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# ACKNOWLEDGEMENT

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The IGCC/IFRP wishes to acknowledge with thanks the time taken off by H.E. The Deputy Minister of Public Health, Thailand, Dr. Krasae Chanawongse, from his busy schedule to give his welcome address and to perform the Opening Ceremony for this Joint Workshop.

Thanks are due to the enormous assistance rendered by Dr. Somboon Vachrotai, Director General of Public Health, Thailand, and his staff for assisting the IGCC Secretariat with the overall details of all the administrative arrangements (including the utilization of this office equipment, typing, purchase of stationery, etc. etc.). Though he has just come out of hospital, he was able to take up the chairmanship, and was also active as Resource Person and member of the Steering Committee.

Our grateful thanks are also extended to the USAID, Identification No. AID/PHA-C-1172, for providing funds for the meeting, without which the seminar would not have taken place.

We are profoundly grateful to Dr. J.Y. Peng, Associate Director for International Activities of IFRP, who supported

and assisted the Secretariat from the early start of the preparation of the Seminar and also for the preparation of the proceedings.

Thanks are also due to Dr. Johan A.M. Thambu, our Rapporteur-General, and to all members of the Steering Committee, Resource Persons, especially those who contributed personal papers together with their dedicated roles as speakers and session-coordinators.

Last but not least we also like to acknowledge the active participation, valuable cooperation, assistance and contribution of the Participants from the six IGCC member countries, namely, Indonesia, Malaysia, Nepal, Philippines, Singapore, Thailand, and participants from Japan, Korea, Hong Kong, Taiwan and from IPPF-ESEAOR, Kuala Lumpur.

Not to be forgotten to be acknowledged are the Observers from the Population Council Bangkok, PIACT Asia, UNFPA Bangkok, UN-ESCAP Bangkok, IDRC Singapore, WHO Programme Coordinator Bangkok, ICARP ASIA, 2 other Representatives from Taiwan and the Chairman FFPAM FPA Kedah, Malaysia.

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# INTRODUCTION

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1. The Joint IGCC/IFRP East and South East Asia Seminar on Regional Fertility Research was held at the Ambassador Hotel, Bangkok, Thailand, from 18–20 July 1979.

The Seminar was sponsored by the International Fertility Research Program, Triangle Park, North Carolina, U.S.A.

2. The meeting was attended by participants from ten (10) countries namely, Indonesia, Malaysia, Nepal, Philippines, Singapore, Thailand, Hong Kong, Japan, Korea, and Taiwan. There were a total of 47 participants and Resource Persons and 11 Observers.
3. The proceedings consisted of both Plenary and Group Sessions. A total of 9 (nine) country papers and 19 related documents were presented at the Seminar proceedings.
4. The Seminar was officially opened by H.E. The Deputy Minister of Public Health, Thailand, Dr. Krasae Chanawongse, preceeding the introduction of Dr. Somboon Vachrotai, the Director General of the Department of Health, Thailand. Dr. L.S. Sodhy, Secretary General of the IGCC Secretariat and Dr. Malcolm Potts, Executive Director of the IFRP both delivered the Introductory Statements respectively.

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# FOREWORD

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Since 1973 until now 5 workshops have been jointly organized between IGCC and IFRP. Much research has been done in the IGCC region with assistance from the IFRP. The IGCC has taken on the task to coordinate this comparative research programme in the field of Reproductive Systems (on contraceptives, sterilization, pregnancy termination) in the Region.

This 3-day Seminar on Regional Fertility Research has helped not only to provide and establish a forum for exchange of experiences of studies and researches done or still on-going in the participating countries, but also to bring greater aware-

ness to the participants (who came from a variety of disciplines: health researches and administrators in Health on Family Planning) of IFRP's accomplishments, current projects, capabilities and future priorities and plans.

It has also assisted to define the Regional needs in contraceptive safety research and the introduction of new technology in maternity health research. We must now find ways and means of meeting these unmet needs.

Dr. L.S. Sodhy  
Secretary General,  
IGCC Secretariat.

## WELCOME ADDRESS

*Dr. Somboon Vachrotai*

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Distinguished Participants, Ladies and Gentlemen:

It is my great pleasure to participate in this East and South East Asia Seminar on Regional Fertility Research which is jointly sponsored by IFRP and IGCC. Those of us gathered here include not only research professionals but also highly qualified health and family planning administrators, and we are prepared to discuss and explore family planning research activities and needs in Asia, as well as increase our awareness of IFRP activities and its assistance role in meeting the family planning research needs of this region.

We are honoured today to have with us His Excellency the Deputy Minister of Public Health, Thailand, Dr. Krasae Chanawongse, known worldwide for his dedication as a physician to the health of rural communities which has already earned him the Magsaysay Award. His Excellency has always been actively involved in, as well as a strong supporter of, family planning research activities.

Now, at this time, I would like to present Dr. Krasae Chanawongse, Deputy Minister of Public Health, who will kindly present the opening address.

## OPENING ADDRESS

*H.E. Dr. Krasae Chanawongse*

Distinguished Participants and Guests, Ladies and Gentlemen:

It is indeed a great honour and privilege for me to join you for the first day of this important meeting. This meeting is a result of the joint efforts of two very capable and efficient organizations, the International Fertility Research Program and the Inter-Governmental Coordinating Committee (the Regional Organization for Inter-Governmental Cooperation and Coordination in Population and Family Planning in South East Asia). We may note with satisfaction that there have already been 6 Expert Meetings jointly conducted by these two organizations, the IFRP and IGCC, in the field of Fertility Research. These deliberations are of marked importance for strengthening and accelerating on-going family planning research programmes within our Region. As we approach the advent of the new decade, we must look for new orientations and guidelines conducive to the formulation of a new and more effective development strategy for the 1980's. We all know that this can be accomplished best through relevant action-oriented research on the one hand, and close Regional cooperation and coordination on the other.

According to the policy of the Thai Ministry of Public Health and, I believe, the policies of all nations represented in this meeting, Fertility Research has been given a high priority in overall Family Planning activities. Efforts have been made to establish a workable mechanism for Inter-Government cooperation and Inter-Sectoral coordination and to organize pooled activities for the development of appropriate technologies and strategies to deal with global population problems. The steps that have been taken by IFRP and IGCC to foster

Regional Research activities deserve much praise and applause. Such regional cooperation can lead us to self-reliance and self-sufficiency which is one of the major objectives that we wish to achieve through our collaboration.

During the course of this 3-day meeting, there will be optimal opportunity for all distinguished participants to utilize their expertise in identifying unmet needs in the field of Fertility Research as well as to share experiences, many of which might be the products of the six former meetings.

Because we are from a group of developing countries working under the severe constraints of limited resources, our task is to help channel the limited resources available to those areas of highest priority in order to avoid wasteful duplication of effort. It is noted with appreciation that the concept of primary health care with special reference to integrated Nutrition, Maternal and Child Health and Family Planning services will be taken into consideration in the meeting, because this approach is the most efficient and effective approach.

We must, therefore, join our hearts and minds together as peoples of one world, now assembled at this important meeting. We should make this meeting an important landmark as we prepare ourselves to enter the new decade of the 1980's.

May I now have the honour to declare open the IGCC/IFRP East and South East Asia Seminar on Regional Fertility Research. And I wish you all success in your deliberations.

Thank you.

## INTRODUCTORY STATEMENT

*Dr. Malcolm Potts*

A recent academic paper by Smith of the East-West Center has studied what the author calls "crisis mortality" in the 19th-century Philippines (1). In several years, such as in 1883, the death rate greatly exceeded the birthrate, often as the result of cholera epidemics.

The human race has always lived with crises. In many ways, the period of calm and relative progress since the end of World War II has been an unusual and aberrant episode in human affairs. The events of recent years, and especially recent months, suggest that perhaps we are returning to normality, having to face crises more frequently!

Inflation is taking revenge on the economic progress of the 1950s and 1960s. Politically, countries are turning to the right. Doors are closing between nations, and as Southeast Asia knows all too well, wars still occur.

What happens in times of crises? Rapid reaction, not slow change, is needed. Radical changes, rather than compromises, are likely to succeed. Crises are a time of weeding out; some groups and traditions that do not adapt and respond simply get eliminated.

What have these grand, if rather dismal, prospects to do with family planning and population? Perhaps, the current crisis in petroleum supplies reminds us how shortsighted and self-centered our interpretations can be. In the United States, people are saying, "Gasoline is too expensive." In reality, it has been too cheap, too long for a finite resource that is rapidly being depleted by rampant consumption.

Population trends are often interpreted with a similar lack of realism. Some people think the problem of population growth is disappearing simply because certain birthrates are dipping, without realizing that absolute increments in the population may be the same or greater than they were before. Some people measure the success of family planning programmes by the number of acceptors and avoid looking at demographic change or seeking demonstrable alteration in illegal abortion rates. It is too easy to forget that today's birthrate statistics will be tomorrow's unemployment statistics — perhaps involving hostile, restless millions.

And what have these considerations to do with the International Fertility Research Program? The IFRP must also change and adapt. Currently, it is one third of the way through a three-year contract. Like nearly all family planning organizations, it began in a developed country. Today, the IFRP is an amalgam of staff in North Carolina and contributors throughout the world. The purposes of this meeting are to review ongoing research and to help plan new projects and new themes for study so that the IFRP can change and adapt to new circumstances.

The easy money of the 1960s has come to an end. When inflation is considered, the actual money available for research in fertility control is declining (2). The effectiveness of the IFRP's use of its resources will be scrutinized even more than previously by its response to current needs. To make that response as adequate and appropriate as possible, the fulltime staff of the IFRP need all the help and insight that contributors can give them.

The IFRP must work within a framework, partly determined by its principal donor, the US Agency for International Development (AID). The IFRP has a contract to improve and adapt fertility regulation methods to meet the needs of developing countries. The IFRP also has a grant to help train medical and non-medical personnel, disseminate information and transfer technology to family planning professionals in these countries. Such activities should, of course, also follow the guidelines and emphasis set by the US Congress.

In 1973, it was decided to focus AID resources on the world's poor, and most especially, on the poor of the poorest nations. One way to define the purpose of the current meeting is to help design research projects that place a special emphasis on extending family planning services to the poor. His Excellency Dr. Krasai and Dr. Somboon, who opened the meeting, have pioneered many aspects of taking health care and family planning to needy populations in rural areas.

The IFRP has established further development of chemical sterilization and the final testing of IUDs modified for postpartum use as its current priorities. We sincerely believe that these priorities focus attention on problems whose solution will be of greatest assistance to the poor.

In many parts of the world, the demand for voluntary female sterilization exceeds the capacity of services to provide the operation. The development of a transcervical method of tubal occlusion that an auxiliary is able to use would be the single most important technical advance that could be made in family planning.

Similarly, the use of IUDs is often limited by the availability of trained personnel to insert the device. A device that could be modified for immediate postpartum use might eventually be proved a responsible method of fertility control to put in the hands of auxiliaries and even traditional midwives.

There are many needs that this meeting may address. What is the best way to involve traditional birth attendants in family planning services as well as in motivation of women to accept contraception? What are the costs of providing family planning through hospitals, institutes, clinics or community-based services? What are the costs of treating incomplete abortions due to an illegal operation as opposed to the costs of legal abortions? What are the costs of services not only to the providers but also to the consumers?

I see a need to improve the organizational aspects of administration as much as the clinical aspects of contraception.

I also see problems. For those of us who jet set around the world, it can be difficult to define services and methods for those who travel in bullock carts. All of us at this meeting are on the same side of the great divide between rich and poor —

we are the rich.

One thing the IFRP can do is to help express the latent demand for family planning and try to understand how people perceive the services we offer. Maternity Care Monitoring is a powerful tool that not only tells us about the clinical needs and progress of a pregnant woman, but also enables us to review the acceptability and adequacy of existing family planning services.

In conclusion, the IFRP regards this meeting as an important one, representing a formal policy of setting goals not in North Carolina but, as in this case, in Asia. If the meeting succeeds, then it will help the IFRP move forward globally. If we do not succeed, then, like any group or institution at a time of crisis, we will simply not survive because we have failed to adapt. However, in the final analysis, I believe that we are well placed to continue to move forward and that responding to challenges should be an exciting and, hopefully, even enjoyable process.

## REFERENCES

1. Smith PC: Crisis mortality in the nineteenth century Philippines: data from past records. *J of Asian Stud* 38: 51–76, 1978.
2. Greep RO, Koblinsky MA, Jaffe FS: *Reproduction and Human Welfare: A Challenge to Research*. MIT Press, Cambridge, 1976.

## INTRODUCTORY STATEMENT

*Dr. L.S. Sodhy*

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*Your Excellency Deputy Minister for Health Dr. Krasae, Dr. Somboon,*

*Ladies and Gentlemen:*

I have much pleasure and honour to address such a distinguished gathering on the occasion of this Joint IGCC/IFRP workshop.

First I want to convey our heartfelt gratitude to His Excellency the Deputy Minister for Health for taking time off from his busy schedule to give such a stimulating address and to perform the Opening Ceremony for this Joint Workshop. We are indeed sir, very grateful to you.

I also wish to thank Dr. Somboon and his able and hard-working staff for all the work involved in preparing for this meeting. Dr. Somboon deserves special mention. He has just came out of hospital in order to join us, and will later return to hospital for further treatment.

We are also grateful to Dr. Somboon and the Government of Thailand for agreeing to host this workshop in Bangkok.

We are fortunate to have with us very distinguished persons. I wish to make special mention of Datin Dr. Nor Laily who has come to attend this meeting inspite of her very busy schedule. She has to return early to attend a very important meeting in Kuala Lumpur and later to fly to Nairobi for an international meeting. Another SGO present with us is Mr. Benjamin de Leon, Executive Director of the Population Commission

and Dr. Aragon the member of the Board of Commissioners of the Population Commission. I also wish to mention that we have two Deputy Chairmen of the BKKBN (National Family Planning Coordinating Board, Indonesia), Dr. Haryono Suyono and Dr Pardoko. We are indeed grateful to them for their presence.

I also wish to make special mention of Dr. Vitura Sangsingkeo, Executive Director of the ICARP. He informs me that he would like to work closely with the IGCC, and it is possible that we may in the near future have a joint IGCC/ICARP/IFRP meeting.

The IGCC and the IFRP have been working together for the past seven years. We have had several joint meetings and also cooperated in research activities related particularly to the Asian region. This joint meeting is a further manifestation of this close and fruitful relationship. We are also very pleased that the Executive Director of IFRP, Dr. Malcolm Potts is here in person to attend the meeting. With regard to this joint meeting I wish to make special mention of Dr. J.Y. Peng. He has been the man behind the scenes to make this meeting possible and he has been constantly assisting in all the preparations for the past several months.

We have in all a very good group of people and I have every confidence that we will have an excellent and fruitful meeting.

Thank you.

## CLOSING REMARKS

*Dr. Somboon Vachrotai*

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Distinguished Participants, Ladies and Gentlemen:

Three fruitful days are being passed away. Though the time will pass us by, all the benefits we earn from various country papers, and presentation of the most well-done works from distinguished resource persons and participants also those benefits from all valuable discussions and small group meetings, will permanently stay with us. We certainly will apply them in our programme to make our common goal of health activities in our region to be highly successful. All this for the better life of our people who are still living in low privilege situations. As a representative of all participating countries here I would like to express our high appreciation to IFRP and IGCC steering committee for providing us the auspicious opportunity otherwise we will never get together like this to

bring out many valuable ideas.

This meeting would never have been successful without those competent Chairman, Rapporteur as well as the coordinators and the very important group behind the scenes, namely, the secretariat group.

Finally, I would like to reiterate that, to me, our meeting has been highly successful because all of us are eager to help each other. We will work hand in hand to try and keep this great cooperation and collaboration together. Finally, in closing we wish all of you a pleasant and bright time travelling back home.

Thank you.

## AIDE MEMOIRE

### IGCC/ IFRP EAST AND SOUTH EAST ASIA SEMINAR ON REGIONAL FERTILITY RESEARCH

#### INTRODUCTION

In January 1973, the first meeting was organized by IGCC and involved a working group of representatives from member countries of the IGCC. This meeting called the IGCC Expert Group Working Committee on Sterilization and Abortion was held in Penang, Malaysia, and was made possible by a grant from the Population Council.

The meeting considered all relevant matters on the subject of pre and post contraceptive fertility regulation. One amongst the urgent recommendation was that the IGCC should coordinate a comparative research programme on sterilization and pregnancy termination within the Region. The IGCC approached the IFRP for assistance establishing such a project and the response was very favourable.

Since then the IGCC and the IFRP have been working together. Five expert meetings have been jointly organized by IGCC and IFRP in the past. Much research has been done in the IGCC region with assistance from the IFRP.

It is now proposed to conduct a seminar with broader scope and to involve not only gynaecologists but also programme administrators in health and family planning and other programme leaders in East and South East Asia. The Seminar that will be conducted is to be set up to have a broader scope, not only in the variety of participants who will participate but also in the choice of subjects to be discussed.

The objectives of the Seminar will be as follows:

1. To bring together individuals of leadership status in the East and South East Asian Research, Health and Family Planning community in order to discuss regional activities and needs.
2. To enhance the awareness of these individuals with respect to:
  - a) IFRP's past accomplishments;
  - b) IFRP's current projects;
  - c) IFRP's capabilities; and

d) IFRP's future priorities and plans.

3. To define the IFRP's role in meeting regional needs in the following areas:

- a) Contraceptive safety research
- b) Introduction and transfer of new technology
- c) Maternity Health Research

#### Mechanics of the seminar

Participants will be called for from member countries and from other countries in East and South East Asia where IFRP's contributors are. Invited countries will be: Indonesia, Malaysia, Nepal, Philippines, Singapore, Thailand, Hong Kong, Japan, Korea and Taiwan.

The participants are requested to prepare a joint Country Paper on "Inventory within the Country of Previous Ongoing Research" which includes:

- a) which are appropriate for Asian Women on Oral Pills;
- b) traditional methods on abortion and other methods;
- c) studies in IUD;
- d) Trophoblastic diseases; and
- e) bringing with them some traditional medicines for fertility control

Besides that, some participants (contributors mostly) are individually asked to present papers; also resource persons from in and outside the region will be requested to prepare papers.

The tentative list of subjects are:

1. Primary Health Care with special reference to Nutrition, MCH and Family Planning.
2. Prospective studies on risk and benefit of Family Planning Contraceptives.
3. Retrospective studies specially on Depo Provera.
4. Alternative Delivery System for Family Planning Services:
  - a. Camps
  - b. Organization of clinics: training/effective referral

system

- (1) Outreach
- (2) Clinic management

c. Traditional Birth Attendant

- 5. IPPF – ESEAOR Medical Committee Findings.
- 6. Maternity Care Monitoring – where next?
- 7. Is what we are offering acceptable?
- 8. Incidence and follow-up of trophoblastic diseases.

Of these papers, only highlights will be read out for about

10 minutes, but the paper can be prepared as long as they wish.

The Seminar will last from 18 to 20 July, 1979, and will be held in Bangkok, Thailand, at the Ambassador Hotel.

One and a half days will be dedicated for Plenary Sessions, where papers will be presented and the other one and a half days for group discussion sessions.

All papers will be distributed at the Meeting.

The total attendants (participants, resource persons and observers) will be around 50 persons.

# AGENDA

## 18th July 1979 (Wednesday)

<p>09.00 – 10.00 HRS. <b>OPENING CEREMONY</b></p> <p>(i) Introduction of H.E. the Deputy Minister of Public Health, Thailand, By Dr. Somboon Vachrotai.</p> <p>(ii) Welcome Address, By the Deputy Minister of Public Health H.E. Dr. Krasae Chanawongse.</p> <p>(iii) Introductory Statements:            (a) IGCC – By Dr. L.S. Sodhy            (b) IFRP – By Dr. Malcolm Potts.</p> <p>10.00 – 10.30 HRS. <b>COFFEE BREAK / GROUP PHOTOGRAPH</b></p> <p>10.30 – 10.40 HRS. <b>Announcement of Chairman and Rapporteur General.</b>            Chairman: Dr. Somboon Vachrotai.            Co-Chairman:            Rapporteur-General: Dr. Johan Thambu.</p> <p>10.40 – 12.30 HRS. <b>COUNTRY PRESENTATIONS</b></p> <p>“Inventory within the Country of Previous On-Going Research”            – Display of Traditional Medicines</p> <table border="0" style="margin-left: 20px;"> <tr> <td>1. Indonesia</td> <td>6. Thailand</td> </tr> <tr> <td>2. Malaysia</td> <td>7. Hong Kong</td> </tr> <tr> <td>3. Nepal</td> <td>8. Japan</td> </tr> <tr> <td>4. Philippines</td> <td>9. Korea</td> </tr> <tr> <td>5. Singapore</td> <td>10. Taiwan</td> </tr> </table> <p>Clarification of Country Papers.</p> <p>12.30 – 14.00 HRS. <b>LUNCH BREAK</b></p> <p>14.00 – 14.15 HRS. <b>DISCUSSION</b></p> <p>14.15 – 14.35 HRS. <b>PLENARY PRESENTATION ON TOPIC I</b></p>	1. Indonesia	6. Thailand	2. Malaysia	7. Hong Kong	3. Nepal	8. Japan	4. Philippines	9. Korea	5. Singapore	10. Taiwan	<p>Coordinator: Dr. Henry Pardoko            “Primary Health Care with special Reference to Nutrition, MCH and Family Planning” By Dr. Somboon Vachrotai and Dr. Taek Il Kim</p> <p>14.35 – 14.45 HRS. <b>DISCUSSION</b></p> <p>14.45 – 15.15 HRS. <b>COFFEE/TEA BREAK</b></p> <p>15.15 – 15.50 HRS. <b>PLENARY PRESENTATION ON TOPIC II</b></p> <p>Coordinator: Datin Dr. Nor Laily Aziz            (a) “Prospective Studies on Risk and Benefit of Family Planning Contraceptives”. By Dr. David Edelman            (b) “Retrospective Studies Specially on Depo Provera”. By Dr. Malcolm Potts and Dr. Edwin B. Mc Daniel</p> <p>15.50 – 16.10 HRS. <b>DISCUSSION</b></p> <p>16.10 – 17.00 HRS. <b>PLENARY PRESENTATION ON TOPIC III</b></p> <p>Coordinator: Dr. Haryono Suyono            “Alternative Delivery System for Family Planning Services”            (a) <b>Camps</b>            By Dr. Malla Dibya Shree            (b) <b>Organization of Clinics</b>            – training / effective referral systems            (1) <b>Outreach</b>            By (i) Dr. Gloria Aragon or Mr. Benjamin de Leon            (ii) Dr. Debhanom Muangman            (2) <b>Clinic Management</b>            By Dr. Johan A.M. Thambu</p>
1. Indonesia	6. Thailand										
2. Malaysia	7. Hong Kong										
3. Nepal	8. Japan										
4. Philippines	9. Korea										
5. Singapore	10. Taiwan										

	(c) <b>Traditional Birth Attendant</b> By Dr. J.Y. Peng	11.00 – 11.40 HRS.	<b>PLENARY PRESENTATION ON TOPIC (VII)</b>
17.00 – 17.30 HRS.	DISCUSSION		Coordinator: Dr. Malla Debya Shree "Incidence and Follow-Up of Trophoblastic Diseases"
19.30 HRS.	SEMINAR DINNER		By (i) Prof. Mark Cheng Chi Erig (ii) Prof. Ho-Kei Ma (iii) Dr. Takashi Wagatsuma (iv) Prof. Pei-Chuan Ouyang
<b>19th July 1979 (Thursday)</b>			
09.00 – 09.20 HRS.	<b>PLENARY PRESENTATION ON TOPIC IV</b>		
	Coordinator: Dr. Suporn Koetsawang "IPPF-ESEAOR Medical Committee Findings" By (i) Dr. Jose B. Catindig (ii) Prof. Ho-Kei Ma	11.40 – 12.00 HRS.	DISCUSSION
		12.00 – 12.30 HRS.	CLARIFICATION ON GROUP DISCUSSIONS
		12.30 – 14.00 HRS.	LUNCH BREAK
09.00 – 09.45 HRS.	<b>PLENARY PRESENTATION ON TOPIC V</b>	14.00 – 17.30 HRS.	* GROUP DISCUSSION SESSIONS Split into 3 Discussion Groups
	Coordinator: Prof. Mark Chen Chi Eng "Maternity Care Monitoring – Where Next?" By (i) Dr. Tina Agoestina (ii) Dr. Roger Bernard	<b>20th July 1979 (Friday)</b>	
		09.00 – 11.00 HRS.	GROUP DISCUSSIONS CONTINUE COFFEE/TEA
09.45 – 10.15 HRS.	COFFEE/TEA BREAK	11.00 – 12.00 HRS.	Secretariat Works on Group Reports
10.15 – 10.30 HRS.	DISCUSSION	12.00 – 14.00 HRS.	LUNCH BREAK
10.30 – 11.00 HRS.	<b>PLENARY PRESENTATION ON TOPIC (VI)</b>	14.00 – 16.00 HRS.	Chairman: Dr. Somboon Vachrotai PLENARY SESSIONS ON GROUP DISCUSSION REPORTS
	Coordinator: Mr. Benjamin De Leon "Is What we are Offering Acceptable?" By (i) Dr. Haryono Suyono (ii) Dr. Azizan bt. Aiyub Ghazali	16.00 HRS.	CLOSING
		* Please refer separate document on Group Session to be distributed later.	

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# SUMMARY OF PROCEEDINGS

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**Wednesday, 18th July 1979.**

## OPENING CEREMONIES

This Seminar on Regional Fertility Research was held jointly by IGCC and IFRP. There were six (6) previous seminars conducted by IGCC in the past years. The first was in 1973 with the aid from the Population Council, and the rest of them were sponsored by the IFRP (Research Triangle Park, North Carolina). All were technical in nature and labelled as "Expert Meetings".

This seminar was held at the Ambassador Hotel, Bangkok, from 18—20 July, 1979. Ten (10) countries attended the meeting, with 48 participants and 11 observers. Twenty (20) of the participants who also acted as Resource Persons, presented papers. There were 29 documents/papers presented and discussed. The participants represented the countries of Indonesia, Malaysia, Nepal, Philippines, Singapore, Thailand, Hongkong, Japan, Korea and Taiwan.

The Opening Address was delivered by H.E. the Deputy Minister of Public Health, Thailand, Dr. Krasae Chanawongse, who had been introduced by Dr. Somboon Vachrotai. H.E. the Deputy Minister stressed the importance of strengthening and accelerating the on-going family planning research in the region and that new orientations and guidelines conducive to the formulation of a new and a more effective development strategy for the 1980's should be looked for. It is for this reason that he appreciated very much the steps that have been taken by IFRP and IGCC to foster Regional Research Activities. This regional cooperation he stressed further can lead to self-reliance and self-sufficiency. He then declared open the meeting and wished all, the success in their deliberations.

Dr. L.S. Sodhy, Secretary General of the IGCC, in his Introductory Message, conveyed his heartfelt gratitude to His Excellency the Deputy Minister of Public Health, for his stimulative address and for performing the Open Ceremony for the Joint Workshop. He thanked Dr. Somboon Vachrotai and his hard working staff for the preparation of the meeting and was also grateful to Dr. Somboon and the Government of Thailand for agreeing to host this workshop in Bangkok. He was pleased and fortunate, to have many distinguished persons attended the seminar, for special mention were Datin (Dr) Nor Laily Aziz, Director-General of NFPB, Malaysia, in spite of her busy schedule, Mr. Benjamin de Leon, Acting Executive

Director of the Commission on Population, Dr. Gloria Aragon, Member of the Board of Commission on Population, and two (2) Deputy Chairmen for the BKKBN, Indonesia, i.e. Dr. Haryono Suyono and Dr. H. Pardoko, for their presence.

He also made special mention of Dr. Vitura Sangsingkeo, Executive Director of ICARP, who in the near future would like to work closely with IGCC to have a joint IGCC/ICARP/IFRP meeting.

Dr. Sodhy then informed the audience about the several meetings and cooperation in research activities between IGCC and IFRP and was very pleased indeed to have the Executive Director of IFRP, Dr. M. Potts, in person to attend the meeting. Last but not least he thanked Dr. J.Y. Peng, as the man behind the scene, who worked very hard in all the preparations and made the meeting possible.

Dr. Sodhy's message was then followed by Dr. M. Potts from IFRP. He stated that measuring the success of family planning programme by acceptor rate is not an accurate one; it is better to use the demographic methods, e.g. incidence of illegal abortions. He then explained the objectives of IFRP and that priority has been given to develop family planning techniques for developing countries with the emphasis on training, I.E.C. and Transfer of Technology to Developing Countries. One other field was the Research Studies to find the needs for the poor of the world. The technique of methods used for studies must be simple to improve family planning where the infrastructure is poor. He stressed further the importance of the study of TBAs for family planning delivery services, the study of cost of methods and the maternity care monitoring system.

Before the presentation of the Country Papers, Datin (Dr) Nor Laily Aziz, Chairman of the Steering Committee, clarified the objectives of the seminar.

After the addresses, it was announced that Dr. Somboon Vachrotai would act as Chairman and Dr. Suporn Koetsawang as Co-Chairman and Dr. Johan A.M. Thambu was designated as Rapporteur General.

## COUNTRY PRESENTATION

The first to present their respective papers were the

countries of Indonesia, Malaysia, Nepal, Philippines, Singapore, Thailand and followed by Hongkong, Japan, Korea and Taiwan.

The topic was "Inventory within the Country of Previous on-going Research".

**INDONESIA:** Although research, and studies conducted in Indonesia are limited in scope and intensity, the National Family Planning Programme has gained important information on various aspects of contraceptive use. Important issues related to the use of contraceptives have been identified like the suppressive effects of oral pills on lactation, the most suitable IUDs for Indonesian women, the epidemiology of trophoblastic diseases and the effects of sterilization on the socio-cultural life in Indonesia. The need of having a large number of continuing users of contraceptives in their programme at the end of 1990, made them aware of the need for more effective, safe and acceptable means of contraception.

**MALAYSIA:** Malaysia re-affirmed that contraceptive/reproductive/fertility research must be given high priority in programme development. During the past 13 years the emphasis has been on the hormonal contraceptives. Hormonal research is needed to guide and back the national programme. That is why Malaysia established the National Family Planning Specialist and Research Centre under the NFPB. This centre was to act as stimulus for the scientists and academicians to participate in research, and with the availability of Research Laboratory Facilities, Research Grants, Study Fellowships, Financial Support for Attendances in International Congresses and Seminars, local expertise be available for research studies. Besides studies undertaken so far on pills, injectables, IUCD and sterilizations, study must also be carried out to develop local available and acceptable contraceptives, the future Asian pill.

**NEPAL:** The basic philosophy is that Family Planning and MCH are carried out together by NFP/MCH Project. Family Planning methods offered are pills, IUD, injectable contraceptives, condoms, and sterilization procedures like: minilap, laparoscopy, vasectomy. The services are provided free of cost. The prescribed mode of service delivery has been through clinics, community-based workers, mobile clinics and camps. In order to encourage more people to practice family planning, the Nepal Contraceptive Retail Sales (CRS) Project is developed by His Majesty's Government of Nepal's Family Planning & Maternal and Child Health Project. It distributed contraceptives through commercial channels throughout the country, e.g. pills (Gulaf) for women and Condoms (Dhaal) for men.

**IUD:** IUD users that was very popular in the beginning of the programme declined in the later years by 50%. This may be due to the major side effects; to increase IUD acceptors, staff nurses are trained for IUD insertions.

**Abortion:** Illegal abortions are performed by trained medical personnel as well as by untrained indigenous midwives. In Nepal not only to perform abortion is regarded as a crime against the existing law but also anybody seeking abortions or practising it or willing to be an accomplice to such an act is punishable with long term imprisonment.

**Trophoblastic Disease:** Although Trophoblastic Diseases are common but no research has been conducted.

**PHILIPPINES:** The Philippines Population Programme has developed four component programme activities namely, Service Delivery, Training, IEC and Research. The service

delivery programme is part of the overall health care. All acceptable methods of contraception, except abortion, are available.

**Research:** Research is a basic activity in the National Programme from the start.

1. Research in Demographic Levels, Patterns and Trends.
2. Research in Socio-economic and demographic inter-relationship.
3. Programme Oriented Research.

**Trophoblastic Disease:** Studies in Trophoblastic Disease were started at the University of the Philippines — Philippine General Hospital (U.P. — PGH) as early as the 30s.

**IUD:** In the early years (late 60's and early 70's), the IUD was the second method of choice. Since 1972 its use started to decline, and has now dropped to the 4th place. Nurses and midwives after training are now licensed to insert IUD.

**Oral Contraceptives:** From 1970 to the present, the pills have remained on top. The study under process for implementation is the trial study on different dose combinations of oral contraceptives; to determine the formulation most suitable to the Filipino women.

**Traditional Methods:** Researches on folk methods of fertility control and abortion have been undertaken primarily to identify traditional methods of abortion and contraception, to test the pharmacological effectiveness of local plants, to assess the effects of training programmes of TBAs (hilots) to determine the characteristics of mothers seeking abortions, and to determine abortion rates in certain Philippine Population Groups.

Problems of research on population is less on adequacy but more on the utilization of findings and recommendations.

**SINGAPORE:** Research and Studies conducted.

**Oral Pills:**

1. Trials comparing various dose requirements of oral pills; also various synthetic oestrogens.
2. Effect of pills on carbohydrate metabolism.
3. Effect of pills on Coagulation.

**IUD:**

1. Trial comparing various types of IUDs.
2. Ectopic pregnancies and IUD.

**Menstrual Regulation:**

1. Comparison of flexible and rigid canulas for surgical menstrual regulation.
2. Medical MR with prostaglandins.

**Abortion:**

1. Psychosocial aspect of abortion.
2. Safety of out-patients abortion compared with in-patients abortion.

3. Safety of local anaesthesia.
4. Prostaglandin for preparative cervical dilatation in multiporous pregnancies and mid-trimester abortion.

**Sterilization:**

1. Concurrent versus interval sterilization in relation to abortion — both medical and psychological aspects.
2. Sterilization failures.
3. Safety of various methods of sterilization.

**HONGKONG:** Research and Surveys in Hongkong are done by several agencies as follows:

- (i) Hongkong Family Planning Associations:
  - (a) KAP Survey of Hongkong
  - (b) Impact of Industrialization on Fertility in Hongkong
  - (c) The Family Planning Requirements for the Housing Estates in Hongkong.
- (ii) Department of Obstetrics & Gynaecology, University of Hongkong:
  - (a) Coagulation changes in females on oral pills.
  - (b) Hyperprolactaemia
  - (c) Hormonal profile and various maturation in Hongkong adolescence.

**Traditional Methods on Abortion and Other Methods:**

Department of Biology & Biochemistry Department, Chinese University of Hongkong.

Non-steroidal contraceptive compounds from Chinese herbal drugs.

**Studies in IUD:**

- a) Hongkong Family Planning Association:  
A comparative study fo the performance of 4 IUDs in Hongkong.
- b) Department of Obstetrics & Gynaecology, University of Hongkong:  
The dosage and effectiveness of continuous infusion of prostaglandin in first trimester abortions.

**Trophoblastic Diseases:**

Department of Obstetrics & Gynaecology, University of Hongkong.

**Laboratory Research:**

- a) Department of Zoology and Physiology, University of Hongkong:  
Study of spermatogenesis and sperma maturation.
- b) Department of Anatomy, University of Hongkong:  
Hormonal influence on tissue culture.

**JAPAN**

**Oral Pills:** The use of Steroidal preparations as contraceptives has not been approved. The Central Drug Control Agency approved the drug as therapeutic agent for functional uterine bleeding, dysmenorrhœa or ovarian dysfunction and not for use as contraceptives. However, in the commercial

world, 4 different varieties of combined oestrogen/gestogen preparation are available for physicians to be prescribed to women who wish to use.

**Traditional Methods of Abortion:** Induced abortion was legalised since 1948 and the standard method at the first trimester has been dilatation and curettage. For the mid-trimester abortion, the standard method was the dilatation of the cervix with the laminaria tent and followed by an insertion of a rubber ballon with a pitoxin drop. Now more and more physicians are using an extra-amniotic infusion of Prostaglandin F.

**Studies in IUD:** Clinical effectiveness of the IUD has been investigated from as early as teh 1930's. In 1974, the Ota-ring and the Yusei-ring were officially approved, followed by the Lippes Loop and the FP-1, another Japanese produced IUD in 1977. The Ministry of Health and Welfare holds a somewhat conservative attitude toward the clinical application of medicated IUDs.

**KOREA**

**Oral Contraceptives:** Various kinds of oral contraceptives have been used over the past 10 years and many clinical and experimental studies have been conducted with the steroidal contraceptives.

The list of titles for the on-going projects are as follows: —

1. Effects of oral contraceptives on metabolic processes.
2. Comparative study of an oral combination contraceptive preparation in tablet and "paper-pill" form.
3. Study of prevalence of signs of vitamin deficiency in association with oral contraceptives.
4. Comparative study of the bio-chemical effects of combined estrogen/progesterone oral contraceptives containing 50 mg or less of estrogen.

**Abortion Method:** Several research findings have been found on the procedure of practising induced abortion. In the first trimester technique used are 95%, D & C, 65% section and 42.8% MR. In mid-trimester abortion the major procedure utilized are metreurynter (36.2%), oxytocics infusion (28.2%), Bougie (23.0%), Laminario (6.0%), Prostaglandin (3.5%), Saline Solution (2%), and some of them are used combined.

Titles for the on-going research are:

1. A mid-trimester abortion study.
2. Controlled clinical trial of flexible vs rigid cannulas for the early termination of pregnancy by endometrial aspiration.

**IUD:** Various types of IUD are introduced in Korea, but Lippes Loop was only inserted in the government programme. Other types such as CU-T, Cu-7, Alza-T were inserted only on clinical trials and self-supporting.

The list of tables for the on-going research project on IUD are:

1. A comparative study on the effectiveness of immediate post-abortion intra-uterine contraceptive device insertion.
2. Case-control study on the relative risk of ectopic preg-

nancy and pelvic inflammatory disease associated with IUD use.

3. Multi-center Study of the microbiology and histology of the fallopian tube in IUD users.
4. Hormone releasing vaginal rings.
5. Long-term effect of the IUD on the human endometrium. Histologic, histochemical and ultrastructural studies.

**Trophoblastic Diseases:** Trophoblastic disease is a common disease in Korean women. Studies were mostly undertaken for the clinical analysis and evaluation on the women with trophoblastic disease who had been admitted and treated at hospital.

**Traditional Medicine for Fertility Control:** In Korea, numerous plants or animal preparations have been used for the purpose of fertility control. The descriptions are based upon the experience of human trial for hundred years. A list of these plants and animals covering most of the natural products with reputed antifertility effects are to be found in the full text of the Country Paper.

**TAIWAN:** Family Planning Programme started by voluntary agencies or as study projects in 1959, and was expanded as a national programme in 1964. In 1968 the regulations governing the implementation of family planning was promulgated by the Executive Yuan (Cabinet) and the Population Policy of the R.O.C. was announced in 1969. Delivery of family planning services has been integrated as part of overall health care.

There are four methods of contraception: — Lippes Loop and Ota Ring, Oral Contraceptives, Condom and Male and Female Sterilization available to all married couples desirous of spacing. Of the acceptors, 50% are IUD users, 15% oral pills, 20% condom and 15% undergone sterilization.

**Contraceptive Research:** Research is one of the basic activities in the national programme from the start. Population/Family Planning related research activities in Taiwan Area, R.O.C. can be categorised broadly into:

1. Research on demographic levels, patterns and trends.
2. Research on socio-economic and demographic inter-relationship.
3. Programme oriented research.

The research is further dealing with: —

- systematic analysis of contraceptive acceptors
- oral contraceptives
- sterilization

Sterilization as a method was adopted since 1974 and several follow-up services has been conducted since then. About 80% of the sterilization was performed by the contracted private physicians.

After lunch break the seminar resumed again with presentation on **TOPIC I: "PRIMARY HEALTH CARE WITH SPECIAL REFERENCE TO NUTRITION, MCH AND FAMILY PLANNING"**

Dr. H. Pardoko (Indonesia) acted as Session's Coordinator. The first paper was presented by **Dr. Somboon Vachrotai**. He started with stating that the Thai Government Health Service like most countries in Asia is also searching for alternative methods for extending basic health services to the majority of rural villagers, a concept of Primary Health Care. The Pitsunalohe Project, the Saraphi Project and now the Lampang Project are vanguard efforts that helped to resolve the current PHC approach to MCH, Nutrition and Family Planning in Thailand.

The Health development strategy of the Lampang Project involves 4 key features:

- a) Developing Primary Health Care Workers for every village.
- b) Developing wechakorn or community health paraprofessionals, for every hospital and rural health center.
- c) Developing private sector involvement and community participation in primary health care work.
- d) Integrating medical care, health promotion and disease prevention services and developing improved management practices from the provincial level to the health centre level.

Some of these features that have been developed are replicated and adapted by the National Health Plan. At the end Dr. Somboon explained "Although a 'grass-root' primary health care manpower force have been developed comprising traditional midwives, village health post volunteers, communicators, the journey to 'health for all by the year 2000' is a long way and still remain a formidable task.

The second speaker, Dr. Jae Mo Yang, did not turn up and the paper was read out by his country fellowman: **Dr Taek II Kim**. Some points that can be summarised from his 50 pages presentation are as follows: —

- Although during the last 17 years the Republic of Korea has made rapid progress in economic development, however, attention to health care development has been paid only recently.
- There were many problems to be solved, he explained:
- maldistribution and insufficient utilization of health care resources.
- that the increased production of doctors does not provide solution for health care problem in rural areas (doctors are more oriented in biological and individual medicine and over-specialization).
- there is some misconception on "Primary Health Care", that it is a service of poor quality and only applicable in very poor undeveloped countries where medical doctor is scarcely available.

(The percapita income in Korea exceeded US\$1,000 and has more than one (1) medical doctor for every 2000 population).

In order to remedy and test the misconception, Yonsei University started a community teaching programme and family planning programme and took 2 townships as pilot projects. After 3 years (1975—1978) the project was evaluated on 3 aspects: —

1. The changes of health status and evaluation on achievement on maternity care, child health care, family planning, tuberculosis control and medical programme compared with that of non-project areas.
2. The performance of Health workers with particular emphasis on field health workers and multipurpose workers.
3. Aspect of evaluation or the community participation and community's attitudes towards the project.

The result of evaluation were extremely encouraging and successful. There are (2) other on-going projects on family planning programme integrated with Primary Health Care. Conclusions about these two are not yet available at this moment.

Ten (10) recommendations have been drawn from the outcome from the studies, the most prominent one was:—

that Primary Health Care should be accepted by the Government and leaders in Korea with highest priority, as the key to achieving an acceptable level of health for all countries, whatever their level of development, and does not regard Primary Health Care as a "Medical Care of poor quality for rural poor in developing countries only".

Before tea/coffee break, the floor was opened for discussion on the country presentations and on Topic I.

#### **SUMMARY AND DISCUSSIONS ON COUNTRY PRESENTATIONS AND ON TOPIC I**

1. Studies from 4 countries showed that:
  - high percentage of failures with Fimbrectomy
  - there were less percentage of abortions in patients pregnant and who had their IUCD removed.
  - all translocated IUCD, open or closed, should be removed because of the risk of tissue reactions and adhesions.
  - there was a great number of hydatidiform moles observed in nulliparous women.
2. A Singapore Study on vaginal sterilization by Fimbrectomy with linen sutures showed a pregnancy rate of 3% as compared to a pregnancy rate of 0.3% for the modified Pomaroy with a minilap technique: Recorded evidence in other countries had shown that Fimbrectomy carried good results.
3. There is a need to study in other centres a comparative study on Fimbrectomy versus Tubectomy.
4. Pregnancy with IUD had shown that if the device is left in it carried a higher abortion rate than if the IUD was removed.
5. Study in Thailand had shown that pregnancy with IUD in situ did not carry any risk of infection or septic abortion.
6. A study of extra-uterine IUDs had shown that copper IUD had very extensive adhesions. More than 50% of translocated IUD had moderate to severe adhesions. All types of IUD carried high risk of adhesion and so all extra-uterine IUDs must be removed. The best way to remove

IUD is by laparoscopy.

7. In Indonesia, Nulliparous women had a high risk of molas pregnancy as shown by a rate of 1:60, pregnancies for hospital studies.
8. In Bangkok, a study on hydatidiform mole had shown that 30% were in nulliparous women and 70% in multiparous women.

The Plenary Session in the afternoon was coordinated by Datin (Dr) Nor Laily Aziz and heard the presentations of **Dr David A. Edelman** on "PROSPECTIVE STUDIES ON RISK AND BENEFIT OF FAMILY PLANNING CONTRACEPTIVES", and "RETROSPECTIVE STUDIES SPECIALLY ON DEPO PROVERA" by **Dr Malcolm Potts** and **Dr Edwin B. McDaniel**. (Topic II).

#### **Dr D. Edelman:**

Prospective studies designed to assess some aspects of various contraceptive materials, particularly oral contraceptives (OCs) and Intra-uterine Devices (IUDs), have been conducted mostly in the developed world (US, UK, Europe). The relevance of these studies to the developing world is not known.

Issues related to the safety of contraceptive methods can be a deterrent to the expenses of contraceptive services. He took example of the decision made by the Family Planning Association of Hongkong to discontinue use of Depo Provera, following the decision of the FDA. The decision of the FDA appeared to be based on political rather than scientific grounds. The need for large prospective studies of the risks of all contraceptive methods including depo provera is obvious.

Dr. Edelman further reviewed significant contraceptive safety studies that have been conducted during the past decade:

1. The Walnut Creek Contraceptive drug studies conducted by the Kaiser Permanent Medical Care Programme, which is a prospective study to determine the side effects of OCs.
2. The cooperative statistical programme (CSP) under the leadership of Dr. Christopher Tietze, evaluated the safety and effectiveness of IUDs, including the Lippes Loop, Saf-T-Coil, Birnberg Bow, Margulies Spiral and Steel Ring.

All these represent a large investment of time and efforts but it is doubtful if these studies will provide definite answers to the many issues regarding the risks and benefits of contraceptives. He found case control studies are better suited for the evaluation of rare adverse side effects than are prospective studies. Case control studies permit an assessment of the relative risks of particular side effects for one type of contraceptive versus another but do not permit assessment of the absolute risks of the side effects.

IDRC, WHO, IFRP are currently planning or undertaking studies to evaluate specific aspects of contraceptive safety. But there are still many questions related to the safety of contraceptive methods that cannot be answered through the analysis of the IFRP's data. He referred to the studies in IUD use in the US and Sweden that indicate a three to five fold increase risk of pelvic inflammatory disease to those of non-users.

Studies conducted by the IFRP have neither supported nor refuted this claim. The principle purpose of the IFRP's studies has been to locate IUD-related events, such as frequency expulsion and removal. Large multi-clinic studies might be necessary whereby thousands of women using the major methods of contraceptives will be studied. Aside that it will be costly; the feasibility may be questioned.

He expressed the hope that each of the IGCC countries should delineate the pertinent issues concerning the safety and benefits of various contraceptive methods. Contraceptive studies should be conducted by any country, that reflect the needs of the country and not necessarily those of the funding agency. IFRP can help to design and support such design.

**Dr Malcolm Potts:**

This is a Summary of Dr. Potts' presentation:

1. Important management decision can be taken, based on the results of short term studies.
2. Retrospective study is a quick and dirty way to get important data.
3. Work on monkeys in USA — a small number of monkeys were given a very high dose of DMPA and some of them developed endometrial cancer. From the above, one can summarise that if you gave normal dose on a large population, would you get the same effect?
4. If a rare disease is to be picked up, then a larger group for a long period must be followed-up to see if the drug or device caused or did not cause the condition; controls are well matched.
5. Data may not be reliable because people after a long period may forget if they took the drug or device.
6. Prospective studies, can study the risk/benefit. It is easy to know who died rather than to know who will die. From retrospective studies-data, one can plan prospective studies.

The second speaker for the same subject was **Dr Edwin B. McDaniel**.

This presentation went on Retrospective Studies of Contraceptives use of all cases of Ca Endometrium in the Hospital area in Chiangmai. The DMPA study in Chiangmai is one of the largest study in the world he said, and one of the longest ever done; it has been conducted for 14 years. The average number of injection per day is 426 (except Sunday). All deaths certified as Ca Endometrium were taken for this study. The diagnosis was made on a) Histology, b) Pre-assumptive, on clinical examination, and in some cases the pathological diagnosis was not proven. The reason being that on admission a diagnosis of Ca Endometrium was made and a biopsy taken, but the patient died or was discharged a few days later. The original diagnosis was not changed inspite of the fact that at a later date that the histology report was ready and showed that it was not endometrial Ca.

The distribution of the 26 cases of Carcinoma of Endometrium according to the year:

1974	3 cases
1975	8 cases
1976	6 cases
1977	7 cases
1978	2 cases
<b>Total</b>	<b>26 cases of Carcimoma Endometrium</b>

The above data is reassuring because the incidence of Ca Endometrium is not rising. The occurrence of 2 cases of Endometrium cancer in Rhesus Monkeys can and should not be extrapolated to Human beings. DMPA should be continued to be used.

WHO earlier concluded that DMPA has safety and that the study of Rh monkey has many defects.

In the discussion that followed, Dr. Potts and Dr. McDaniel responded to the questions as follows:

1. The use of DMPA is part of the National Programme in Thailand and there are 80,000 on DMPA users in the programme.  
  
Dr. McDaniel has 32,000 and they are mainly in the Chiangmai and Lampang areas.
2. Regarding the IUD and Pill, two types of studies would be of use:
  - (i) For large numbers of IUD acceptors; IUD with threads vs. IUD with no threads.
  - (ii) Small study of type of organism found in IUD with thread vs. IUD with no thread.
3. Ethical and legal implications of prospective studies
  - for IFRP, there is a committee that goes through the ethnics and legality of the study.
  - for WHO, the protocol for the study to be approved by
    - a) committee in the institution
    - b) government of the country where the study to be undertaken
  - for Universities: the study must be cleared by the University and the Government.
4. Retrospective Study can be meaningful, for the study needed for immediate reassurance for programme implementation. Once this is available, then long term prospective studies can be done.

The late afternoon session on Topic III was coordinated by **Dr Haryono Suyono** (Indonesia). The topic was on "ALTERNATIVE DELIVERY SYSTEM FOR FAMILY PLANNING SERVICES". It consisted of 3 sub-topics:

- a) **Camps** by Dr. D. Malla (Nepal)
- b) **Organizations of Clinic** (training/Effective referral systems)

b.1 **Outreach** by Mr. Benjamin de Leon  
(Philippines) and  
Dr. Debhanom Muangman  
(Thailand)

b.2 **Clinic Management** by Dr. Johan A.M.  
Thambu (Malaysia)

c) **Traditional Birth Attendant** by Dr. J.Y. Peng  
(IFRP)

**Dr. D. Malla:**

The experience in Nepal was, that delivery of Family Planning Services through Camps can obtain the maximum output or result in a given period of time. It was very popular. In 1973, the first laparoscopic sterilization camp was organized. The reports or results were encouraging. Number of cases steadily increased. In 1978—79, 10 camps had 11,629 cases for laparoscopic sterilization. Total cases of vasectomy was about 55,000. These camps were organized by different agents as MCH & Family Planning Project, Family Planning Association, Integrated Health Project, Social organizations are helping bringing clients to and from the camps. Nepal is now considering using the camps for other family planning services like IUD insertion and delivery of injectables. Different aspects of camp organization:

1. Planning of camp
2. Implementation
3. Follow-up
4. The aspect of organization.

After going into detail on every aspect, she made the statement "that Camp is definitely an effective means of delivery of family planning service in the remote and difficult areas of the country, where medical facility is limited.

**Mr. Benjamin de Leon:**

His presentation was about the "Outreach Project", and how it related to the clinic service component of the Philippine Population Programme, and also touched on the Training and referral system which supported the outreach project. The outreach project was launched in 1976, to provide family planning information and services to the barangays in the rural areas. It is managed by the local governments. He then described the criterion for recruitment of personnel and types of workers and clinics.

The delivery system which is comprehensive and cohesive is moved into the institutionalization of it by adoption of a coordinating guideline for family planning service delivery promotion and service delivery. Rules and functions of clinic personnel and field-workers in each municipality are identified in the guidelines.

The training for the full-time Outreach Worker is a continuing process, with a basic pre-service training focussed on Country organization, family planning technology, human relation and communication. After this training the workers may be licensed to dispense pills.

The Barangay Supply Point Officers have been trained informally on a person to person basis, by the full-time outreach member. There is also a formal training for 3 days and includes family planning technology, information and moti-

ational skills recording and monitoring system. Nurses and midwives were trained on comprehensive family planning technology (pill dispense and IUD insertion). Physicians were given special training as a back-up to the trained nurses and midwives and in sterilization procedures. The community based population field workers and the Barangay Supply Point Officers motivate and refer clients to service centres. On the other hand the clinics refer clients who need medical follow-up or re-supply of pills or condoms to the Field Workers. At the end of his presentation, Mr. Benjamin de Leon made the remarks: "that the Outreach Projects has become a viable and meaningful course of bringing Population and Family Planning information and services within easy reach of married couples even in the remotest areas.

**Dr. Debhanom Muangman:**

Dr. Debhanom's presentation went on Organization of Clinics and how to give good family planning services to the people, so that there are not too many drop-outs. Essentials for these services are:

1. Necessity of services to every person.
2. Clinics should be able to give a comprehensive family planning service.
3. There should be adequate number of clinics in the community.
4. A continuity of service with good referral, good follow-up and good re-supply of contraceptives should be maintained.
5. Quality of Service be maintained, it should be reliable and be backed-up by professional competence, that is adequate for the whole community.
6. Administration and performances of family planning workers must be efficient.

He then discussed the situation of family planning services as it is today in Thailand. There are 3 stages:

1. Physicians play a dominant role.
2. Paramedical personnel play a dominant role.
3. Community people play a dominant role.

Each stage has its advantages and disadvantages. For developing countries, where there is a shortage of physicians, Stage 2 will do better. But the best is then when it will come to Stage 3. There should be 2 groups of providers e.g. the smaller medical group and the larger non-medical group. These 2 groups should work closely and do not come into conflict with each other. Everyone will have its own role in the service, adjust to his/her profession. And this system of work should be backed-up by the clinics.

**Dr. Johan A.M. Thambu** from Malaysia spoke on Clinic Management. He discussed the situation in Malaysia. He first explained the structure of the National Family Planning Board, Malaysia, which was set-up in 1966 under the Prime Minister's Department. He then discussed the National Family Planning Programme schedule, starting from the year 1966—1976 and year 1976—1986. After giving a sketch of the National Family Planning Service coverage he gave a picture of the clinic structure and staffing, pattern of clinic by type in the action programme. A special clinic service will be provided by the Na-

tional Specialist and Medical Research Centre of the National Family Planning Board. This will include activities like consultation, counselling, minor surgical procedures, clinical research, teaching and medical record keeping. This centre will also serve as a referral centre for all problems related to contraceptive usage (pills, IUD, injectables) and do surgical contraception for male and female. Other activities are: consultation and counselling in infertility and endocrine disfunction, cancer detection, ultra sound and low dose monography. Regional Specialist Centres will be set-up in Johore Bahru, Penang, Ipoh and Kota Bahru and would provide the same services but on a smaller scale. Speaking about training of family planning personnel, he explained that various types of training courses have been conducted not only for members of the Board but also including personnel coming from the Ministry of Health, FFPAM, State FPAs and other non-governmental agencies. The curriculum have been standardised by the Board. On the Clinic Management of acceptors he gave a description of the procedures receiving new acceptors by the nurse and the prescription of contraceptives. The cafeteria system is followed.

The last speaker for the day was **Dr J.Y. Peng** (IFRP). Traditional Birth Attendants (TBAs) in Indonesia, Malaysia, Thailand, and Philippines play an important role in the maintenance of Maternal Health. There is a sizeable and identifiable group of these old women. Dr. J.Y. Peng shared his experiences in the TBA project in Malaysia (starting in 1969). He described the training of these TBAs and the special project to utilize TBAs for the National Family Planning Programme in Malaysia. Simple illustrated delivery records are designed for TBAs to record the deliveries they attend. At the end of his presentation Dr. Peng suggested the Organization of an Agency to promote the cooperation and coordination in one of the four countries mentioned before. The first step, he said, would be to identify key people and organizations in each country. Then to organize meetings with them to consider objectives, activities and future plans.

Summary of the discussions that followed the presentations:

1. In four Asian Countries, TBAs are being trained and utilized in their national programme.
2. A proposal was made to establish a coordinating organization for TBAs.
3. A committee outreach survey is in process in Philippines despite the low salary, yet these outreach workers took the leadership.
4. IN the four points planning for outreach workers, effectiveness must come before efficiency.
5. TBAs can be used to improve rural health service by reducing maternal mortality and infant morbidity. TBAs must be made aware of modern health service and to refer cases earlier.

Thursday, 19 July 1979

The morning plenary session was chaired by Dr. Suporn Koetsawang. Speakers on **TOPIC IV, "IPPF-ESEAOR MEDICAL COMMITTEE FINDINGS"** were **Dr J.B. Catindig** and **Prof. Ho-Kei Ma**. Their presentations went on a report of the Panel on "**EFFECTS OF STEROIDAL CONTRACEPTION ON ASIANS**" held by the Regional Medical Committee IPPF-ESEAOR.

**IPPF** is concerned just as other agencies are that increasing use of western contraceptive technology in developing countries may be inappropriate or unsafe, given the health and dietary condition of users in these countries. The initial meeting of this panel was held in Hong Kong in September 1978, and brought together 12 research contributors and 11 guests research scientists. There were 48 on-going projects related to the study of the effects of steroidal contraceptives identified by the panel. Some of the following recommendations could be used as guidelines for family planning workers (the proceedings of this workshop is not yet available because many of the projects are still on-going).

#### Statement of Recommendations

1. Re-affirm the safety of Depo Provera (DMPA)  
This has the advantage of increasing milk production. It causes less derangement of metabolism of carbohydrates, liquids, aminoacids, vitamins and coagulations. When compared to the oral combined preparations of oestrogen and progestogen.
2. The existence of menstrual disturbance is confirmed.  
This has been identified as the main cause for non-acceptance.
3. For users of combined oestrogen-progestogen preparations there are changes in coagulation functions carbohydrate liquid aminoacids and vitamins metabolism but the clinical significance of these changes in Asia is still not well established.
4. Ideally combined oestrogen-progestogen preparation should be used for short-term spacing.  
In the later part of the reproductive life, it should be prescribed with caution.  
In CBD programmes, it is advisable that women above the age of 35 are fully assessed by a doctor before the combined O.C. is prescribed.
5. There is a need to be aware of the psychosexual effects of steroidal contraceptives.

#### Other Findings

1. Excessive weight gain in DMPA users
2. The oestrogen content of cycloprovera is viewed with caution
3. Low dose progestogen pills (lynestrenol and d-Norgestrel) has low acceptance and continuation rate.
4. No ideal combined oestrogen-progestogen preparation.
5. No major advantage of paper pill noted.

The next Plenary Session on **Topic V**, was chaired by **Prof. Mark Cheng Chi Eng** (Singapore), as the Session Coordinator. The topic was "**Maternity Care Monitoring -- Where next**". Speakers were **Dr. T. Agoestina** (Indonesia) and **Dr. Roger Bernard** (IFRP).

Dr. Tina Agoestina reported on the Maternity Care Monitoring Study conducted in Indonesia by the Coordinating Board of Indonesia Fertility Research Study (BKS--PENFIN). A variety of problems came out from the preliminary result of the Maternity Research Study. These should be tackled

in the near future. Some of the recommendations were as follows:

1. It is urgent that MCM for Indonesia be expanded to include representative samples, and that the Study design should reflect the actual condition that prevail in the country.
2. The Government of Indonesia through the Ministry of Health and the Family Planning Coordinating Board should be actively involved in MCM.
3. A continuous period of time (at least 5 years) for data collection is necessary in order to enable the researchers to compare and evaluate the progress of different levels of Maternity Services from year to year.

As background material she read out the following facts:

The total population of Indonesia is 140 million.

The crude birth rate is 40%.

The deliveries are conducted at hospitals and at peripheral health centres but in the remote areas births are helped by the TBAs, who had no training.

The accurate maternal mortality rate is still unknown. Only figures from teaching hospitals or top referral hospitals are available, even then, figures often differ in meaning due to different definition and/or different recording systems.

**Dr. Roger Bernard:**

In his introduction, Dr. Roger Bernard said:

the term "Maternity Care Monitoring" was coined to stress the need and potential of routinely completing a record that would lead to systematic feedback. As part of the clinical record, physicians and midwives routinely collect data that is returned to them in the form of pre-programme computer tables organized around four (4) major themes:

- a) Family formation and reproductive experience
- b) Family health and lactation
- c) Clinical management and outcome of the current delivery including antenatal care and
- d) Desired family size and contraceptive intention/practice.

This systematic analysis of information led to the recognition of a new data source of an inter-disciplinary nature that could be provided rapidly and cost-effectively. The 1st (first) National experience with the National Maternity Record, was in Colombia. The result was used by the Ministry of Health to identify areas needing improvement in the Colombia Maternity Care System.

Soon the Health theme was linked with the MCM, because for monitoring the reproductive histories of women who deliver need the systematic identification and quantification of high risk pregnancies and of risk factors in a specific centre and in various maternity care.

Dr. Bernard reported on the analysis of data from 24 maternity centres in Asia, each with records on 700 or more consecutive deliveries. Since a minimum time — span of recording, one year was needed, the analysis was further restricted to four Asian centres for Trend Studies.

Tables of studies can be found in the full text of the paper. He stressed the need for local standards of maternity care in

developing countries, because although it is desirable to base standards or facts known facts are frequently largely irrelevant. But obtaining relevant facts regarding maternity care within developing countries, where variation in standard care are extreme is even more difficult he explained further. He suggested then ways to use data as standard in order to improve maternity services.

Studies of maternity care using a standard maternity record with programmed computer feedback have been found useful. Strategies for implementation of MCM must vary from country to country because of the diverse pattern of organization of maternity services. He then gave some advices and factors on using a computerised record system.

As conclusions and recommendations he stressed the following:

- The cost of poor maternity Care is large and incalculable.
- MCM describes a tool, which can maximize knowledge for improved maternity care and family health.
- in its applications it should improve in quality and cost effectiveness

Lastly he conveyed his message:

The IFFH with support from the UNFPA and the IFRP can now offer consultation to Ministries of Health to design country projects for MCM, which may be eligible for UNFPA and other financial support.

The Discussions on Topic IV and V are summarised as follows:

**Dr. Tina Agoestina**

Indonesia has experienced a fertility decline from 5.3 to 3.8 in the last few years. Indonesia is trying to have this system of MCM in the routine system of maternity monitoring but the problem is how to make this work-tool simple.

**Dr. Roger Bernard**

This system MCM picks up such changes as fertility.

- 1 It is a most delicate system to get answers. It is of tremendous national importance. To undertake a study there must be a formal Government request — outline. Your system, and a proposal will be made on how to help a formal grant proposal.
- 2 The MCM is a very elaborate form. This form has undergone 3 changes at recommendations of FIGO and WHO.
3. At present there are 4 ways to data collection system:
  - a) Census
  - b) Vital statistics
  - c) Social research
  - d) Health statistics

But now we have a new data collection system — You are presently discovering interdisciplinary data collection tool. MCM will be the future most effective routine collection of MCH work.

The Plenary Sessions on **Topic VI** was coordinated by

**Mr. Benjamin de Leon (Philippines). The topic was on "Is what we are Offering Acceptable?"**

**Dr. Haryono Suyono (Indonesia)** as the first speaker, started with the history of the family planning movement in Indonesia, the undersigning of the U.N. declaration on Population by President Soeharto in 1967 that resulted in the Political Commitments of the Government e.g. the establishment of the BKKBN in 1970.

Then he explained:

1. The functions of the BKKBN as the Coordinating Body in family Planning matters and
2. The operational strategies and commitments.

The growing number of acceptors through the years have accumulated to 14 million only for Java and Bali (1974) and the number of villages to be served (approximately 22,000), the growing number of Provinces to be covered, soon it became evident that the programme's administrative structure should be reviewed, and a new service delivery system to be devised.

Primary emphasis was to be placed on making family planning a village rather than a clinic oriented activity.

He further stressed that primary responsibility for managing and implementing a programme of fertility limitation, including motivating, recruiting and maintaining family acceptor was to be transferred from the Government to the people and their community. The second objective was to gradually broaden the scope of family planning from its narrow Birth prevention realm to more positive objectives of promoting overall family planning welfare by linking family planning with general development programme of the Government. He then widened out on the village family planning approach in Bali with the Banjar system.

A similar community involvement was also developed in Java. The first step is through the provision of contraceptive resupplies to those already using the pill and the condoms in the villages. Village contraceptive distribution centres (VCDC) have been created for these purposes in most of the villages in Java. The functions and systems of distribution of contraceptives of these Pos-KB (Family Planning — post) was then explained.

When in the beginning only old acceptors are served, more and more the village volunteers in the Pos-KB actively worked to motivate and recruit others in the community. They organized the so called village acceptors group. Non-family planning activities are undertaken (beyond family activities) such as various economic cooperation, rice and money saving programmes, home handicraft and others more.

The link between Pos-KB and the family planning Clinic is taken care by the family planning field workers. The Camat (sub-district head) becomes the focal point for ensuring that communities themselves become involved in.

For the outer islands (outside Java and Bali) where the situations are somewhat different than Java and Bali, an alternative approach for reaching the village is still to be sought. For the whole National Programme, now a broader programme commitment has been adopted, that is the acceptance of small family norm. In order to broaden the appeal of fertility limitation, the BKKBN in cooperation with other Ministries of the Government will soon begin to employ the five (5) basic needs of all Indonesians; these include Health, Education, Employ-

ment income generation and status of women.

The second Speaker on the same subject was **Dr Azizan bt. Aiyub Ghazali "ACCEPTABILITY OF FAMILY PLANNING IN MALAYSIA"**. The family planning concept was basically presented in macro-economic terms in Malaysia. The approach was contraceptive and clinic based. In order to reach a demographic goal of lowering the population growth rate from 3% to 2% between 1966 and 1985. The families readily accepted the family programme. It was discovered that in the rural areas, service delivery was found to be more effective if it was to be integrated into Maternal and Child Health Service delivery of the Ministry of Health. This was realized in 1975 and family planning is part and parcel of MCH.

It showed a favourable acceptor rate in the areas with integrated service. To make it more attractive and acceptable and with visible benefits, the integrated programme is extended to nutrition and parasite control. Another important content is that people must see that some economic gain can be possible in the near future. They must see that they are part of the programme because they are actively involved in it. The use of some modern methods of contraceptive are officially supported by religious leaders. The acceptability of the various alternatives offered by the programme was related directly to certain factors such as:

- availability,
- economic,
- socio-cultural,
- religious,
- educational,
- age.

Dr. Azizan then went on into alternative methods and degree of acceptability and reasons for acceptability/rejections of various methods, and she concluded that: It is important to any family planning activity or related activity to study not only the most acceptable contraceptives but also the type of information and methods of their delivery to target groups in the context of socio-economic, cultural and religious situation.

The last plenary presentation was on "**INCIDENCE AND FOLLOW-UP OF TROPHOBLASTIC DISEASE**" (Topic VII) and **Dr. D. Malla (Nepal)** was the Session coordinator.

There were 4 speakers:

- Prof. Mark Cheng Chi Eng (Singapore)
- Prof. Ho-Kei Ma (Hongkong)
- Dr. Takashi Wagatsuma (Japan)
- Prof. Pei-Chuan Ouyang (Taiwan)

#### **Prof. Mark Cheng Chi Eng**

He made the observation that there is no universal agreement on the classification of trophoblastic diseases. The classification used in Singapore is Tow's classification, which was adopted in 1966.

In his conclusion he stated: epidemiological studies have shown that several factors as age, parity, socio-economic status, predispose to molar pregnancies. These risk factors may all be related. Large scale epidemiological studies are necessary to elucidate the relative importance and the relationship of the risk factors. The finding of apparent occurrence of edpidemics of moles is important as it suggests an infective etiology. Again this requires confirmation, Great importance

should be put on follow-up of mole cases for 2 reasons:

1. 83% of choriocarcinoma are preceded by a molar pregnancy and
2. the mortality rate of choriocarcinoma increases sharply with increase in interval between the occurrence of mole and detection of choriocarcinoma. It is logical to follow-up mole cases for up to four years because 95% of our choriocarcinoma are detected within four years.

#### **Prof. Ho-Kei Ma**

In her brief presentation Prof. Ho-Kei Ma discussed the objectives, the possible achievements and the problems of a Regional-wise or National-wise follow-up programme for patients with molar pregnancy. As an example she took the on-going Hongkong programme. She outlined the programme as follows: —

Objectives for the follow-up programme for mole patients:

1. To study the post-abortion MCG pattern.
2. To correlate the MCG regression pattern with the course of the disease.
3. To make early diagnosis of residual or malignant trophoblastic disease in mole patients.

Then she went on into the various steps of the protocol and continued on observing the problems of a multicentre follow-up programme, like:

1. wrong diagnosis
2. incomplete laboratory study: —
  - a) no sample
  - b) no delivery samples
3. loss to follow-up
4. communication

The possible achievements are:

1. selection of high risk mole patients for chemotherapy
2. a survival rate of higher than 95% of patients with gestational Trophoblastic disease.
3. reduction of cost of health care in the National programme.

#### **Dr. Takashi Wagatsuma**

The research of trophoblastic disease in Japan was organized in 1974 by the Ministry of Health and Welfare, with the establishment of a Task Force. Since then more than 30 Japanese University Hospitals and Medical Institutions took part. There are 2 possibilities on the development of hydatidiform mole:

1. that the hydatidiform mole develops either from an ovum fertilised with diploid sperm or from the duplication of an ovum fertilized with 23X sperm but detailed mechanism of this are yet to be clarified.
2. Immuno selection theory as a mechanism for the development of the hydatidiform mole.

He then explained on the various methods of diagnosing the hydatidiform mole. Or: the incidence of the trophoblastic disease in Japan he reported that incidence within different selected prefectures is fairly constant at a rate of 5 to 6 per 100,000 population and 3.5 per 1,000 live births. The incidence of the invasive mole and that of choriocarcinoma vary considerably in different prefectures. It is estimated that Japan (1977) with a population of 113,499,000 and number of live birth 1,755,032 have 5,000 to 7,000 cases of hydatidiform moles annually.

Follow-up formula for the hydatidiform mole is then explained. An intensive follow-up of individual cases after the evacuation of the mole from the uterine cavity is the only way to prevent or to detect the development of the invasive mole or choriocarcinoma in the early stages. Several different follow-up are recommended by various University Hospitals.

A patient with a molar pregnancy who wishes to have a child in the near future may proceed to plan the next pregnancy, provided that the following conditions are fulfilled: the urine HCG level must decrease after the evacuation to a level below normal R.H. (less than 20 IU/L) and must stay at that level for at least three normal ovulatory cycles.

The standard therapy against choriocarcinoma today is hysterectomy combined with chemotherapy.

#### **Prof. Pei-Chuan Ouyang**

Taiwan has an apparently high incidence of gestational trophoblastic disease. In the years 1951 — through 1978, 457 cases have been accumulated in the National Taiwan University Hospital. Prof. Ouyang described the evaluation on the variations in incidence according to the changes of period and a study comparison of the therapeutic results of destructive moles and choriocarcinoma either with or without chemotherapy. Summary of the findings were as follows:

1. 457 patients with gestational trophoblastic diseases were treated and investigated between 1951 and 1978.
2. The overall incidence relative to deliveries was 1:124. This figure was considerably higher than that of Western Countries. However the actual number of patients was not decreased, though a remarkable improvement in socio-economic status has been achieved in Taiwan in recent years.
3. The presence of gestational trophoblastic disease relative to total deliveries is substantially higher in the group of over 40 and in grand multiparas.
4. A high incidence is also shown in this locality from a stand-point of surgical specimen submitted to pathological examination.
5. The survival rate in hydatidiform mole and destructive mole, either with or without chemotherapy is generally good. In contrast, choriocarcinoma is quite malignant. The survival rate prior to chemotherapy was only 17.2% clearly different with destructive mole.
6. The histological diagnosis is completely acceptable however, its availability is limited because of the improvement in early detection and in early institution of chemotherapy in the occasion of malignant transformation. Accordingly, a practical and clinically oriented classification system should be adopted in this locality.

7. After chemotherapeutic intervention, the survival rate of choriocarcinoma has a definite value on cure of choriocarcinoma.

Due to length of the presentations, no discussion was held, on Topic VI and VII.

#### Display of Traditional Herbs

A display of traditional herbs used as contraceptives was shown in the waiting hall in front of the Conference Room by countries: Malaysia and Nepal.

Before breaking up for lunch, Dr. Sodhy gave clarifications on the group discussions that will commence right after lunch and ended on the next day, 20th July 1979 at noon.

The participants including Observers and Resource Persons will be then split into 3 (three) groups. Each Group was assigned the Task of Discussing Topics with the following guidelines:

#### Group I: Research into Service Delivery

1. Primary Health Care with Special Reference to Nutrition, MCH, Family Planning, etc.
2. Traditional Birth Attendants.
3. Alternative Delivery Systems for Family Planning (Example: ways to expand family planning through private practitioners).
4. Cost effectiveness of different delivery system.
5. Ways to gain insight into consumer perception of services.
6. Are the services we are offering acceptable?

#### Group II: Reproductive Risks

1. Perspectives Studies on Risks and Benefits of Contraceptives.
2. Retrospective Studies specially on Depo Provera.
3. IPPF-ESEAOR Medical Committee Findings. Some of the items that might be discussed are how to:
  - a) Define diagnostic criteria
  - b) What administrative infrastructure is necessary to mount prospective or retrospective studies.
  - c) What items of concern among Asian Users would warrant case control retrospective studies.

#### Group III: Maternity Care Monitoring and Trophoblastic Disease.

1. Maternity Care Monitoring – Where Next?
2. Traditional Birth Attendants.
3. Incidence and Follow-up of Trophoblastic Disease.

Among topics that might be discussed are:

- a) How many deliveries need to be monitored – a sample on all cases.

- b) How can MCM be carried out of institution and into village.
- c) Would a multicentre study of the epidemiology of trophoblastic disease be useful.
- d) How can more data be obtained on natural deaths?

For the results of the Group Session, please refer to the reports.

20th July 1979, Friday

The last Plenary Session was opened at 1400 hours and chaired by **Dr. Somboon Vachrotai**. The Agenda was: **Reports on Group Discussion**. Not many questions were raised. One observation came from Nepal:

- Nepal is interested to join the MCM Study. The old form is too big, but if IFRP can design a smaller form, Nepal has the capacity to undertake the Study.

Before the chairman of the Seminar, Dr. Somboon Vachrotai, officially closed the seminar, participants and observers/resource persons were given the time and opportunity to express their views regarding the seminar.

#### Dr. Pardoko:

On behalf of the participants thanked IGCC/IFRP for organizing the meeting. It was a stimulating and fruitful meeting. He also thanked the Thai Government, the participants, Dr. Sodhy and the Resource Persons.

#### Dr. J. Catindig:

On behalf of IPPF-ESEAOR

- 3 day workshop useful and important
- the programme implication-action, safety effectiveness and acceptability of oral contraceptives.
- IPPF/donor concern, because through the member association, a huge number of contraceptives distributed. IPPF's concern with safety User perspective of contraceptives, we must be concerned if the oral contraceptives we are offering is acceptable to the consumers.
- It is essential that the dollars invested in the programme is worthwhile.
- IGCC/IFRP/IPPF will meet to discuss the unmet needs.

#### Mr. Lloyd Emerson – UNFPA/UNDP:

- Those interested for funding for MCM Study should put in their request.

#### Dr. Jarrett Clinton – Population Council:

- Share the concern expressed
- Too much talk and emphasis on technology
- Need to think of user perspective.

#### Dr. Vitura Sangsingkeo – ICARP Asia

- Extremely pleased with the Seminar and the quality of the scientific papers.
- Will use extracts in their publication.

**Dr. Richard T. Mahoney — PIACT:**

- Found Seminar extremely useful.
- 4 years ago Ford Foundation — Greek Report.
- A series of recommendations.
- High priority — studies on contraceptive safety.
- Funding Agents/Research, this is the direction in which to move.

**Dr. Roger Bernard — IFRP:**

- A new organization, the International Association for Maternal and Neonatal Health (IAMANEH) being formed in Switzerland.
- Funding for Maternity Care Monitoring will increase in the 1980, as part of the activities for maternal and neonatal health.
- Funding may come direct from above association or through WHO or UNFPA.

**Prof. Chong Chun Hian (Malaysia):**

- Agreed with sentiments expressed by Dr. Pardoko.

**Dr. Malcolm Potts — IFRP:**

- Maternity Care Monitoring is the success story.
- Trophoblastic Disease — must get funding because there is a definite need to study this problem.
- Safety of oral contraceptives — useful information for management of programme and propaganda.
- Group discussion especially Group I has raised many

sensible questions.

- Questions that IFRP has not looked into in its research activities.

**Dr. L.S. Sodhy — IGCC**

- meeting of 65% success
- the evaluation will come in 2 years from now if the decision made now

- thanked Dr. Somboon and Staff

IGCC and Staff

Dr. Potts and Staff  
Dr. J.Y. Peng

- Senior Government Officials
- Participants, Resource Persons and Active Observers
- Hotel/Management

**Dr. Somboon Vachrotai**

In his closing speech Dr. Somboon Vachrotai said among others:

- benefits we earn from Country Papers, presentation of Resource Persons, Participants and from discussions in the Group Meetings will permanently stay with us.
- we will certainly apply them in our programme — to make our common goal of health activities highly successful.
- high appreciation to IFRP/IGCC Steering Committee, the Chairman/Session Coordinators and the Secretariat Group.

Finally he expressed the hope:

- will work hand in hand to try and keep great cooperation and collaboration together.

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# GROUP SESSIONS

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## OBJECTIVES FOR GROUP DISCUSSIONS

### I. Objectives

- a) In-depth study and the exchange of experiences of the current programme.
- b) Assessment of the research needs in the following:
  - i) Contraception (include all forms of contraceptive technology) e.g. pills, IUD, sterilization, abortion, etc.
  - ii) MCH/Family Planning/Nutrition/Delivery Service System, etc.
- c) Identification of Research Projects in accordance with the country priorities.
- d) Formulation of the identified Research Projects.
- e) Assessment of the following:
  - i) Capability (resources, manpower, development, etc)
  - ii) Capacity for research nationally and internationally and to provide solutions.
- f) Evaluation of on-going research projects and making recommendation for possible future activities.

## GUIDELINES

### Group I: Research into Service Delivery

1. Primary Health Care with Special Reference to Nutrition, MCH, Family Planning, etc.
2. Traditional Birth Attendants.
3. Alternative Delivery Systems for Family Planning. (Example: ways to expand family planning through private practitioners).
4. Cost Effectiveness of Different Delivery System.

5. Ways to gain insight into consumer perception of services.

6. Are the Services we are offering acceptable?

### Group II: Reproductive Risks

1. Prospective Studies on Risks and Benefits of Contraceptives.
2. Retrospective Studies Specially on Depo Provera.
3. IPPF-ESEAOR Medical Committee Findings.

Some of the items that might be discussed are how to:

- a) Define diagnostic criteria.
- b) What administrative infrastructure is necessary to mount prospective or retrospective studies.
- c) What items of concern among Asian users would warrant case control retrospective studies.

### Group III: Maternity Care Monitoring and Trophoblastic Disease

1. Maternity Care Monitoring – Where Next?
2. Traditional Birth Attendants.
3. Incidence and follow-up of Trophoblastic Disease.

Among topics that might be discussed are:

- a) How many deliveries need to be monitored – a sample on all cases.
- b) How can MCM be carried out of institutions and into villages.
- c) Would a multicenter study of the epidemiology of trophoblastic disease be useful? What might it cost?
- d) How can more data be obtained on natural deaths?

## THE DISCUSSION REPORT FROM GROUP I (A & B)

The group discussed the topics given as guidelines for discussion.

I. The population who are to be covered by Primary Health Care varies from country to country, these are population in rural areas and urban poors.

There is a disparity in the development of health care services like nutrition, MCH & FP. In some countries FP services are better developed than MCH and in other it is the other way. These services should be integrated and provided as part and parcel of total health care service. The base line study of basic needs of the communities have not been assessed in some countries. The demand for types of service are to come from the community for the fulfilment of their needs; the demands can be created using the educational and development approach.

When the above problems are identified the research should be directed into the following aspects of PHC, MCH and FP Services.

i) In the organization of logistic supply the following points are considered:

- 1.1. The assessment of existing manpower and their utilization to be carried out. There are other group of personnels involved in health care service delivery like nurse midwife, TBA, local village worker — most of them are multi-purpose workers. As IEC is an integral part of health care service, teachers, religious heads, village leaders and students can be the available and useful manpower to deliver this service. Research can be carried out to find out how best they could be utilised.
- 1.2. The constrain in the establishment of supply of logistic support specially to remote areas are well recognized and research should be done on how the providers can overcome the constrains.
- 1.3. We should study whether the community worker could be trained as multipurpose worker. The analysis of the workload and performance of multipurpose worker should be made.

### II. TBA

We recognise that TBA are valuable aids in the delivery of health care service in countries of this region. They need some training and supervision. So the research are to be directed to:—

- i) To evaluate criteria for selection of TBA for training.
- ii) To expand the function of TBA as post partum use of uteronic drugs and pills.
- iii) Functions of the supervisory system to be evaluated.
- iv) Comparative study of performance and result of different health worker as Nurse midwife, Trained TBA and Un-trained TBA.
- v) The maternal and infant mortality and morbidity of home delivery by TBA should be analysed.

vi) Studies are to be carried out on Traditional Medicine.

III. While delivery systems are considered, individual countries should use the particular mode of delivery system suited to them. One may be more useful to one than other.

In this aspect coordination of the different activities and systems seems to be more important. There is need for research in developing system for coordination at all level. The involvement of social organization like women's organization, youth organization, specially in IEC should be studied.

Private Practitioner' participation in the delivery of health care service can be very valuable. Not much has been done to mobilise it. So the Group feels that steps should be taken to use this resource in delivery of the health care service.

The cost effectiveness of the system are to be evaluated when the time calls for it after all the priority areas have been considered.

IV & V These both points are considered together as they are interrelated

The concept of FP should be understood as means to improve quality of life by consumer as well as providers and not merely the use of contraceptive and fertility control. The research is to be directed to.

- 1.1. In-depths analysis of existing datas are needed. They should be analysed by using the appropriate method to monitor the perception and attitude in term of MCH and FP Service.
- 1.2. New research are to be done with the involvement of social psychologists and behavioural scientist.
- 1.3. The studies are to be carried out to find out the acceptance and effectiveness of free against service with payment.
- 1.4. The assessment must be carried out at regular interval to make the datas more valuable. These information should be disseminated to consumers and providers as soon as possible to have effective planning and service.

## GROUP II

Studies on reproductive risks and benefit could best be conducted in situation where:—

- a) Comprehensive and systematic record systems of contraceptive use exist.
- b) A high prevalence of contraceptive use exists.
- c) And a mixture of fertility regulation methods exists.

Although a large data banks on the clinical experience of contraceptive use (eg. IFRP) and many research studies have been conducted (eg. IFRP, WHO) additional methodologies are needed to establish a general perspective on the risks and benefits of contraceptive use.

The Group reviewed the administrative opportunities presented by the careful mapping and recording of contraceptive users in Bali (Pop: 2.4 m, adequate prevalence of use of IUDs, Pills and sterilization) and the comprehensive organization of the INC, Philippines (Pop: 4 m, adequate prevalence of use of condoms, pills, IUDs and sterilization).

Among rural populations adequate standard diagnostic criteria for illness would be difficult to establish, but in each of the two above cases it would be worth carrying out a pilot study to determine if a sample of all deaths among fertile women could be conducted and a plausible explanation of the cause of death established.

Such a study might not expose any specific mortal risks of contraceptive use, but might demonstrate a difference in mortality between users and non-users of contraceptive methods and the documentation of such a difference would be valuable in establishing realistic perspectives on the safety of family planning when made available through systems of delegated medical distribution.

A retrospective study on the long term consequences of tubal ligation could be considered in Nepal, where several thousand women have now had voluntary sterilization through camps in stable, traditional society with a good possibility of adequate follow up. The children of sterilized couples might be compared to those of similar age whose parents were not sterilized and who continued to have children.

A long term follow-up of abortion, including subsequent contraceptive use, should be considered.

The Group saw a need to try and establish the broad significance of the information which is accumulating from metabolic studies of small groups of pill users.

The Group felt that the current studies and plans for studies by IFRP and WHO on Depo Provera were adequate.

### Discussion Group III

#### Maternity Care Monitoring and Trophoblastic Disease

The group discussed the following three items in the following order:

1. Trophoblastic Disease
2. Traditional Birth Attendants,
3. Maternity Care Monitoring.

#### I. Incidence and follow-up of Trophoblastic Disease

The discussion may be summarized as follows:

1. Is there a need for Trophoblastic studies?  
Unanimous answer by the group: Yes.
2. What kind of question should be answered?  
INCIDENCE STUDIES are needed that really cover several defined geographic areas. Based on Prof. Wagatsuma's report, such studies will have to include the question of the husband's age.
3. Identification of possible places to conduct incidence studies.

The participants discussed possibilities:

- Malaysia:  
Island of Penang with 1 million population might be a possibility. However, Prof. Chong feels that Malaysia's contribution might rather lie with the Laboratory aspect in Kuala Lumpur
- Japan:  
At least one prefecture might be identified for a neat

epidemiological study. Prof. Wagatsuma can give more details after investigating the matter.

Nigata with Prof. Ishisika  
Aichi Takeuci (?)

#### — Indonesia:

Bali is considered a likely place for such a study. 1 provincial hospital + 5 small hospitals. But as many traditional birth attendants exist, the study would have to tap this paraprofessional corps as well.

#### — Philippines:

Greater Manila would be the best place to conduct such study. With around 6'500 deliveries, annually, Prof. Aragon picks up 80 TD, whereas with around 30'000 deliveries Prof. Apelo picks up around 150 TD at Jose Fabella Memorial Hospital. As in metropolitan Manila virtually all deliveries are registered, both Prof. Aragon and Apelo may serve as resource for such project.

#### — Thailand

95% of deliveries occur at institution in Bangkok Metropolis. This means that a multicenter study could possibly be organized in downtown Bangkok, among the various universities/hospitals .. such "Ramathibodi, Chulalongkorn, Hospital for Women, and Siriraj.

#### — Hong Kong

Would be ideal but has now a problem of migration.

#### — Singapore

This place is recognized as an ideal place of study, if Government agrees.

#### — Korea

While not discussed, the group feels that Korea could be an ideal place, at least a given region.

#### — Taiwan

Taipei City would be ideal, but a problem of migration.

4. Preliminary Assessment could be made by travelling epidemiologist who would collect some information on feasibility and appropriateness.

5. A *small expert group* should be nominated to review, among others, all protocols now existing and that expert group may send its delegate to the Tokyo FIGO meeting in October, in order to learn from evolutions on that end.

#### II. Traditional Birth Attendants

The discussion may be summarized as follows

1. Because of the remarkable number of TBAs existing in four Asian countries:

Malaysia	3,000
Thailand	33,000
Indonesia	60,000
Philippines	30,000
around	125,000

a **coordinating body** should be created to work out more common knowledge on this corps of birth attend-

ance for these four countries.

2. Both IFRP and IFFH might be helpful in helping to develop simplified MCM systems adopted to birth attendants.
3. This instantly available woman power should be fully utilized for improving pregnancy outcome in rural areas.
4. The first meeting of coordination of TBA activities for these four countries could be held during the World Congress of FIGO in Tokyo if key people on TBAs from these four countries attend the congress. It is hoped that IFFH, IFRP or WHO could support the coordinating activities.

### III. Maternity Care Monitoring – Where Next?

The discussion may be summarized as follow:

1. The entire group felt that there is **great need** for each country not only to study but above all to monitor maternity care.
2. The countries that had acquired experience with the IFRP/FIGO maternity record also recognized that the Monitoring would have to be developed **from within** the country by the obstetrical profession and in intimate cooperation with and support from the Ministry of Health. The entire group rallied to this view.
3. **Reliability of recording and data collection coordination** would have to be major concerns of the group entrusted with the execution and supervisor of Maternity Care Monitoring.
4. The group also felt that the mid-term aim is to push monitoring from University centers into **regional teaching and referral hospitals** in a first step, and from there further into the health centers. Increasing simplification of the data collection tool along this **centrifugal implementation path** would be essential. However, each country would have to decide for itself on the scope of items to be monitored at each level of maternity care services.
5. The **present 903 form** was considered (by all participants in this group who had experience with it) too long for routine monitoring. However, its value for **initial studies** of maternity care was recognized and actually lauded as a **demonstration tool** of the potential of future national maternity care monitoring, whose major aim would be to provide a **mechanism of peer review** towards improving pregnancy outcome in a programmed manner.
6. The fundamental question as to whether **new data collection systems of maternal and child health services**, including obstetrical services (now being developed in certain countries with considerable expense) could be used for **monitoring** as well, was asked by the Philippine Delegation. The group felt that maternity care monitoring is as much an **attitude and spirit** as a **technological feature** and that new data collection systems

of service statistics should always be reviewed for securing the main features that elevate service statistics to functional monitoring of maternity care. Not using new data collection systems for monitoring is considered a great waste of resources both human and technical. The new data collection systems should be utilized by both health administrators and the service providers, i.e. the obstetrician and midwife. This is the only practical way to improve pregnancy outcome in a programmed manner with full involvement of the profession.

7. The discussion group then pushed for **concrete steps** to be taken to secure optimal development of maternity care monitoring in Asian countries. The following steps were suggested for IGCC countries to take action for the national development of maternity care monitoring systems:

- 7.1. Countries who have not yet tested the system are encouraged to conduct a few studies at the University Teaching Hospital and possibly some selected referral hospitals. IFRP/IFFH/FIGO may provide initial help to secure the implementation of such **studies**. Early feedback should be used towards developing a **monitoring system** in cooperation with the Ministry of Health.

- 7.2. The development of national maternity care monitoring systems is bound to the development of **simple maternity records**. Hence a national task force will have to be formed to make in-country decisions on the number and content of items to enter maternity records at the teaching/referral hospital level, the intermediate health center level and the most peripheral level. The group agreed that the nucleus of such:

#### **National Task forces on MCM Core questions**

should be instituted without delay and that the persons indicated below should call a meeting for establishing such task forces that would recommend the content of future MCM forms at the various levels of **MCH service delivery**.

- 7.3. In order to secure an orderly process of work that would be productive within a short time, the **IFRP/FIGO short maternity record (910)** should be the starting point for discussion. Certain university and other centers may want to adhere to the longer IFRP/FIGO 903 form (in use since October 1977) to do maternity care **studies** in addition to **monitoring**. But in general, the summary record (910) might provide a basis for use across ALL institutions (University/Provincial Referral hospitals and even certain Health Centers). In essence, the entire "institutional"; management pyramid should be uniformly monitored, at least experimentally, in order to identify the key problems that are to emerge from the analysis of the monitored centers. The following delegates have agreed to call the founding meeting of the task force described above:

Country	Delegates and suggested persons
Indonesia	Prof. S. Suleiman Prof. M.J. Hanafiah
Malaysia	Datin (Dr.) Nor Laily Aziz Prof. Chong Chun Hian
Philippines	Prof. G. Aragon Dr. F. Bayan
Singapore	Prof. Mark Cheng Dr. Ng Kwok Choy
Taiwan	Prof. Pei-Chuan Ouyang Dr. Fu-Min Chen
Thailand	Dr. Somboon Vachrotai Dr. Kamheang Chaturachinda
Nepal	Dr. (Mrs.) Malla Dibya Shree

Other countries in the IGCC region should be encouraged to adhere to the same procedure.

- 7.4. These task forces should come up with recommendations for a MCM-form giving precise information on which questions of the 910 form should be used in-country for the monitoring of Maternity C are across the entire "institutional pyramid" (List A: **retained** questions). A second list should give the questions that are to be eliminated (List B: **dropped** questions). A third list should give the questions that should be added to the national MCM-form (List C: **country-specific** questions).

- 7.5. The recommendations will be forwarded to Dr. Roger P. Bernard for an analysis of the three lists from the various countries and in order to design a **draft form** for the IFFH Executive Committee to meet during the Tokyo FIGO meeting in October 1979. The main aim of this **intermediate exercise** is to secure a broad comparability of the future national questionnaires across both Asian countries and indeed on a truly international scale. The recommendations of the task forces should be sent not later than 15th September to Research Triangle Park, in order to be able to do this analysis. The analysis will start on October 1st and no late comers can be considered for technical reasons.
- 7.6. The draft form will then be submitted to all countries concerned for final decision by each country. The major emphasis will lie on securing an **international common data core** and to organize country specific requirements in such a way that computer programming remains constantly effective. Country-specific items may be entered in country specific boxes.
- 7.7. All this work is preparatory for countries to develop a proposal for instituting "institutional MCM" that may require international funding. IFFH will help in developing such proposals if solicited.
- 7.8. It was agreed that steps 7.2 to 7.6 are to be considered as a high priority action to secure further decision making in Tokyo in October 1979.

It was also agreed that the Task Force will concentrate after the Tokyo meeting on the number and substance of questions that will have to be used in the "Primary Health Care Pyramid".

	Objectives	Research	Methodology
1. Primary Health Care, Nutrition MCH, FP.	To develop a creditable PHC System as a pilot project	1.1 Assessment of the basic need of the community 1.2 Planning and organisation PHC to meet the needs of the Community 1.2.1 Type of PHC worker 1.2.2 Roles and function 1.2.3 Training 1.2.4 Logistics: support 1.2.5 Supervision and link up with health delivery system	Sample Household Survey  Field Trials
	To identify and recruit suitable country development workers.	1.3 Study existing participation and organisation	Field Trials
	To review, improve and expand the PHC system	1.4 Assessment of utilisation and acceptability of service provided	Sample screening
2. TBA	To develop criteria for selection of TBA recruitment and training.	2.1 Review of existing criteria for selection and training of TBA	Inventory of TBA
	To identify future roles and training of TBA.	2.2 Review of present roles and practices of TBA	Sample interview and participating observation
	To identify and isolate beneficial effects of Traditional medicine.	2.3 Study of chemical control of traditional medicines	Chemical laboratory analysis
	To review, improve expand TBA programme.	2.4 Assessment of performance of TBA	Sample survey Study & re interview
3. Alternative delivery system including Cost-effectiveness	To improve existing and identify new system	3.1 Study the different ways and means of providing FP services.	Field study
	To develop a system including training for FP, other physicians participating in the delivery of FP service	3.2 To study involvement of GPs and other Physicians delivering FP service.	
4. Perception and acceptability	1) To develop/improve comprehensive programme which reflects the need of the people and therefore emphasising a humanistic approach to develop.	4.1 Assessment of acceptability concept of programme as well as delivery system including service fees 4.1.1 providers 4.1.2 consumers	KAP
	2) To reorientate and retain providers.  To improve and develop innovative IEC programme to effectively communicate the concept of the programme.	4.2 Evaluation of existing IEC with its various components	Field study

Name of Country	Oral Contraceptive	IUD	Injectables	Sterilization	Abortion	Services Delivery	Reproductive Anatomy
Indonesia	<p>Prospective study are acceptability and safety on hospital cases. Findings:— Provision of creditable back up support services increases acceptability/safety.</p>	<p><b>Completed</b></p>				<p>Longitudinal, time motion study to evaluate integrated FP/MCH activities &amp; personnel utilization. Findings show that there is under utilization of personnel due to training therefore need to review curriculum &amp; develop multi-purpose family health nurses.</p>	<p><b>On Going</b> Prospective sociological study on the couple as a biological unit and etiological factors.</p>
		<p><b>On Going</b></p>		<p><b>On Going</b> Prospective Study on safety/failures/effects in 1000 hospital cases.</p>	<p><b>On Going</b> Prospective epidermiological study of the incidence of abortion using Randomized Response Technique.</p>		
Malaysia	<p><b>Completed</b></p> <p>1) Clinical trials to test efficacy of various types of OC. Finding show that low dose containing going ethynyl oesgradiol is suitable with minimal side effects.</p> <p><b>On Going</b></p> <p>1) Metabolic studies among pill users. Preliminary results showed favourable picture of low dose pill in relation to carbohydrate and lipid metabolisms and coagulation factors</p>	<p><b>Completed</b></p> <p>1) Several case studies on efficacy/side effects / complication. Preliminary results show favourable result for copper T.</p> <p><b>On Going</b></p> <p>1) Use of paramedics in IUCD insertion. 2) Study effectiveness of sutured IUCD (Lippe and Copper T) immediately after postpartum or delivery.</p>	<p><b>Completed</b></p> <p>1) Prospective study on efficacy. Findings common with other studies that menstrual irregularities were main reasons for termination.</p> <p><b>On Going</b></p> <p>1) Comparative prospective study on Depo and Norigest in terms of acception, tolerance, side effects.</p>	<p><b>Completed</b></p> <p>1) Study of psychosexual effects of vasectomy. Findings show that anxiety coordinates with parity. 2) Clinical studies on various types/methodology.</p>	<p><b>Completed</b></p> <p>1) Case studies of hospital records on septic abortion. 2) Prospective and retrospective study concluded that majority of those seeking induced abortion were utilizing western medical service.</p> <p><b>On Going</b></p> <p>1) Epidemiological study do determine extent of morbidity as a result of abortion.</p>	<p><b>Completed</b></p> <p>1) Various follow-up studies on effectiveness of services offered. 2) Evaluation of integration with MCH showed that MCH services were not affected negatively by additional work load. 3) Various KAP studies.</p>	<p><b>Completed</b></p> <p>1) Case studies showed that H. Mole have varied diverse clinical presentations and mimics systems of threatened abortion making early diagnosis difficult. 2) Case studies showed that 6—10% of H. Mole would progress to choriocarcinoma and the risk increases with parity and age.</p>

Name of Country	Oral Contraceptive	IUD	Injectables	Sterilization	Abortion	Services Delivery
Thailand	<p style="text-align: center;"><b>Completed</b></p> <p>a. Prospective on combined. Finding showed that the combined pill with the lowest dose so as to produce the least side effects is 6-levonorgestril 0.15 mg. + EE 30 mg. and therefore, should be offered in National programmes.</p> <p style="text-align: center;"><b>On-Going Research</b></p> <p>Prospective clinic cases on safety of low dose on lactating women. Preliminary finding shows 1.d. does not suppress lactation.</p>	<p style="text-align: center;"><b>On-Going</b></p> <p>1. Epidemiological study on relation of IUD with PID/Ectopic Pregnancy.</p>	<p style="text-align: center;"><b>On-Going</b></p> <p>1. Epidemiological study on relation of DMPA usage on incidence of Cervix, corpus, ovary, breast, liver.</p>	<p style="text-align: center;"><b>Completed</b></p> <p>Prospective to compare methods of sterilization laparo-electro, laparoring. Finding shows least complication using non-electrical method but past operation pains.</p>	<p style="text-align: center;"><b>Completed</b></p> <p>Epidemiological study on incidence of illegal abortion. Study recommends liberalization of existing laws to prevent the attendant complication of criminal abortion.</p>	<p style="text-align: center;"><b>On-going</b></p> <p>1. Pilot Project to find feasibility of utilization of non-physician health personnel (midwives) in IUCD insertion. Finding shows that there was no statistical difference in efficacy between physicians and midwives and therefore more midwives should be trained in IUCD insertion.</p> <p>2. K A P Survey amongst trained and untrained TBA on Family Planning activities. FP Programme should train TBAs.</p> <p style="text-align: center;"><b>On-going</b></p> <p>1. Pilot Project to integrate FP with immunization component of MCH programme.</p>

Name of Country	Oral Contraceptive	IUD	Injectables	Sterilization	Abortion	Service Delivery
Taiwan				On-going		
Japan		<p><b>Completed</b></p> <p>Case study on efficacy/ side effects. Findings in paper.</p>		Case Study (IFRP)	<p><b>Completed</b></p> <p>Case study to study effect of new PG Analogue. Findings show that this is relatively effective.</p>	
Korea						<p><b>On-Going</b></p> <p>Evaluation of various management and organizational aspects of Primary Health Care at the village level.</p>
Nepal	<p><b>Completed</b></p> <p>Case studies to analyse efficacy/side-effects of various methods. Findings higher continuation with IUCDs &amp; Depo.</p>					<p>Pilot study to determine acceptability / continuative rate of acceptors in clinic based and community based delivery system</p> <p>Finding:— Community based more favourable. Nepal service delivery community now.</p>
Philippines		<p><b>On-Going</b></p> <p>Prospective studies to analyze efficacy/side effects of various methods.</p>				

# INDONESIA

## Country Paper

### INTRODUCTION

The Indonesian National Family Planning programme recorded a substantial achievement in terms of number of new acceptors in the last eight years since its initiation in 1971. The ultimate goal of Indonesia's family planning programme is the wide spread adoption of a small family norm. In quantitative terms it is striving to reduce fertility as measured by CBR by fifty percent by the year 1990 (instead of the year 2000 as it was planned.) from 1971 level of approximately 44 per thousand.

To reach the goal the programme is planned to be executed through three broad phases. The phasing of the programme implementation goes in line with the other sectorial development plans, which again are integral parts of the National Development Plan in Indonesia. Those three phases are:

- (1) A short-term phase of 5 to 10 years of intensifying informational and educational activities to introduce the family planning concept and establish contraceptive services at the grassroot level. At the same time the programme is laying the foundations with and private groups to integrate the introduction of the idea of small family norm into their development programmes.
- (2) A medium-term phase of 10 to 25 years which seeks to completely integrate most of the population with existing government developmental programmes. In this context each ministry is expected to devote part of its resources and manpower to combatting the population problem through its own funded and directed programmes. The role of the BKKBN (National Family Planning Coordinating Board) would be primarily that of coordinating and orchestrating the various programmes to ensure that the overall population policy is implemented.
- (3) A long-term phase which creates social, economic and psychological conditions wherein the small family norm can feasibly become an integral part of the Indonesian way of life. It has actually been initiated as an operational programme component since the last few years, but it requires many more years to accomplish. As an output of

the overall national development programme we expect the country to progress along the road to modernization in such a way as to support the ultimate population objective of a small family.

To implement the three-phased strategy, the following activities become the essential parts of the programme:

- (1) Continued efforts to expand new family planning acceptors as possible. The record shows that up to date accumulatively more than twelve million couples have accepted family planning since the initiation of the programme in 1971. In the next five years another twelve to fourteen million couples of acceptors are expected to be recruited.
- (2) Increased efforts directed at better maintenance of acceptors. Up to date more than five and a half million couples in Indonesia are practising family planning, of which around 64 percent using oral contraceptives and 27 percent using the intra-uterine-device. At the end of the next five-year period it is expected to have twelve million couples practising family planning.
- (3) Incooperate the efforts of accepting small family norm through governmental apparatus and through existing social and cultural institutions.

In the context of expansion of programme coverage the traditional clinic-base family planning programme has generally been shown to be poorly suited to our needs since the majority of our people live in rural areas where clinics, no matter the number, are not readily accessible to couples with need for services. To cope that problem various efforts have been experimented. One form of delivery system is to have one villager designated as a person to whom pill and condom users should turn periodically to obtain contraceptive supplies. To date this scheme is found in countless villages throughout Java. Yet no two resupply schemes are alike. In fact the programme has not tried to adopt or promote a single model. Instead, it has encouraged the villagers to develop a system that suits the needs and interests of the communities themselves. Another form emerged as a modification of the above one, and that is the existence of the "acceptor-groups", each of which designate one person who represents the group as a voluntary family

planning worker. Although these persons are not paid, the role provide them with increased prestige in the eyes of the community. They gain an important social status in their community. In fact they have considerable responsibilities for seeing that everyone's supply of pills or condom is obtained from the clinic or village-depot and is distributed properly to the women in their group. They also play an important role in keeping track of current users, on their use of contraceptives and in reporting dropouts and suspected pregnancies to the field-worker or nurse midwife. To keep these acceptor-groups alive a number of social activities are conducted by the group, like lottery, money saving etc. which attract new members and encourage old members to continue using contraceptives.

The programme in Bali has adopted another type of resupply system, which is incorporated in the traditional activities in the hamlet or banjar. A monthly meeting of the banjar attended mostly by men, includes population problem in the discussions and this meeting is used for resupply of contraceptives through the husbands.

The government seeks to encourage those various kinds of approach and is trying to replicate their success elsewhere in the country. As of this year the programme is expanded geographically as to cover all the 27 provinces in Indonesia. It requires strengthening of the management of the national programme which brought about consequences of inflating the organization both at the central as well as at the provincial level. In addition the national programme has widened its scope of function by initiating "beyond family planning" programmes, that support the family planning programme. These are and will be dealing among others with the legal aspects of the population programme, nutrition family planning programme. The involvement of women in the effort for increasing the village family income, etc.

In the light of the experience gained by the programme to date an increasing attention has been devoted to the use and the side-effects of use of contraceptives used in the programme. Data on side-effects are compiled for careful evaluation and assessment. This paper contains some reports on the use and side-effects of various contraceptives in Indonesia.

### The Programme Achievement

The acceptance records show that the national family planning programme has gained an increasing number of new acceptors, but they show a gradual decreasing proportions of

those accepting the intra uterine device since the initiation of the programme. The percentage level was 54—7% in 1970 and decreasing gradually to the level of 18.3% in 1979, while the percentage level of oral pill showed an increasing trend from 27.5% to 68.8% for the same period. Our record of current users shows that 26.96% of the eligible couples are still using the IUD and 64.42% the oral pill in 1979. In absolute numbers it could be stated that about 1.1 million couples of the accumulated 2.6 million recruited for IUD have dropped out, while for oral pill the figure was 5.3 million couples out of 8.9 million, which shows a higher continuation of use of IUD over oral pill. These figures refer only to the use of pills distributed through the programme which are limited in types and composition. The use of other pills available in the free market has yet to be studied.

Quarterly independent samplly surveys showed cumulative drop-outs rates for respectively 12, 24 and 36 ordinal months of 10.2%, 20.4% and 25.8% for IUD and 35.8%, 52.9% and 67.7% for oral pill.

The reasons for drop-out from IUD after the 36th ordinal month were psychological (11.2%) followed by expulsion of the device (7.1%), accidental pregnancy (2.4%) and want to have another child (4.2%). The reasons of drop out from pill were psychological (15.3%), health (12.3%), accidental pregnancy (5.9%) and want to have another child (17.4%).

From the above statistics we could conclude that although a large number of new acceptors have been recruited the performance of use of the pill as well as the IUD still has to be improved.

Research and studies for the improvement of the performance have already been initiated in recent years by various universities in Indonesia. In the following chapters the findings of some studies are presented. Research and studies on contraceptives are being conducted by various universities in Indonesia to back-up the national family planning programme. Some of the results are presented here, dealing with the intra uterine device, the oral pill, sterilization and the incidence of trophoblastic diseases.

#### a. The Intra Uterine Devices

IUD is one of the effective contraceptive methods which has both advantages and disadvantages.

TABLE I

Advantages	Disadvantages
1. High Effectiveness.	1. Possibility of Pregnancy with IUD in situ.
2. Long-term duration.	2. Unsuitable to medesty and concerned with menses.
3. Reversible.	3. Unsuitable to a certain culture or religious back ground.
4. Suitable during lactation.	4. Pain or Discomfort and Insertion.
5. Preconceptive.	5. Non-self Administration.
6. Coitally independent.	6. Presence of Contra Indication.
7. No sexual effect.	7. Side effects: bleeding, hypermenorrhea, uterine cramps, infection, anemia, perforation, etc.
8. No serious effect on General Health.	8. Possible Effect on fetus (medicated IUD).
9. No Continuous Supply required.	9. Medical Personnel, Clinics and Instruments are required for providing and Follow Up. (6)
10. Relatively Low Cost.	

After nearly two decades of use, the IUD remains "a generally safe, effective and useful form of birth control".

The number of women using IUDs is growing slowly but steadily. Despite extensive experience and continuing research in both developed and developing countries, some of the original problems of IUD use remain unresolved and some of the promising new solutions remain unproven. (5)

Several attempts have been made to improve the effectiveness and acceptability of the inert intra uterine device. The findings suggest that the performance of inert IUDs may not be improved (2) and further progress can be expected only in development of bioactive and medicated devices.

Experience with the IUD throughout the world has demonstrated that within certain limits clinical and individual factors may have more impact on continuing IUD use than the design of the device itself.

The skill of the health personnel, whether physician, midwife, or other auxiliary, and the care and follow-up provided may produce more satisfied users than does the latest permutation of device.

To ensure best results, proper insertion is crucial. The IUD must be inserted gently and high into the uterine fundus.

The geometric factors which adversely affect IUD performance are predominately those resulting from an unfavorable relation between the geometric parameters of the IUD and those of the endometrial cavity. (3)

The most appropriate time for IUD insertion, first provided by Gravenberg in 1931, is that IUDs should only be inserted immediately after menses.

As Gravenberg pointed out, this assures that the woman is not pregnant. Insertion during or immediately after menstruation has other advantages: the cervical is dilated, the endocervical canal is soft, and any bleeding produced by insertion is masked by normal menstrual bleeding.

The World Health Organization has noted that limiting IUD insertion to the menstrual period may not be a practical approach in large-scale family planning programmes. (7)

In the interval period of a woman, the best time to insert an IUD is probably the time she appears in the clinic or health center to request it, regardless of timing of her menstrual cycle except if there is contra indication.

In the last decade investigators have found that IUDs can be successfully inserted after delivery, both in the early and

later post partum period, and immediately after abortion.

Research is now underway to develop postpartum IUDs that will resist expulsion and post partum inserters that will minimize perforation and misplacement.

There are obvious advantages in providing an IUD immediately after delivery for the woman who wants this protection rather than insisting that she make a return visit which may be difficult for her. (5)

## RESULTS

During the first year of the official government supported effort in family planning in Indonesia (1969), the majority of new acceptors (55%) selected the IUD. Pill acceptors consisted some 27% of the total compared to 18% for the condom and other methods.

By 1977–1978, the situation had reversed itself. New pill acceptors were by and large the majority (72%) followed by the IUD (19%) and condom and others (9%).

The programme has been recruiting each year younger women with lower parity. At the start of the programme, the average new acceptor was about 30 years of age with 3,5 to 4,2 living children.

By 1977 the average age of acceptance had declined to 26.5 and average parity had declined to 2,4–2,8 living children.

Throughout, IUD acceptors have tended to be slightly older with higher parity. The attractiveness of the IUD of this group of women is due to the relative finality of the method, compared to the pill, in preventing unwanted or further pregnancies.

In terms of continuation rates, a Java-Bali wide survey in 1976–1977 revealed that after 12 months of exposure, some 64% of programme pill acceptors continued using that method whereas 90% of all IUD acceptors did. After 36 months of exposure all but 32% of all pill acceptors had terminated use of the first method of acceptance, for the IUD only 25% had.

In order to strengthen the contribution of the IUD in assisting the Indonesian National Family Planning Programme achieve its objective of a 50 percent decline infertility between the years 1970 and 2000, several decisions have been made which will be implemented over the coming years.

A device more superior to the present Lippes Loop should be introduced into the programme (4).

Research on various new IUDs in some teaching centers had been done, plain latex leaf, Cu T 200 & Cu 7 200, Multi-load Cu 250 IUD and Progestasert.

**TABLE II**  
**INERT IUDs (PLAIN LATEX LEAF VERSUS LIPPES**  
**LOOP) (DOUBLE BLIND STUDY) 1976 – 1978**

	Plain Latex %	Lippes Loop D %
Mean Age	26.5	26.2
Mean Parity –	2.6	2.5
<b>Side effects:</b>		
Intermenstrual bleeding:		
– spotting	10.3	19.4
– moderate	6.0	6.5
– severe	0.0	0.5
Dysmenorrhoe:		
– mild	7.1	7.5
– moderate	1.1	0.5
– severe	0.5	0.5
Intermenstrual pain:		
– mild	4.9	8.6
– moderate	0.0	1.1
– severe	0.0	0.0
Leucorrhoea	10.3	5.3
Infection	0.5	0.0

This study showed that the new inert Plain Latex Leaf IUD has higher pregnancy rate but lower percentage of bleeding and pain than the Lippes Loop D.

**TABLE III**  
**REASONS OF DISCONTINUATION, CU 7 200 AND CU T 200 1975 – 1978**

a.

Reasons of discontinuation	Cu 7 200		
	1 year %	2 years %	3 years %
Pregnancy	1.0	1.9	1.9
Expulsion	2.9	3.8	3.8
Reasons of Removal:			
– bleeding and pain	1.7	2.9	2.9
– medical indication	1.0	0	0
– planned pregnancy	3.9	11.5	17.3
– personal	2.9	6.7	6.7

b.

Reasons of discontinuation	Cu T 200		
	1 year %	2 years %	3 years %
Pregnancy	2.0	3.0	3.0
Expulsion	2.0	2.0	2.0
Reasons of Removal:			
– bleeding and pain	2.0	2.0	2.0
– medical indication	0	2.0	2.0
– planned pregnancy	1.0	11.9	13.9
– personal	5.9	7.9	7.9

The effectiveness of IUDs Cu 7 200 and Cu T 200 is the same in the period of 2 years and 3 years of use. (1)

Medicated Progesterin IUD (Progestasert) are ongoing studies in some teaching hospitals in Indonesia.

Multi Load IUD has been distributed by the National Family Planning Coordinating Board as the National Programme IUD to the hospitals and health centers.

Continued international donor assistance will permit the programme to offer a wide selection of more readily acceptable IUD devices than before.

A directive has gone out from the chairman of the National Family Planning Coordinating Board to all implementing units at all levels of the government that acceptance of the IUD is to be consciously and more explicitly encouraged than in the past. Special information and motivational campaigns are to be undertaken in the belief that better and more relevant information concerning the IUD will greatly enhance its overall popularity.

#### b. The Oral Contraceptive

During the past 20 years, oral contraceptives have been used by millions of women throughout the world. In Indonesia about 70% of new acceptors are pill users and it is estimated that about 3 million women are current pill users. The low dose combined pill (containing no more than 0.5 mg of estrogen) is being used.

Besides their many advantages, various undesirable side effects of oral contraceptives have been reported. Certain side effects of the pill known in the western world, thromboembolism, myocardial infarction, and other cardiovascular complications may not apply to our women. The women of Indonesia as all women of Asia differ from the women of industrialized nations in diet, life style, genetic heritage, smoking habits, exposure to disease vectors and environmental contaminants and myriad other ways that seem to effect cardiovascular diseases. It is in this context that safety research in oral contraceptives is badly needed in this country. Unfortunately, not enough research has been done to justify any conclusion. The side effects of oral contraceptives usage which showed symptoms of "pseudopregnancy" such as nausea, dizziness, headaches, enlarged and tender breasts, weight gain, breathlessness and depression have been studied by investigators from the University of Indonesia, Jakarta, the University of Pajajaran, Bandung and the University of North Sumatera, Medan. Although reliable measurement of those side effects is difficult and many of them could occur with or without oral contraceptives it was concluded that the most frequent side effect reported was nausea and occurred only in the first 3 cycles. However headaches and dizziness were still reported although the administration of the oral pills was discontinued. With regard to the menstrual side effects for a majority of normal women, they produce more regular cycles, shorter in duration with less heavy bleeding, less abdominal discomfort, and partial or total relief from premenstrual tensions. In fact, reduced menstrual bleeding is an important health benefit for our women who are undernourished and suffering from anemia. Extremely irregular bleeding, such as spotting and constant or intermittent bleeding usually occurred due to forgetfulness in taking the pill or failure to understand very well the instructions involved as we deal with less educated people.

This side effect is very important for Indonesian women

who are predominantly Moslems, in relation with observing the daily prayers. On the other hand amenorrhoea due to oral contraceptives pills occurred very rare. In the last few years the method of oral contraceptive pills without taking the last 7 tablets of the 28 pills prescribed have been used to avoid menstruation during the fasting month and during the pilgrims visit to Mecca. A University of Indonesia Medical School study indicated that slight elevation of blood pressure in normotensive women during oral contraceptive use apparently has no ill effect on health. Blood pressure usually increases from the 2nd to 12th month of use and returns to pretreatment levels within 3-6 months after discontinuing the pill. However, the hypertensive women taking oral contraceptive has caused more elevation in blood pressure. It is in this context that administration of combined oral contraceptive pills should be carefully considered relative to patients who develop hypertension by such pills.

The metabolic effects of the combined oral contraceptive pills has been studied by the University of North Sumatra Medical School. It was found that there was impaired glucose tolerance of the study group compared with the controls. The triglycerides and cholesterol also showed significant increase in the study group. The investigators are in the opinion which is in line with other investigators that the administration of combined oral contraceptive pills should be carefully relative to women with particular risks, e.g. latent diabetes or potential diabetics.

The effect of oral contraceptives on the liver has been studied by a group from the University of Airlangga Medical School, Surabaya. They reported that although oral contraceptives modify excretory function of the liver and are statistically significant, the data still showed within normal limit values. These changes appear to be reversible when drugs are discontinued. The effect of the O.C. on the cytology of vagina and cervix have been investigated by University of Pajajaran, Bandung. They reported that there was an increase of Monilia vaginalis in the pill users and the cervical cytology and showed changes as in folic acid deficiency.

Effect of oral contraceptives on lactation has been studied by investigators from the University of Pajajaran, Bandung. Studies have shown that combined oral contraceptives may cause a reduction in milk volume. The ongoing project will investigate whether or not low dose combined pills will have a suppressive effect on lactation.

Regarding tumorigenic effects of oral contraceptives, there are no report yet in Indonesia although there are a number of reports in the literature on the relation of genital tumors, breast tumors and liver tumors to the use of oral contraceptives.

From the above reports it is clear that additional research on oral contraceptives is needed in Indonesia and a multicenter study should be supported and encouraged.

#### c. The Voluntary Sterilization

In Indonesia sterilization was started in teaching hospitals in the big cities such as Medan, Jakarta, Bandung, Yogyakarta and Surabaya. Indication for sterilization in general has been a mishap experienced by a mother as a consequence of a reproductive process (e.g. postpartum hemorrhage), hence almost all the patients are older women who have many children already. In case there are male patients, it is only because they are of a very advanced age so as to facilitate prostate hypertrophy operation in the future.

## PUSSI

The Indonesian Family Planning Programme, however, does not include a voluntary sterilization component, and in February 1974, the Indonesian Society for Voluntary Sterilization (PUSSI) was established to promote voluntary sterilization on a national basis.

Support of VSC by the National Family Planning Programme is a fairly recent development, the emphasis in this field being on research and education rather than service to the public. Funds to cover the cost of procedures still must come from the patients. It is evident that, with few exceptions, VSC is still a relatively costly procedure performed by gynecologists for middle and upper class women of relatively high age and parity. A limited number of male procedures are performed. Most procedures are performed by surgeons (urologists).

Given the limited number of gynecologists and urologists in Indonesia, while expanding availability of specialist controlled methods (e.g. culdoscopy and laparoscopy), additional consideration has been given to those methods (e.g. mini-laparoscopy and vasectomy) that can eventually be performed by non-specialist physicians. Therefore, it was decided that training centers be established to develop a manpower resource upon which voluntary sterilization services could be built under the auspices of the Departments of Obstetrics and Gynecology and Surgery in prominent medical schools all over the country.

PUSSI has initiated steps to cover as wide an area as possible through the establishment of ten branches throughout the country. A number of these branches have been entrusted with activities in the fields of education and training through the establishment of voluntary sterilization training centers in Medan, Jakarta, Bandung, Yogyakarta, Surabaya and Manado. One of PUSI's main activities is the coordination of the National Voluntary Sterilization Training Programme.

### KLINIK RADEN SALEH

One of the training centers is the Klinik Raden Saleh in

Jakarta, which was established in March 1974, for the purpose of initiating and assisting the development of a family planning programme in Indonesia by undertaking activities, particularly in the field of human reproduction and family planning, which had not been adequately carried out by others in the field of family planning. The clinic is a Sub-Division of Human Reproduction in the Department of Obstetrics and Gynecology, School of Medicine, University of Indonesia and the Dr. Cipto Mangunkusumo Hospital. The clinic is located at a distance of approximately two kilometers from the hospital. IP-AVS awarded a subgrant to the Klinik Raden Saleh providing funds, to establish, equip, and staff a voluntary sterilization training center in Jakarta. This training programme is conducted under the auspices of the Department of Obstetrics and Gynecology, School of Medicine, University of Indonesia and Dr. Cipto Mangunkusumo Hospital, at the family planning facility: the Klinik Raden Saleh.

To date, under the first year subgrant which became effective on November 1, 1977, 1,934 female voluntary sterilization procedures have been performed. Training started at the center on May 1, 1978, with 18 general practitioners and 21 Obstetrician/Gynecologists having completed training at the present time.

All trainees will be required to submit to the training center quarterly statistical reports for a period of one year, describing the age and parity of their VSC acceptors as well as any complication encountered. The training faculty will attempt to visit each trainee within six months after the completion of the training in order to assess the trainees' ability and success in establishing VSC services.

### Voluntary Sterilization Acceptors in 1978/1979

Sterilization services acceptors in the period 1978/1979 number 39,869, consisting of 7,444 male acceptors (vasectomy) and 32,425 female acceptors (tubectomy). With the results obtained in 1978/1979 family planning participants who have selected sterilization as a method of contraception throughout Indonesia since 1974/1975 have been registered to number 122,312, consisting of 24,561 male sterilization acceptors.

### DEVELOPMENT OF NUMBER OF STERILIZATION ACCEPTORS IN 16 PROVINCES IN INDONESIA

Sterilization in	1974/1975	1975/1976	1976/1977	1977/1978	1978/1979	Total
Male	1,959	2,115	3,487	9,556	7,444	24,561
Female	7,724	12,519	19,020	26,063	32,425	97,751
Total	9,683	14,634	22,407	35,619	39,869	122,312

In 16 Provinces throughout Indonesia where a voluntary sterilization programme has been in operation the largest number of sterilization participants for the period 1978/1979 has been found in East Java Province (20.8%), followed by Central Java Province (18.1%), Metropolitan Jakarta Province (16.0%) and West Java Province (14.6%). For the regions outside Java

and Bali, the greatest number of sterilization participants has been found in North Sumatra Province (7.9%), followed by West Sumatra Province (2.5%) and South Sumatra Province (2.3%). A complete breakdown of the number of voluntary sterilization participants during 1978/1979 province wise is as follows:

**NUMBER OF STERILIZATION ACCEPTORS PROVINCEWISE  
IN 1978/1979**

No.	Name of Province	Male Sterilization	Female Sterilization	Total	%
1.	Metropolitan Jakarta	293	6.083	6.376	16,0
2.	West Java	1.853	3.969	5.821	14,6
3.	Central Java	3.122	4.107	7.229	18,1
4.	Yogyakarta Special Region	867	1.592	2.459	6,2
5.	East Java	232	8.070	8.302	20,8
6.	Bali	250	2.000	2.250	5,6
7.	Aceh Special Region	5	181	186	0,5
8.	North Sumatra	579	2.583	3.162	7,9
9.	West Sumatra	2	1.014	1.016	2,5
10.	South Sumatra	39	890	929	2,3
11.	Lampung	106	185	291	0,7
12.	West Nusa Tenggara	1	208	209	0,5
13.	West Kalimantan	26	111	137	0,3
14.	South Kalimantan	7	149	156	0,4
15.	North Sulawesi	2	728	730	1,8
16.	South Sulawesi	60	556	616	1,5
Total		7.444	32.425	39.869	100,0

**d. The Trophoblastic Disease**

In Indonesia, as in other Asian countries, the incidence of trophoblastic disease is notoriously high, in the form of Hydatidiform Mole as well as Choriocarcinoma. The obscurity of its etiology and the difficulty in the management of the disease is no novelty. Our hope that chemotherapy could be a real panacea did not always come true. Too many patients still lost their lives in spite of rigorous treatment with chemotherapy.

In addition to those above mentioned problems, we are also burdened by social constraints which have much influence on the outcome of the therapy. These following examples are just some of the many:

1. Ignorance and poverty are two factors which make many of the patients come to the hospital in a very advanced stage.
2. We have never been able to obtain precise data of the incidence of the disease, because many of them are lost to follow-up. Unmindfulness on the part of the patients and lack of funds make follow-up very difficult. It could be that the incidence of malignancy and mortality rate are much higher than we realize. And yet we all agree that early detection of the disease is one of the most important

factor in treatment.

3. Chemotherapy as a drug of choice is too expensive for the majority of the patients. Consequently we have to rely on surgical treatment as a second best method, even if the patient is still young and childless. But surgery alone is only for non metastatic cases, beside the fact that the patients have to sacrifice their reproductive function. Our hospital record shows that the disease attacks mostly women in the reproductive period, and many of them are nullipara. In Indonesia, women who cannot bear children might be divorced by their husbands.

In short it can be stated that management of the trophoblastic disease in our country is inadequate, and it deprives many women their reproductive function, their marriage security and ultimately their lives.

- The risk of having mole is greater in women:
- a. under 20 year and above 40 year
  - b. with high parity
  - c. with low socio economic level

The malignancy rate is about 10%.

The following tables will show the magnitude of the disease in Indonesia.

**TABLE I  
INCIDENCE OF TROPHOBLASTIC DISEASE IN HASAN SADIKIN HOSPITAL,  
BANDUNG, WEST JAVA, INDONESIA**

Year	No. of Hyd. mole	No. of Chorio Ca	No. of other Pregnancies	Incidence of Hyd. mole	Incidence of Chorio Ca
1964 — 1966 (3 years)	126	9	7876	1 : 63	1 : 875
1970 — 1977 (6½ years)	323	57	19625	1 : 60	1 : 344

**TABLE II**  
**INCIDENCE OF TROPHOBLASTIC DISEASE IN OTHER HOSPITALS IN BANDUNG,  
WEST JAVA, INDONESIA**

Hospital	No. of Hyd. Mole	No. of Chorio Ca	No. of other pregnancies	Incidence of Hyd. Mole	Incidence of Chorio Ca
St. Borromeus	28	8	7546	1 : 270	1 : 945
Beatrix	32	1	4128	1 : 129	1 : 4126
Immanuel	182	30	13398	1 : 74	1 : 447
Advent	5	1	1075	1 : 215	1 : 1075

**TABLE III**  
**INCIDENCE OF HYDATIDIFORM MOLE IN OTHER CITIES IN INDONESIA**

Cities	Incidence
Jakarta	1 : 82
Ujung Pandang	1 : 51
Surabaya	1 : 84
Padang	1 : 53
Manado	1 : 256
Yogyakarta	1 : 89
Medan	1 : 132

**TABLE IV**  
**INCIDENCE OF HYDATIDIFORM MOLE IN SEVERAL COUNTRIES**

Countries	Incidence
USA, Novak	1 : 2500
Hertig	1 : 2000
Netherland	1 : 2000
Mexico	1 : 200
Brazil	1 : 1071
Rep. of China	1 : 940
Philippine	1 : 200
Hongkong	1 : 530
Japan	1 : 232
Singapore	1 : 823

## SUMMARY

From research and studies conducted in Indonesia, although limited in scope and intensity, the national family planning programme has gained important information on various aspects of contraceptive use. Other important issues related to the use of contraceptives have been identified like the suppressive effect of oral pills on lactation, the most suitable IUD's for Indonesian women, the epidemiology of trophoblastic diseases and the effect of sterilization on the socio-cultural life in Indonesia.

The need of having a large number of continuing users of contraceptive in the Indonesian family planning programme at the end of 1990, makes us aware of the need of more effective, safe and acceptable means of contraception.

A continuous exchange of research data and experience among countries in the region would enhance the cooperative spirit among countries and strengthen the national family planning and population programmes in the region.

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# MALAYSIA

## Country Paper

### I. INTRODUCTION

Since its inception in 1966 the National Family Planning Board Malaysia has undergone tremendous growth and expansion in its activities. Initially the national programme was focussed on contraceptive service delivery. Today, the programme is more broadbased and multi-disciplinary in nature. Very little emphasis was put on biomedical research in the past due to its low priority within the context of the development of the total national family planning programme. However, as the programme grew, the need to develop the area of contraceptive and reproductive research became more evident in order to ensure the continuing success and acceptance as well as safety of the various contraceptive methods.

The national programme is today in the stage where it is now prepared to embark on biomedical research with capability and capacity for supporting and conducting such researches within its premises as well as coordinating the work of other researches in the country. This has been made possible through the establishment in November, 1978 of a new division in the NFPB, which will be responsible for the development, implementation and coordination of specialised family planning services as well as biomedical research in relation to contraception, reproduction and fertility. This is indeed an important milestone in the history of biomedical research in relation to contraception, reproduction and fertility. It must be emphasised and initially the nature of biomedical research would be mainly problem or programme oriented where the findings would be utilised to determine the operational policies in the national programme.

### 2. Previous Trends and Priorities of Research

The emphasis on programme research in the past has been on surveys/research related to the socio-economic, cultural and demographic aspects of family planning. Due to many important findings of these surveys, particularly in relation to the socio-economic status among the people of various races in Malaysia, their differing cultural practices and attitudes towards family planning, they have been carefully utilised to guide programme implementation as well as policy direction of the national programme. The list of previous researches and surveys is enclosed in Appendix I.

### 3. Previous Biomedical Research Related to Family Planning in Malaysia

In the area of contraception research, the stress has been on clinical trials of various types of contraceptives. The limited number of biomedical researches in the past were conducted by individuals on his/her own initiative without much funding from any source. There were several researches conducted by the Department of Obstetrics and Gynaecology University of Malaya with internal funding through departmental research vote. There are several researches that are collaborative in nature and funded by the NFPB and conducted by members of the Department of Obstetrics and Gynaecology University of Malaya. International agencies such as IDRC and WHO also funded some of the research projects related to family planning. Medical research in family planning was at that time coordinated by the Service and Training Division in the NFPB. The list of previous clinical trial and researches are enclosed in Appendix II. The following are some of the highlights abstracted from those research papers:—

#### 3.1. Hormonal Contraceptives

##### 3.1.1. Pills — the most appropriate dose for Malaysian Women

On reviewing the local literature of the pills previous research were mainly clinical trials to test the efficacy, side effects and the acceptance rate of the various types of pills. Although the Pill is the mainstay in the national family planning programme accounting for 82.3% of the acceptors, very little metabolic or other studies have been carried out.

Studies conducted in the Department of Obstetrics and Gynaecology University of Malaya indicate that the low dose pills containing 30 ug of ethynyl oestradiol are most suitable for Malaysian women. The contraceptive efficacy is about 99.5% with minimal side effects. The common minor side effects are weight gain, amenorrhoea, scanty period and break through bleeding. Studies among NFPB clients also showed that

continuation rate among low dose pill users are higher than the higher dose pill.

The Department of Obstetrics and Gynaecology, University of Malaya in conjunction with IDRC is currently conducting metabolic studies among pill users. This study is still ongoing and is in collaboration with other departments of Obstetrics and Gynaecology University of Singapore and Medan, North Sumatra. Preliminary results showed a favourable picture of low dose pills in relation to carbohydrate and lipid metabolisms and also coagulation factors where disturbances are found to be very minimal.

### 3.1.2. Depo-Provera

The use of Depo-Provera in the National programme still remains limited. Two of the studies conducted locally concur with results of other international studies in that menstrual irregularities were the main side effects experienced by acceptors and in our Malaysian women these were their main reasons for terminating this method.

Currently the Department of Obstetrics and Gynaecology University of Malaya is conducting a comparative study of Depo-Provera and Norethisterone oenanthate 200 mg. in terms of acceptance, tolerance and side effects. Another study planned intends to evaluate the menstrual pattern of women on the injectable progestogens of those with regular cycle and those amenorrhoeic (post partum) on commencing the method.

### 3.2. IUCD Studies — Some Highlights

There are several publications related to studies on IUCD in Malaysia. Most of them were concerned with the contraceptive efficacy, side effects and complications. The most commonly used IUCDs in Malaysia are Lippes Loop and the recently introduced copper bearing devices.

Intra uterine contraceptive device is not very popular among the acceptors and in 1978, it accounted for only 1.9% of acceptance by method in the National Family Planning Programme. The presence of a foreign body is cited as one of the reasons for low popularity especially among the Muslim women. Other reasons include pregnancy rate, side effects and complications. Further the programme had emphasised the Pill and has not propagated the IUCD because of lack of trained "personnel" to the insertion as well as follow up cases. Initial efforts have been made to utilise para medical personnel to insertion, and if this project proves to be successful, then this would be expanded on a national scale.

Most of the problems associated with IUCD among Malaysian women are very similar to those encountered by Western women. The pregnancy rate among the copper devices namely Copper 7, Copper T and Multi-load Cu250 is about 2%. (Goh et al 1977). From the same study, the removal rate for pain/bleeding was about 3.1/1000 users and this is in contrast with the Lippes Loop which is reported to have a comparative rate of 9.9 at 6 months (Orlan 1974).

Among the three copper devices studied, preliminary data

shown favourable results for Copper T. These devices are generally easier to insert than the Lippes Loop and this factor is an important consideration for large scale usage of IUCD such as in our National Family Planning Programme. However, on the other hand, copper devices tend to corrode after three years or more and this is a disadvantage because if IUCD were to make a demographic impact in the National Family Planning Programme, it should be effective in utero for at least 3 to 5 years (Tatum 1977).

Studies are on the way now in collaboration with the IFRP on Sutured IUCD (Lippes and Copper T) inserted immediately post-partum or at delivery. If this study proves successful, this mode of insertion may make a positive impact on the National Programme because during confinement, women are supposed to be at the peak of motivation for contraception.

### 3.3. Traditional Methods of Abortion

In the report on maternal health and early pregnancy wastage in Peninsular Malaysia 1977, it was shown that about 10.7% of women surveyed reported having had one or more induced abortions. Of these, nearly half (44%) to have been affected by "injections" while approximately 10% were through dilatation and curettage (D&C) and 9% by using "medicine" from doctors. Medicine from 'non-doctors' and herbs were used in 18% of the induced abortions. The remaining 18% included massage, insertion of foreign bodies and others. The survey concluded that the majority of those seeking induced abortion were utilizing Western type medical services.

Morbidities and mortalities associated with abortions are very difficult to assess. Hospital returns from Peninsular Malaysia for 1972 showed that there were 1,076 'septic' abortions" with 152 maternal deaths and 13,665 "spontaneous abortions" with 112 maternal deaths occurring in government hospitals. Most resultant morbidities and mortalities from abortions are usually not reported. A study is now being carried out to determine the extent of morbidity as a result of abortion from cases admitted to hospitals.

Though traditional methods of abortions are still practised in Malaysia, it is very difficult to obtain accurate information because most patients involved refused to reveal any information for fear of incriminating a third party. Traditional practice of abortion needs a detailed study in view of the health hazards involved. There are definitely ethnic differences (Malay, Chinese and Indians) in the methods used to induce abortion and perhaps also in the outcome. Malays and Indians being that rural and suburban might perhaps succumbed more to the dangerous procedure especially when their initial health status is poor and accessibility to immediate emergency help remote.

### 3.4. Trophoblastic diseases in Malaysia

It is very difficult to get an accurate figure for the incidence of trophoblastic diseases in Malaysia. In Singapore the incidence is 1 in 169 pregnancies. (Tow and Fox 1966). Some aspects of trophoblastic diseases are highlighted in the previous researches:

(a) **Problems in early diagnosis of hydatidiform mole.**

Hydatidiform mole have varied and diverse clinical presentations and very often it mimics the symptoms of threaten abortion. (Khairuddin Yusof 1973). This make early diagnosis of molar pregnancies very difficult. However, with the advent of ultrasound facilities, these difficulties would soon be overcome.

**(b) Problems of predicting the natural history and follow-up of molar pregnancies.**

About 6–10% of cases of hydatidiform mole would progress to choriocarcinoma and the risk increases with parity (more than 3) and age (more than 35 years). Patients within these risk groups should be treated by hysterectomy (Chun et al 1967).

Strick surveillance of patients during follow-up is extremely important using reliable and accurate indices such as radio-amnioassays of HCG for detecting choriocarcinoma in early stage. However, at this stage, the HCG assays is not available yet, but LH assay is being used and evaluated to monitor the natural history of trophoblastic diseases. This test proved to be important for early detection of choriocarcinoma and at the moment it is the only radio-amnio-assay method available locally.

Sivanesaratnam and Ng (1977) suggested prophylactic use of methotrexate 20 mg given intravenously in 500mls of 5% dextrose solution at commencement, during and after surgical evacuation of hydatidiform mole. Of the 36 patients treated by this regime and follow-up for three years or more none so far develop choriocarcinoma.

Another controversial area regarding molar pregnancy is on how long should the patient practice contraception after surgical evacuation of molar pregnancy and what is the most appropriate method of contraception during these period.

Most authorities believe that following hydatidiform mole, patient should avoid pregnancy for at least 1 to 2 years. It has been found that if choriocarcinoma were to develop following hydatidiform mole it is during the first two years. As regards to the most suitable method of contraception, this issue is still very controversial. Many people believe that the use of oral pills is acceptable while others believe that other methods such as intra-uterine contraceptive device or condom be used for contraception.

**3.5. Vasectomy**

In a study of the psychosexual after effects of Vasectomy (Wolfers, Subbiah & Ariffin, 1971) it was shown that not operative anxiety coordinated significantly with parity. Those with less than 4 children and only of one six (daughters) tend to express regret after the operation.

Of the problems quoted "general weakness" appears prominent and a few respondents were able to identify sexual problems such as loss of libido as the underlying factor. However the study also elucidated the fact that if detailed pre-operative counselling was given Vasectomy could remain acceptable.

**4. Future Plans & Policies on Biomedical Research**

**4.1. Role of NFPB in Biomedical Research**

With the establishment of Specialist & Medical Research Center, research activities related to family planning would be more well organised and better coordinated in future. The roles of this new division are as follows:

1. To conduct its own researches in fertility and human reproduction.
2. Initiate and motivate local scientists and physicians interested in the reproductive research to conduct researches.
3. Provide financial support and infra-structure for research to researches involved in reproductive research.
4. Coordinate all fertility and reproductive research activities that are being conducted by scientists in the local universities and research institute.
5. Collaborate and/or participate in the international research project undertaken by International Organizations such as WHO, IFRP, JOICEF, ICARP, IDRP etc.
6. The NFPB would play the role of subgranting agent for international funding agencies for all researches related to family planning.

**4.2. Participation in biomedical Research**

All physicians and scientists from the following Institutions.

- 4.2.1. The National Family Planning Board
- 4.2.2. Department of Obstetrics and Gynaecology, National University Malaysia.
- 4.2.3. Department of Obstetrics & Gynaecology, University Malaya.
- 4.2.4. Maternity Hospitals Ministry of Health
- 4.2.5. Institute of Medical Research
- 4.2.6. University Science Penang
- 4.2.7. Agriculture University Kuala Lumpur
- 4.2.8. Individual physician and scientist interested in reproductive research.

**4.3. Implementation of biomedical research programme**

It is estimated that the physical facilities for the Specialist & Medical Research Center would be fully completed by 1983. The center would then have complete complement of a research laboratories namely endocrine, cytogenetic, physiology, biochemistry, pharmacology and reproductive physiology laboratories. It would also have a comprehensive family health clinic which offer services related to problems of contraception, infertility, marriage & sex counselling and also genetic counselling. It would also be a center for surgical contraception since it would have full facilities for day ward and surgery. Specialised training in family planning and human reproduction would be organised for all categories of staff including physicians and the para medics. It is emphasised that this center would ultimately develop into an institute for fertility and reproductive research for Malaysia.

When the center is completed, it will have full complement of staff with special training in family planning and

reproductive research methodology. The new specificity would enable physicians to be trained to become specialists in family planning. The curriculum for training of family planning specialists is being developed and the major component of this training programme would be clinical based. A core of research scientists would also be created and they would consist of endocrinologists, biochemists, pharmacologists, reproductive physiologists and geneticists who would be given special training on research methodology in human reproduction. These scientists would form the nucleus of fertility and reproductive researchers who will conduct research within the premises of the specialist center and also coordinating research activities with other scientists in the universities and research institutes.

Since the Medical Research Center would take about five years to establish, interim activities need to be organised particularly pertaining to specialised services and biomedical research. At present, the reproductive components in the Institute of Medical Research, Malaysia particularly the endocrine laboratory, the cytogenetic and cytology laboratory are being strengthened by provision of additional equipment and trained staff to cater for the research and service needs of the Specialist & Medical Research Center.

Expertise in specialised family planning services and medical research are gathered from the local universities particularly the Department of O & G, University Kebangsaan Malaysia, University Malaya and also from the General Hospital. The organizational set up of the medical research component of the Specialist Center is in the chart (Appendix III). The Research Secretariat will have an epidemiologist or a trained medical statistician who would assist in preparing research protocol and data collection and analysis as required by researchers. This secretariat would be linked very closely to the computer in the Research Evaluation and management information division of the NFPB.

#### 4.4. Areas of biomedical research

Some of the aspects to be covered in the biomedical research are as follows:

1. Medical aspects of contraceptive technology
2. Biology of fertility and reproduction relevant to Malaysian population.
3. Infertility and reproductive endocrinology
4. Perinatal and maternal mortality
5. Human sexuality in relation to marriage and sexual problems
6. Female genital cancer with emphasis on early detection
7. Abortions

##### 4.4.1. Medical & Research Advisory Committee

An Advisory Committee consisting of physicians who are interested in family planning researches, social scientists and basic scientists with special interest in human fertility and reproduction, has been formed to advise the NFPB on various matters:

- (a) identifying areas requiring biomedical research
- (b) identifying research priorities
- (c) advice on ethical aspects of research

(d) review the action of research task force

#### 4.4.2. Research Task Force

This subcommittee consists of the Director and the Assistant Directors of the Specialist Center with representatives from the administrative and finance division and also the project and planning units of the NFPB. The main function of this task force is to look into the research proposals particularly to its budgeting. Research proposals would then be submitted to the Medical Advisory Committee for approval.

#### 4.4.3. Research Grant

Under the 2nd Population Project, substantial allocation have been made for research grants. Local scientists and physicians who are interested in reproductive research could apply for these grant. The NFPB would fund research projects up to maximum of \$30,000 and those exceeding this amount are usually channelled out for International Funding such as from UNFPA.

### 5. Some Constraints

1. One of the major constraints in planning and conducting biomedical research programme in human reproduction is the shortage of trained manpower particularly physicians and scientists. Research is not attractive because of low financial returns and as a result most of them move out to the private sector. The number of locally available scientists and physicians already trained in reproductive research methodology is very scanty indeed.

It is the responsibility of the NFPB Malaysia to motivate scientists and physicians to conduct reproductive research and assist them in special training in research methodology, by provision of study grants or fellowships.

2. Laboratory facilities for biomedical research in human reproduction are grossly inadequate. The Institute of Medical Research (IMR) Malaysia has limited facilities for reproductive work since its major role is in providing laboratory backup services to government hospitals in the Ministry of Health. Reproductive research has been given low priority.

The NFPB is strengthening these laboratory facilities by provision of additional equipments and staff to cater for the needs in reproductive research. This is an interim measure before the Institute of Fertility and Reproductive research, NFPB is fully established in 1983.

3. Reproductive research activities had been hampered by lack of finance. There was no national body that would finance research projects. Prior to 1979, the NFPB only allocated \$15,000/- in its budget for medical research but this has been beefed up to about \$1 million for the next 5 years. This is not including financial allocations from external funding agencies.
4. Academic institutions like the Universities of Malaya

and Kebangsaan have in the past placed medical research as low priority whilst they are developing and consolidating the undergraduate teaching programmes. However, the two local medical schools are in the stage where they are more prepared to participate actively in reproductive research. The department of Obstetrics and Gynaecology University of Malaya had been in the past fairly active in contraceptive technological research, however, most of their works are mainly clinical trials.

## CONCLUSION

The establishment of the Institute of Fertility and Reproductive Research under the NFPB Malaysia would act as stimulus to the scientists and academicians to participate in research particularly with the availability of Research laboratory facilities, research grants, study fellowships, financial support for attendance in international Congresses and seminars and infrastructure for supporting researches.

It can no longer be denied that contraception/reproduction/Fertility research must be given high priority in programme development especially in view of the fact that the national programme is now 13 years old and the emphasis in contraceptive usage has always been on the hormonal contraceptives. The lack of hormonal research supports, if allowed to continue will be detrimental for the programme as a whole. As there is continuing new evidence on the possible 'danger' of the hormonal contraceptives especially for long term use, the need to look for other 'alternatives' is now evident. There is also a need to determine the duration of use to ensure completes "safety". In addition studies must be carried out to develop locally available and 'acceptable' contraceptives which could be easily and safely used.

The scope for contraceptive/Reproductive/Fertility research to Malaysia is indeed very broad. The success of present efforts would indeed support the total national programme as well as provide a broadening scope of activities for all levels of workers and researches in the field.

## APPENDIX I

### LIST OF SOCIO DEMOGRAPHIC SURVEYS

1. West Malaysian Family Survey 1966/67
2. Acceptor Followup Survey 1969
3. Post Enumeration Survey 1970
4. Malaysian Family & Fertility Survey 1974
5. Staff Baseline Survey of Intensive Input Demonstration Areas 1975
6. Family & Health Survey in the Intensive Input Demonstration Areas 1976
7. Family & Health Survey in the Federal Territory and Petaling Jaya 1977
8. 2nd. National Acceptor Followup Survey 1977
9. Match Acceptor & Non Acceptors Birth Rates
10. Analysis of Cultural Factors Affecting Fertility from Past Survey Data 1977/78
11. Pilot Survey on Cultural Factors Affecting Fertility 1978
12. 2nd. Family & Health Surveys IIDA 1978/79
13. Study of Social Factors Affecting Fertility
14. Analysis of Inter-relationship between Social Political and Economic Goals
15. Analysis of Inter-relationship of Composition Labour Force between Population Growth, Age, Employment and Economic Development
16. 3rd. Malaysian Family Survey 1982/83
17. Defaulters Survey in Three East Coast District 1971
18. Summary Report on Rate of Acceptors Having Multiple Acceptance and rate of Multiple Acceptance 1972
19. Evaluation Summary of Family Planning Performances by Main Clinic 1972
20. Ranking of Coverage Performance of NFPB Clinic by State and District 1972
21. Assessment of Family Planning Programme Effects on Birth 1972
22. Continuation Rate of Acceptors Using Injectables in Sg. Besar 1976

## APPENDIX II

### LIST OF PREVIOUS MEDICAL RESEARCH IN FAMILY PLANNING

#### 1. ABORTION

**ARIFFIN, Marzuki and THAMBU, Johan A.M. (1971)**  
Septic abortion. *Medical Journal of Malaysia* 26: 2 (77-83)

**HAMID, Arshat (1977)**  
Extra-amniotic prostaglandin E2 and intravenous oxytocin in termination of mid-trimester pregnancy and in the management of missed abortion and hydatidiform mole, *Med. J. Malaysia* 31:3, 220-225

**PUVAN, I.S. (1974)**

Psycho-social aspects of abortion in Malaysia, Proceedings of the Asian Regional Research Seminar in Psycho-Social Aspects of Abortion, Nepal. (pp. 56-62)

**SINNATHURAY, T.A. (1975)**

Pregnancy and abortion in adolescence, report of a WHO meeting (WHO Technical Paper No: 583)

**THAMBU, Johan A.M. (1975)**

Abortions - Government Hospitals Peninsular Malaysia 1960-1972, *Medical Journal of Malaysia* 24:4 (258-262)

**THAMBU, J.A.M (1974)**

Injury to small intestine in induced septic abortions, Proceedings 6th Asian Congress of Obstetrics & Gynaecology

**2. FERTILITY & STERILITY**

**PUVAN, I.S. (1973)**

Varicocele and male infertility, Proceedings of 8th Singapore, Malaysia Congress of Medicine, 8: 242-244

Investigations of an infertile couple, Family Practitioner 1:2 (16-18)

**HAMID, Arshat (1979)**

Management of infertility, Scientific Meeting, Penang

Evaluation of various techniques in tubal plastic surgery for infertility - Malaysia and Singapore Congress 1978

**3. INTRA-UTERINE DEVICES**

**ARIFFIN, Marzuki (1964)**

Clinical use of the nylon coil in Ipoh, Malaysia Proceedings 2nd International Conference intra-uterine contraception, New York 1964

**CHONG, H.L. and NG, K.H. (1974)**

Problems and management of pregnancy with IUCD lodged at the cervical canal, Asian Journal of Medicine, 10: 248-249

**LOURDENADIN, S (1964)**

Experience with Brinberg's intra-uterine device in Kuala Lumpur, Proceedings 2nd International Conference on Intra-Uterine Contraception, New York

**LOURDENADIN, S (1966)**

Evaluation of intra-uterine contraceptive devices, Medical Journal of Malaya 19: 277-285

**PUVAN, I.S. V. Sivanesaratnam and T.A. Sinnathuray (1974)**

An evaluation of Cu7 IUCD in Malaysian women, Handbook of 6th Asian Congress of Obstetrics and Gynaecology, Kuala Lumpur (pp. 212)

Pregnancy associated with copper containing IUD, British Medical Journal 2: (561)

**SAMBHI, J.S. (1968)**

The concept of the action of the IUD in the human, Far East Medical Journal 4: (346)

**SIVANESARATNAM, V and I.S. Puvan (1975)**

Asymptomatic perforation of the uterus with the copper-7 IUD and its management, Singapore Medical Journal 16: 312-314

**SIVANESARATNAM, I.S. Puvan and Sinnathuray T.A. (1975)**

Evaluation of copper-7 intra-uterine in Malaysian women, Medical Journal of Australia, 2: pp. 298-301

**SIVANESARATNAM, V, I.S. Puvan & D.K. Sen (1974)**

Pregnancy associated with copper containing IUD, British Medical Journal, 2: 561

**TAN, E.H. (1972)**

Intra-uterine contraceptive device causing ante-partum haemorrhage, Asian Journal of Medicine 8: 67-69

**GOH, T.H. et al (1978)**

Early experience with the copper-7, copper T220c and multiloop 250 intra-uterine devices, Medical Journal of Malaysia 32:4 (304-307)

**4. INJECTABLES**

**ARIFFIN, Marzuki, HEW Wai Sin, J.Y. Peng (1973)**

A field study of Depo-Provera: Its use as a contraception method by women in a rural town in West Malaysia, Medical Journal of Malaysia, 27: 299-305

**5. ORAL CONTRACEPTIVES**

**WONG, W.P. and I.S. Puvan (1976)**

Current status of oral contraceptives, Medical Journal of Malaysia, 30: 173-177

**SINNATHURAY, T.A. (1976)**

Recent trends and advances in contraceptive technology and its applicability in the reduction of fertility in the Malaysian context, National Seminar on Fertility Planning Towards Achieving Greater Social and Economic Progress, Kuala Lumpur

**SINNATHURAY, T.A. (1974)**

Human reproduction and recent advances in contraception 1974 UNESCO Report of a Seminar on Population Problems (pp. 40)

**6. OBSTETRICS & GYNAECOLOGY**

**CHEAH, S.F. & Khalruddin Yusu? (1973)**

Prostaglandin F2 alpha for induction of labour, Medical Journal of Malaysia, 27: (211-216)

**HAMID, Arshat (1977)**

Clinical applications of serum FSH estimation by radio-immuno assays, Proceeding of Asian Congress of Obstetrics and Gynaecology 1977.

Comparison of oral and intravenous glucose tolerance tests in the diagnosis of diabetes in pregnancy, British Journal of Obstetrics and Gynaecology 85: (536-546)

Comparison of oral and intravenous glucose tolerance tests in third trimester of pregnancy. Medical Journal of Malaysia 31: 2, (133-139)

**HAMID, Arshat (1978)**

Danazol: treatment for endometriosis, Scientific Meeting Sungai Petani, 1978.

Foetal distress and labour monitoring, Scientific Meeting in Kota Bharu, 1976.

**HAMID, Arshat (1978)**

Lactation and Fertility regulation, Annual General Meeting of Obstetrics and Gynaecology Society Malaysia, 1978

The symptomatology and diagnosis of endometriosis: a review of 76 cases, Majallah Obstetrics and Gynaecology 4:3 Indonesia

**KHAIRUDDIN, Yusof (1973)**

Hydatidiform mole: problem in early diagnosis, *Medical Journal of Malaysia* 27: (pp. 275—279)

Prostaglandin F2 alpha for induction of labour, *Medical Journal of Malaysia* 27: (211—216)

**NG, K.H. and Prathap, K. (1975)**

Intestinal leiomyosarcoma simulating malignant ovarian neoplasm, *Journal of International Surgery*, 60: (237—238)

**NG, K.H. et al (1974)**

Longitudinal studies of amniotic fluid lecithin and sphingomyelin values during normal pregnancy, *Proceedings 6th Asian Congress of Obstetrics & Gynaecology*, Kuala Lumpur (pp. 174—175)

**NG, K.H. Wong W.P. & Chai K.H. (1974)**

Trimethoprim sulphamethoxazole in the treatment of infection in Obstetrical and Gynaecological practice: a bacteriological and clinical study, *Medical Journal of Malaysia*, 28: (260—262)

**SEN, D.K. et al (1974)**

Hemoperitoneum and defibrination in gynaecology, *International Journal of Gynaecology & Obstetrics* 12: 124

**SEN, D.K. T.A. Sinnathuray and K.S. Lau (1973)**

The ultrastructure of molar trophoblast, *Australian New Zealand Journal of Obstetrics & Gynaecology* 13: (pp. 35)

**SEN, D.K. (1974)**

Ultrastructure of molar trophoblast in mitosis, *Australian & New Zealand Journal of Obstetrics & Gynaecology* 14: (235—7)

**SINNATHURAY, T.A. (1974)**

Current views of the management of pregnancy toxæmia and eclampsia, *Proceedings of the Obstetrical and Gynaecological Society*, Vol. 5: (pp. 57—59)

**SINNATHURAY, T.A. (1975)**

Hormonal therapy in Obstetrics & Gynaecology, *Family Practitioner* 2: 1&2 (40—42)

**PONNUTHURAI, C.E. and J.C. White (1971)**

Hydrops foetalis due to alpha thalassaemia: a case report, *Medical Journal of Malaysia*, 26: (pp. 102—108)

**SINNATHURAY, T.A. (1971)**

Ovarian tumours in pregnancy, *International Surgery*, 55: (422—430)

The pattern of the pathology of ovarian tumours in pregnancy in the Singapore — Malaysia region, *Medical Journal of Malaysia*, 26: (pp. 53—56)

**SINNATHURAY, T.A. (1976)**

Use of oral prostaglandin E2, tablets in the induction of labour *Handbook Congress of Medicine*.

**WONG, Wai Peng**

Sperm antibodies in fluids of reproductive tract. *nd.*

**6. STERILIZATION****CHAN, W.F. and Puvan I.S. (1973)**

The Place of Laparoscopic tubal sterilization in a develop-

ing Country. *Proceedings of 8th Singapore Malaysia Congress of Medicine*, 8. 254—256

**CHAN, W.F. Puvan I.S. and Sinnathuray T.A (1974)**

Laparoscopic sterilization: The Malaysian experience, *Handbook 6th Asian Congress of Obstetrics & Gynaecology*, Kuala Lumpur, July 1974. (pp. 190)

**HAMID Arshat (1979)**

Towards better success in tubal plastic surgery (Malaysia and Singapore Congress 1978)

**KUAH, K.B. (1976)**

Vasectomy. *Medical Journal of Malaysia* 31: 1 (26—32)

**LEE, T.T. (1971)**

A modern incision for postpartum sterilization, *Handbook of the 5th Asian Congress of Obstetrics & Gynaecology* (184)

**NG, K.H. and Wong Wai Peng (1974)**

Postpartum tubal ligation under epidural block, *Proceedings of 8th Singapore Malaysian Congress of Medicine*, 8: (300—302).

**PURAVIAPPAN, A and I.S. Puvan (1974)**

The anatomical and physiological aspect of vasectomy, *Medical Journal of Malaysia* 29: 1 (64—65)

Vasectomy for population limitation, *Medical Journal of Malaysia*, 29: (230)

**PUVAN, I.S. (1974)**

A long term study of the effects of sterilization in Malaysian women, *Proceedings of 6th Asian Congress of Obstetrics & Gynaecology*, Kuala Lumpur.

Comparison of the use of local analgesia and epidural block in post-partum tubaligation, *Handbook of 9th Malaysian Singapore Congress of Medicine*.

Laparoscopic sterilization: The Malaysian experience, *Proceedings of 6th Asian Congress of Obstetrics and Gynaecology*, Kuala Lumpur.

Reversible tubectomy, *Proceedings 6th Asian Congress of Obstetrics and Gynaecology*, Kuala Lumpur (pp. 320)

Vasectomy for population limitation, *Medical Journal of Malaysia* 28: 251—254

**PUVAN I.S. (1973)**

The place of laparoscopic tubal sterilization in a developing Country, *Proceedings of 8th Singapore — Malaysia Congress of Medicine*, Kuala Lumpur

**SIVANESARATNAM, V. et al (1974)**

A long term study of the effects of sterilization in Malaysian women, *Proceedings 6th Asian Congress of Obstetrics & Gynaecology* (pp. 339—343)

**SWANESARATNAM, V. (1975)**

"Delayed small bowel perforation following laparoscopic tubal cauterization", *International Surgery* 60: (pp. 560—561)

Tubal pregnancies following postpartum Sterilization *Fertility and Sterility*, 26: (945—946)

**THAMBU, Johan A.M. (1970)**  
Early discharge of female sterilization cases, Proceedings Inter Regional Seminar on Family Planning, Bangkok

**THAMBU, Johan A.M. and ARIFFIN Marzuki (1971)**  
Female sterilization by culdoscopy, Medical Journal of Malaysia 26: 2 (120—121)

**WONG W.P. Ng K.H. and I.S. Puvan (1975)**  
Puerperal sterilization: comparison of the use of local anaesthesia and epidural lumbar anaesthesia, Medical Journal of Malaysia 29:4 (293—296).

## 7. TROPHOBLASTIC DISEASES

**KHAIRUDDIN Yusof (1973)**  
Hydatidiform mole: Problems in early diagnosis Medical Journal of Malaysia 27: 4 (275—279)

**SEN D.K. & T.A. Sinnathuray (1973)**  
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**SEN, D.K. (1974)**  
The ultrastructural appearance of molar trophoblast in metaphase, Australian New Zealand Journal of Obstetrics & Gynaecology, 14: 235

**SIVANESARATNAM, V & Ng. K.H. (1977)**  
Prophylaxis against choriocarcinoma, Medical Journal of Malaysia 31: 229—231

**SIVANESARATNAM, V (1976)**  
Transient hyperthyroidism complicating hydatidiform mole, New Zealand Medical Journal, December 8, 1976

## 8. LIST OF RESEARCH STUDIES COMPLETED AT THE NFPB, MATERNITY HOSPITAL CLINIC

1. Ovostat study (1970)
2. Q1 — Q2 Once a month pill (1970)
3. Acceptor Followup study (1967—70)
4. Exluton mini pill trial (1972)
5. Amenorone forte (1972)
6. Neogynon pill trial (1972)
7. Yermonil pill trial (1976)
8. Nordette Study (1976)
9. Pap-smear study (1975)
10. Copper 7/Lippes Loop Study (1977)
11. 3 months followup of Provisional Acceptors in Post Natal Words (1978)
12. Albothyl concentrate and vaginal suppository (Metacresolsulfuric acid and formaldehyde) study (1978)
13. Sagami Condoms study (1978)
14. Injection Norigest study (1975)
15. Injection Norigest study (1978)

## 9. STUDIES IN PROGRESS AT NFPB WITH COOPERATION FROM INTERNATIONAL FERTILITY PROGRAM

1. Progestogen — only pill for lactation study at NFPB Clinic, Kuala Lumpur
2. High-dose to low-dose crossover study at NFPB Clinic, Johor Bharu
3. Low-dose vs low-dose comparative study at NFPB Clinic, Kota Bharu
4. Post-partum, IUCDs — Lippes Loop 'D' vs satured Lippes Loop 'D' at Specialists Centre, NFPB
5. Post-partum IUDs — Lippes Loop 'D' outured vs

Copper T outured at Maternity Hospital, Kuala Lumpur

6. Depo-provera study — menstrual pattern at Specialists Centre and University Hospital Clinic of NFPB
7. IUD photo-reduced Lippes Loop at NFPB, Kuala Lumpur
8. Maternity care monitoring — delivery records by Traditional Birth Attendants (Pretesting done)
9. Delivery records by physicians at Maternity Hospital Kuala Lumpur

## 10. ONGOING RESEARCH STUDIES OF NFPB MALAYSIA ALONG WITH VARIOUS ORGANISATIONS

1. IUD Study — post insertion management  
**Coordinators:** Dr. Mahroof — University Kebangsaan  
Dr. Solai Velayudham — NFPB
2. Evaluation of Condom Usage  
**Coordinators:** Dr. S.K. Teoh — University of Malaya  
LPKN Clinic at University Hospital
3. IUD Study — small frame gravigard  
**Coordinator:** Dr. E.S. Ang
4. Sperm antibodies in fluids of the human female reproductive tract  
**Coordinator:** Prof. W.P. Wong, University of Malaya
5. Laparoscopic sterilization study  
(a) as out-patient procedure  
(b) comparative study (cautery/fallope rings/clips)  
**Coordinators:** Dr. Hamid Arshat  
Dr. Mahroof  
Dr. E.S. Ang
6. Changes in coagulation profile of contraceptive pill users in Malaysia  
**Coordinators:** Dr. H.C. Ong  
Dr. Elizabeth George of National University
7. Establishment of sperm bank  
**Coordinators:** Prof. W.P. Wong and Prof. Khairuddin Yusof of University of Malaya  
(in the process of procuring equipments for an immuno-essay laboratory)
8. Psychosexual profile of Malaysian women: a study of human sexuality  
**Coordinators:** Prof. Khairuddin Yusof  
Dr. E.S. Ang
9. Morning after pill — 600mg d-Norgestral  
**Coordinators:** Dr. C.K. Poh  
Dr. E.S. Ang

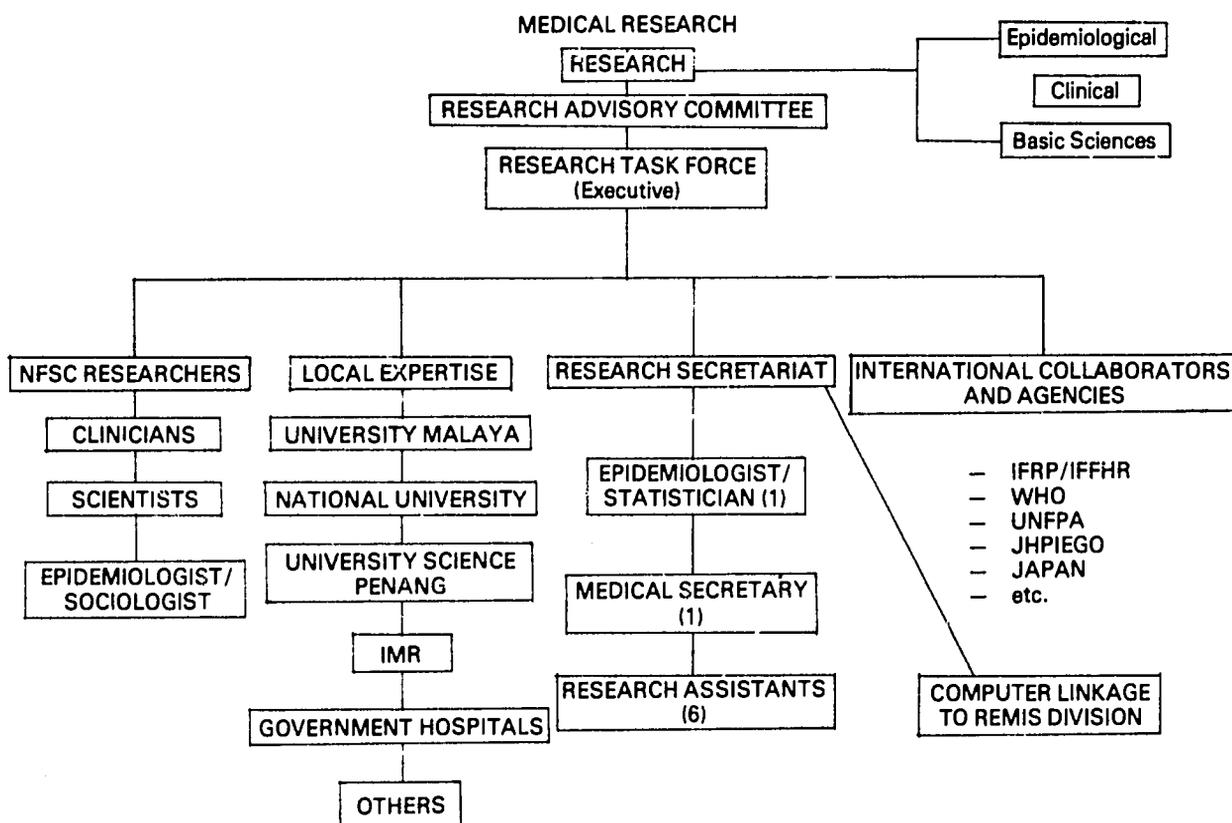
## 11. ONGOING PROJECTS AT UNIVERSITY OF MALAYA

1. Use of pewter as a material for IUCD
2. Techniques of reversible tubal ligation
3. Sperm agglutination and sperm antibodies in fertile and infertile women

4. Vasectomy: acceptance, side-effects etc. in local population
  5. Testing of Lau pregnancy diagnostics
  6. Evaluation of PIEGO double ring applicator
  7. Evaluation of menstrual regulation
  8. Evaluation of interval laparoscopic sterilization with Silastic ring
  9. Evaluation of Laparoscopy — second puncture — Silastic ring — immediate versus 24 hours post abortal
  10. Prospective study of an induced abortion in West Malaysia (Study of Hospital Resources involved)
  11. Metabolic effects of the pill on local population
  12. Comparison of various IUCD
  13. Field trial comparison of injectables
  14. Field trial comparison of low-dose pills
  15. Comparison of laparoscopy, mini-laparotomy and culdoscopy
- 12. ONGOING PROJECTS AT SPECIALISTS CENTRE, NFPB, MALAYSIA**
1. Evaluation of induction of ovulation
  2. Mini-laparotomy: a female sterilization as a clinic procedure
  3. Perinatal Project — to identify the following:
    - (a) Identification of risk factors of morbidity and mortality in maternal care
    - (b) Identification of perinatal risks monitoring measurement of high risk pregnancy and labour
    - (c) Early identification and management of congenital malformations
    - (d) Neonatal screening for mortality and morbidity
    - (e) Breastfeeding promotion in order to reduce neonatal morbidity
  4. Evaluation of fallope ring for female sterilization laparoscopy and mini laparotomy method
  5. Pattern of congenital abnormalities (Maternity Hospital Kuala Lumpur)
  6. Human sexuality (University Malaya)
  7. Oral contraceptive agents and hypertension (National University of Malaya)
  8. Use of Panstan, Baralgin and Endocid in controlling pain due to IUCD (Researcher: Dr. Mahroof Hj. Mohideen)

**APPENDIX III**

**ORGANISATIONAL CHART  
SPECIALIST AND MEDICAL RESEARCH CENTRE  
NATIONAL FAMILY PLANNING BOARD  
MALAYSIA**



# NEPAL

## Country Paper

Although MCH programme in Nepal was started quite early, that is, since the beginning of the hospital-era, like family planning, this programme was also expanded substantially with the inception of NFP & MCH Board in Nov., 1968. Before this period FP and MCH Programme in Nepal was only centred within the valley and few other cities of Nepal.

Initially the FP component was linked with the MCH section of Department of Health, with the understanding that if the mother and child care is adequately provided, people will tend to accept the contraceptives. Since then this basic philosophy continues with FP and MCH components being carried out together and by the same organization NFP/MCH Project. This has helped to increase the willingness of mother to practice FP. During the current five year plan the project aims to reduce the estimated C.B.R. of 40 per 1000 to 38 per thousand and at the same time it also aims at reducing the estimated infant mortality of 200 per 1000 to 150 per 1000 live fifth at the end of the plan period and FP target is to recruit 140,000 new acceptors annually. This (reduction in infant mortality), the project hopes to achieve by providing services to under-fives through its different service points. More over two types of activities are carried out viz curative i.e. offering treatment to under-fives and preventive i.e. carrying out immunization services such as small-pox, B.C.G. and D.P.T. as well as the nutrition programme, rehydration activities, health education.

The available family planning methods offered by the programme are pills (Norinyl 1.50 or 1.80), IUD like L. Loop, Saf. T Coil of varying sizes, injectable contraceptives D MPA dose of 150 mg given once in 3 months, condoms, vasectomy, laparoscopy and minilap. Since the inception of the FP programme, total number of women who adopted pills and IUD are 258835 and 15,529 respectively while the number of men who used condom and vasectomy operation are 539,907 and 65,054 and the number of women who accepted laparoscopic operation are 20,684 (achievement by method and year Table 1).

The services are provided free of cost, to the needy population. The principle mode of service delivery has been through

clinics, community based workers, mobile clinics and camps. The community based worker bring services to the doors of the rural population. Mobile camps are special feature of Nepal and they have proved highly effective over the last few years. The laparoscopic camps are gaining great popularity. As these surgical methods are permanent and have an effective impact over ten years of potential fertility, the provision of surgical services, as close to the home of the acceptor as possible, encourages these methods. A recent study of acceptors characteristics has shown that average contraceptive user is 32.0, 31.5, 30.4, 29.4, and 30.4 years of age respectively for vasectomy, laparoscopic sterilisation, Depo-provera, IUD and pills, similarly the average user accepts family planning services only when he/she has 4.7, 4.4, 3.6, 3.0 and 3.5 children respectively.

At present time, family planning information and contraceptive services are being provided by a number of different government, non-government, and voluntary organizations and agencies such as the Nepal FP/MCH Project, the Integrated Health Service, the Family Planning Association of Nepal, and the Nepal Women's Organization.

The Nepal Contraceptive Retail Sales (CRS) Project is a non-profit programme developed by His Majesty's Government of Nepal's Family Planning & Maternal and Child Health Project to commercially distribute contraceptives throughout Nepal in order to encourage more people to practice family planning.

The goal of the Nepal CRS Project is to distribute two contraceptive products — condoms for men and oral pills for women — through existing retail outlets under the brand name like — DHAAL (Shield) for the condom, and GULAF (Rose) for the pills.

Since the actual distribution of Dhaal and Gulaf began from June, 1978, the Nepal CRS Project has been expanding its distribution to different part of Nepal. So far it has covered seven major urban areas of Nepal and the programme will gradually expand to smaller villages in the hills and terai.

## Pill

From the inception of the family planning programme in Nepal, contraceptive pill has been available as a popular method of family planning among the Nepalese women. In comparison to other methods it is the second most popular method of family planning. Until FY 1977/78 a total of 226,212 women have ever used the pill. It is also important to point out that there has been neither a sharp increase nor decrease in pill acceptors for the last seven or eight years. Each year approximately one-third of all new acceptors are pill users and this percent has remained relatively constant suggesting that there may have been a levelling off of new pill acceptors in relation of other methods. Indeed, Table 2 indicates that since 1972/73, there has been a slight decline in the percent of new family planning acceptors who use pill from 37 percent to 25 percent.

It is surprising that recently there has been a drop in the proportion of pill users. Pill users used to constitute about 37% of the total FP users but currently they constitute only 25% of the total FP users. A look at the total pill acceptor figure shows a slight increase over the previous year but relative to other contraceptive users the increase is very small. Although no studies have been conducted to find out as to the reasons for the decrease in the proportion of pill users it is hoped that currently on going National Acceptors Survey could provide some explanation to it. Some possible reasons could be as follows:

- 1) A dramatic increase in the number of condom users and at the same time small though significant increase in the sterilisations as well as the D.P. users. This has been increasing so with the opening of the panchayat based centres where FP service is provided by field workers with relatively inadequate clinic background.
- 2) In Nepal a high dose pill is currently being used. It has been shown that high dose pill have been associated with relatively large number of side effects especially its effects on lactation and nutrition status of the user is not suitable

to developing countries like Nepal. Lack of effective media have paved way to the rumors initiated by some dissatisfied users which seriously effects the new users. In this connection communication barrier must be broken to achieve programme effectiveness.

As shown by various studies, the mean age of pill acceptors was found 30 years at the time of acceptance, whereas from the acceptors follow-up survey the mean age was found to be 32 years. It is quite obvious that the survey covered the pill acceptors who accepted the method about 2 years before the survey was carried.

The number of living children of the pill acceptors remained almost constant at 3.6. At the time of the survey 2 years later they had a mean of 3.9 living children. As with number of living children, the mean number of living sons of pill acceptors has also remained almost constant at 2.0 and increased to 2-1 at the time of survey.

It can be seen from Table 3 that more and more illiterate females are accepting pills. On the whole, over three-fourth of the pill acceptors were illiterate. Regarding the occupation of the acceptor's husbands, 71% were reported to have been engaged in agriculture.

The continuation rates of pill acceptors at the end of certain length of time is an important index of measuring the effectiveness of the programme. It was found in the National Follow-up Survey of Family Planning Acceptors 1973-74 that at the end of one year, the continuation rate of pill acceptors was 36.7% which is a little lower than the continuation rate of pill users in Korea in 1968, (38% at the end of one year). The continuation rate at the end of 24 months and 36 months are respectively 19.8% and 13.2%. In Korea also the continuation rate of pill users at the end of 36 months was 12%.

—1 United Nations, country monograph Series No 2, Population of the Republic of Korea, ESCAP, Bangkok, Thailand, 1975, P. 215.

TABLE I — FAMILY PLANNING PROGRAMME ACHIEVEMENTS, NEPAL, 1966/67 — 1977/78

Methods:	IUD acceptors (for the first time)	Vasectomy acceptors	Pill acceptors (New)	No. of pill cycles distributed	Condom acceptors (New)	No. of Condom distributed	Laparo- scopic acceptors	Depo- provera	Total Couples (New)	R E M A R K S
Fiscal Year										
1966-67	1806	N.A.	13	13	33	495	—	—	1852	
1967-68	2614	1062	200	1203	1256	113130	—	—	5132	
1968-69	1183	3292	1255	8133	1914	172260	—	—	7744	
1969-70	1109	3888	10263	36329	14480	227636	—	—	29740	
1970-71	711	4441	13496	62865	18785	327098	—	—	37433	
1971-72	1162	3900	15868	86831	22908	479326	—	—	43838	
1972-73	607	4161	24056	125173	35713	725016	558	—	65095	
1973-74	862	5166	27141	202590	52075	1233624	810	25	86079	
1974-75	1110	3702	26943	197061	65814	1207731	662	81	98312	
1975-76	1635	9169	37640	254311	87876	1333425	2162	152	138634	
1976-77	1149	10953	33250	266594	74782	1929975	5422	976	126532	
1977-78	863	8443	35987	273607	92182	1923417	7470	1690	146635	
Total up to 1977-78	14811	58177	226212	1514715	467818	9673133	17084	2924	787026	

Source: NFP/MCH Project, Evaluation Division, Various Reports.

**TABLE II – CONTRACEPTIVE MIX IN A GIVEN YEAR: PERCENT OF ALL NEW ACCEPTORS USING A PARTICULAR METHOD**

Year	Percent Using							Total Percent	Number of New Acceptor
	IUD	Vasectomy	Pills	Condom	Laparscopy	Depo-Provera			
1966/67	97.5	—	0.7	1.8	—	—	—	100	1,852
1967/68	50.9	20.7	3.9	24.5	—	—	—	100	5,132
1968/69	15.3	42.5	17.5	24.7	—	—	—	100	7,744
1969/70	3.7	13.1	34.5	48.7	—	—	—	100	29,740
1970/71	1.9	11.9	36.0	50.2	—	—	—	100	37,433
1971/72	2.6	8.9	36.2	52.3	—	—	—	100	43,838
1972/73	0.9	6.4	36.9	54.9	0.9	—	—	100	65,095
1973/74	1.0	6.0	31.5	60.5	0.9	0.1	—	100	86,079
1974/75	1.1	3.8	27.4	66.9	0.7	0.1	—	100	98,312
1975/76	1.2	6.6	27.1	63.4	1.6	0.1	—	100	1,38,634
1976/77	0.9	8.6	26.3	59.1	4.3	0.8	—	100	1,26,532
1977/78	0.6	5.8	24.5	62.9	5.1	1.1	—	100	1,46,635

**TABLE III – CHARACTERISTICS OF THE PILL ACCEPTORS BY YEAR OF ACCEPTANCE**

Year	Sample Size	Characteristics				Occupation of Spouse		
		Mean No. of living age	No. of living children	No. of living sons	Literacy Illiterate	Literacy	Agriculture	Non-agriculture
1970—71(a)	9458	29.7	3.4	1.9	72.2	27.8		
1971—72(a)	10829	29.9	3.6	2.0	75.5	24.5		
1972—73(a)	1843	30.0	3.6	2.0	77.8	19.7		
1973—74(a)	2015	30.0	3.6	2.0	78.8	1.5		
1975—76(b)	2712	30.3	3.6	2.0	3.5	16.5	71.0	29.0
1973—74(c)	692	31.9	3.9	2.1	2.0	1.0		

**Sources:**

- (a) Joshi, P.L., Evaluation System of the Family Planning Programme in Nepal, Proceeding of the Workshop Conference on Population. Family Planning and Development in Nepal. Berkeley, California, Aug. 24.29. 1975. P. 223.
- (b) NFP/MCH Project, Evaluation Division, Socio-Demographic Characteristics of Family Planning Acceptors during 1975—76.
- (c) A Report on National Family Planning Acceptors Follow-up Survey 1973—74, Kathmandu Nepal, 1976.

**Side effects reported by Pill users:**

In Nepal, different types of oral contraceptive pills have been available from time to time. Among these were, OVULEN Fe-28 Ovrul, Lyndol and Demulen Fe-28. But for the last 4—5 years, Norynil Pill is being used. A National Family Planning Acceptors Follow-up Survey was conducted by FP/MCH Project in 1973/74. The major side effects reported by the Pill users in that study were, giddiness, headache, loss of appetite and bleeding.

Many women discontinue using the pill because of so called side effect which, though, trouble-some are not life

threatening. Those side effect respond to treatment and seem to be reduced with reason and good follow-up. No clinical research have so far been conducted in order to find out the short term as well as long term health risks associated with the pill in the Nepalese women. Experience has shown that most contraceptives have given rise to different degrees and pattern of side effects and complications. And the research conducted in different countries have clearly indicated that the oestrogen content of the pill tends to increase the blood clotting and also long term use of oral is associated with increased risk of heart attack and hypertension. This creates a grave concern to us although it has been mentioned that the proven risk of orals are considerably less than the risk of unplanned pregnancy.

In a developing countries like Nepal the problem of mal-nutrition is relatively severe. More over virtually all the mothers lactate their babies. Studies, carried out both in the developed and developing countries have shown that the low dose combination pill is associated with lower side effects than the high dose ones. Moreover some of these studies have shown that low dose combination pill have an edge over the high dose ones with respect to lactation and nutrition. Although no such studies have been carried out in Nepal as yet, it seems that low dose pill is suitable for Nepal. It is suggested however, that before the full scale availability, a pilot study in limited area be carried out to sort out some of its culture-boond side effects.

## IUD

In the beginning of the family planning programme in

Nepal, IUD was very popular. Table 1 shows that there was one-third increase in IUD acceptors between 1966–67 and 1967–68. In the later years, the new IUD acceptors declined by over 50%. This may be due to the major side effects produced by IUD. With the result that new IUD acceptors continued to be very low until. Table 2 shows that IUD acceptors have declined to the point where they constitute an insignificant percentage of new acceptors approximately one percent of the yearly total. To boost up the IUD acceptors, the FP/MCH Project started a training programme for senior public health nurses and staff nurses for IUD insertion.

### Characteristics of IUD Acceptors:

The characteristics of these acceptors can be seen from Table 4 below.

TABLE IV – CHARACTERISTICS OF IUD ACCEPTORS BY YEAR OF INSERTION

Year	Sample Size	Mean age	Characteristics		Literacy		Occupation of Spouse	
			No. of living children	No. of living sons	Illiterate	Literate	Agriculture	Non-agriculture
1970–71(a)	493	30.9	3.9	2.2	75.5	24.5		
1971–72(a)	422	30.2	3.7	2.2	68.2	31.8		
1972–73(a)	490	30.5	3.8	2.2	65.1	34.9		
1973–74(a)	688	30.4	3.6	2.0	62.5	37.5		
1975–76(b)	399	29.2	3.5	1.9	61.6	38.7	37.6	62.4
1973–74(c)	101	30.2	3.9	2.1	67.3	32.7	49.5	50.5

#### Sources:

- (a) Joshi, P.L., op. Cit. p. 223.  
 (b) NFP/MCH Project op. cit.  
 (c) op. cit.

As with pill acceptors, the mean age of IUD acceptors was also between 30 to 31 years. The mean number of living children of IUD acceptors has decreased from 3.9 in 1970–71 to 3.5 in 1975–76. Similarly the mean number of living sons has also decreased from 2.2 to 1.9 during the same period. As far as the literacy of the IUD acceptor is concerned, in the year 1970–71, over 75% of the females accepting the IUD were illiterate. The proportion of illiterate females accepting IUD has been declining continuously and in 1975–76, a little over 60% of females accepting IUD were illiterate. A lower proportion of husbands of IUD acceptors were engaged in agriculture occupation.

Regarding the IUD acceptors, their continuation rate was found to be higher. As noted in the National Follow-up Survey of Family Planning Acceptors 1973–74, 34.3 percent of the IUD acceptors discontinued use 12 months after first insertion and half of the IUDs inserted were in situ 24 months after first insertion. The discontinuation rate of IUD acceptors 12 months after first insertion was 43 percent in Korea in 1969 and this proportion increased to 51 percent in 1971.

Though the proportion of women wearing IUD in Nepal is low, nevertheless, the continuation rate of IUD acceptors in Nepal is higher than in Korea.

### Side effects reported by IUD users:

The major side effects reported by IUD users in National Family Planning Acceptors Follow-up Survey 1973/74 were bleeding, weakness and giddiness.

### Abortion

The practice of abortion has probably existed for many years. Without the availability of reliable statistics, it is not possible to give any guide on whether the incidence of induced abortion is increasing or decreasing. As in any developing countries in Nepal too, illegal abortions are performed either by trained medical personnel or by untrained indigenous midwives. The traditional method used by indigenous midwives to perform abortion are varied.

- (1) By introducing medicated stick into the cervix.
- (2) By uterine massage.
- (3) Cooked alum and bamboo bark if taken for 5 – 7 days continuously.
- (4) The seed oil of ricinus communis linn (Euphorbraceae) is used for abortion.

- (5) *Potentilla peduncularis* D. Don (Ros a cool) plant bark is powdered and given to pregnant women.
- (6) *Abromo angustic* (Aloes) level are used as abostificient.
- (7) *Plumbago Zedomica* stick is used as abostificient.
- (8) By introducing metal catheter into cervix and then pushing nearly 5 cc of mixture of premasin glycerine and little Acriflavin within 12—48 hours abortion takes place.

Other methods of abortion used by trained personnel are as follows:

- (a) By introducing laminaria tents,
- (b) By menstrual regulation
- (c) By D and C
- (d) By Hysterotocny

In Nepal not only to perform abortion is regarded as a crime against the existing law, but also any body seeking abortion or practicing it or willing to be an accomplice to such an act is punishable with long term imprisonment.

In this context it is not possible to identify the abortion service provider to get the reliable statistical data. So far no research concerning abortion has been conducted in Nepal. However there are some reliable guesses. It is estimated that about 1,100 to 1,200 induced abortion per year are performed in the Kathmandu valleys with the population of 600,000 (1 percent of the country total population. In the hospital of

Kathmandu valley, about 550 cases of incomplete and septic abortion are dealt with every year. All of the hospitalised cases are married women of upper socio economic class who simply want to limit the size of the family. Widow mother or widows do not seek hospital care for complications. They are the ones who terminate their pregnancies at whatever risk obtaining their abortion mostly from unqualified personnel for essentially social reason. At the same time most couples rely on the condom, which has a high rate of failure. Vasectomy, though considered as a failure method has a high failure rate. When these means fail, the women seek abortion. Although no clinical studies have been conducted to estimate the complication rate it is indicated from hospitalised cases that illegal septic abortions continue to the leading causes of maternal morbidity and mortality, commonest causes of death being the haemorrhage, tetanus, peritonitis.

*Source:* Dr. B.P. Sharma, Bir Hospital Pschosocial Aspect of Abortion in Asia, Kathmandu 26—29 Nov. 1974 p.p. 64—68.

#### **Trophoblastic Diseases:**

Although trophoblastic diseases are common and are responsible for significant maternal mortality and morbidity in Nepal, no research concerning this disease has been conducted and therefore accurate data are not available.

# PHILIPPINES

## Country Paper

### PREVIOUS AND ON-GOING RESEARCHES IN THE PHILIPPINES

It is recognized that rapid population growth has multifaceted and multifarious effects on the citizenry of a country. Most of the effects are detrimental not only to the development efforts of the country but also to the total development and well-being of its people. For this reason, the Philippine Government's commitment in the pursuit of the programme of population control as part of the national development effort is total and absolute.

The enrichment of life is the primary concern of the Philippine Population Programme.

In line with that concern, the Philippine Population Programme has developed four component programme activities, namely: Service Delivery, Training, Information/Education/Communication (IEC) and Research.

Service Delivery Programme component provides for family planning services as part of overall health care. All acceptable methods of contraception, except abortion, that are safe and effective are available to all citizens desirous of spacing, limiting or preventing pregnancies. To date, there are 3,600 hospitals, clinics and mobile family planning teams, and 3,100 Full-Time Outreach Workers as well as 30,000 Barangay Service Points deployed all-over the countryside providing family planning services to the people. An estimated 'four million plus acceptors, who at one time or another practiced a method, have been registered. The prevalence rate among married couples of reproductive age (MCRA) at community level was estimated at 37.7% as of March 1979.

To ensure quality service in the programme, training has been a major activity. The major thrust of training is to increase knowledge and develop and/or improve skills and capabilities of clinic personnel and fieldworkers. Special orientation programmes are available to policy and decision makers, managers, media people and local leaders.

Through the IEC programme, the policy of making family planning a part of the broad educational programme and as a way of life for Filipinos is being realized. For this activity, the programme has made provision for the face-to-face motivation

strategy through the 30,000 Barangay Service Points workers and 5,000 other Barangay Development Workers of the Ministries of Agriculture and Natural Resources, Social Services and Development, Local Government and Community Development and Labor and from the private sectors. This is backstopped by public information campaigns through the various media — radio, television, folk media, newsprints, etc.

Research is a basic activity in the national programme from the start. Findings from studies undertaken enable policy makers and programme managers to adopt necessary policy(ies) and programme strategy(ies) that are deemed to help achieve the goals of population growth reduction and the enrichment of Filipino life.

Population-related research activities in the Philippines can be categorized broadly into:

- (1) Research on Demographic levels, patterns and trends;
- (2) Research on Socio-Economic and Demographic inter-relationships; and,
- (3) Programme-oriented Research. This paper addresses itself largely to the last category — programme oriented research.

#### Programme-Oriented Research

The numerous population programme-oriented research activities in the country have concentrated on the assessment of family planning programme effectiveness, some results of which have led to changes in the family planning programme policies and strategies. For example, the 1974 National Acceptors Survey (NAS) findings which showed low rates of contraceptive use among couples who live far from towns where clinics are located (beyond a 3-kilometer radius) led to a major change in service delivery strategy by the introduction of the Outreach Programme, the chief feature of which is service delivery at the doorstep of the barrios and remote communities. It also led to the adoption of a major policy authorizing non-medical family planning workers to dispense pills after training and after having been duly certified by the Commission on Population.

Findings from behavioral research studies have indicated that IEC and training programmes should place heavier emphasis than they do now in informing both programme workers and clients about the actual differences in use-effectiveness of the various methods in the Philippine setting and its importance as a criterion for method selection, and the provision of alternative brands of present programme methods for increasing continuation rate.

The findings led to the repackaging of the IEC modules and the Training modules, the addition of surgical sterilization service in the array of contraceptive methods offered in the programme and the adoption of a National Guideline on Service Delivery Promotion and Coordination.

Studies in the biomedical field antedate the start of the population programme by many years. For example, studies on Trophoblastic Diseases were started at the University of the Philippines—Philippine General Hospital (UP—PGH) as early as the 30's. Findings have guided physicians in the detection and management of Trophoblastic diseases.

### Trophoblastic Diseases

In a six-year study done at the Philippine General Hospital (1969—1975) the incidence of Hydatidiform Mole (H. Mole) is 1:144 live births. In 77.5% of cases, H. Mole was observed in multiparous women. In all cases, the initial symptom was vaginal bleeding.

A disproportionate enlargement of the uterus was noted in only 57% of cases. This same study demonstrated that the prophylactic use of Methotrexate within two weeks after molar evaluation appreciably reduced the incidence of persistent Trophoblastic disease. The incidence of mortality from those which became malignant in this study was 0.4%.

#### Malignant Trophoblastic Disease:

Incidence 1:442 live births

In 76.0% of cases preceded by H. Mole

Therapy — on a selective basis — surgery and chemotherapy are the modes of therapy

Mortality rate was directly related to the duration of the disease prior to therapy and to the presence and location of the metastases.

### Intra-Uterine Device

In the early years of Family Planning in the Philippines (late 60's and early 70's), the intra-uterine device was the second method of choice. However, IUD acceptance and use started to decline since 1972 and had dropped to 4th place to date. Two major reasons were identified for the decrease in IUD acceptance:

- (1) The external influence like myths/rumors and the clinic situation vis-a-vis availability of service, knowledge/competence of service providers;
- (2) The inherent deficiencies of the method itself — IUDs produce bleeding and pain, are expelled and are not 100% effective in preventing pregnancies.

Studies conducted and being conducted are along the area of minimizing side effects — selection of the device, time of insertion, training of service providers and the IUD Delivery System itself.

Findings from some of the completed studies have led to the adoption of a policy licensing nurses and midwives to insert IUD after training and after having been duly certified by the Commission on Population, and the IEC drive to combat myths and rumors. Hopefully, the evaluation of the other studies will indicate the best way to treat side effects, particularly, the bleeding and how the IUD can be prevented from being expelled.

### Oral Contraceptives

With the government policy of free choice on the selection of a family planning method, the pills have remained on top of the preference list although the trend in method six indicates a steady downward trend from 1970 to the present.

There are several studies on oral contraceptives. Most of the studies were along the line of efficacy and safety of pills of dose formulation prepared for the Caucasian women. Studies in England have shown that the pill is responsible for metabolic changes and increased incidence of thrombo-embolic phenomena and other myocardial and circulatory disorder among Caucasian women. The question is whether Filipino women are as prone to the hazards of pills. One study under process for implementation is the Trial Study on Different Dose Combinations of Oral Contraceptives. Hopefully, this study would indicate the formulations suitable to the Filipino women. Eventually, further in-depth clinical study may provide the answer to the question.

### Studies on abortion and folk methods of fertility control

Researches on folk methods of fertility control and abortion have been undertaken primarily to identify traditional methods of abortion and contraception to test the pharmacological effectiveness of local plants, to assess the effects of training programmes for traditional birth attendants (hilots), to determine the characteristics of mothers with abortion cases, and to determine abortion rates in certain Philippine population groups.

The general findings of such studies indicate adherence to traditional methods, reluctance to use modern contraceptive methods, and inadequate knowledge and practice of family planning on the part of the groups studied. Specific findings revealed the following:

- (1) Traditional birth attendants recommend traditional practices which have been in use for quite a time because both "hilots" and the acceptors are familiar with the plants and objects used to prevent conception or induce abortion.
- (2) There are four traditional methods of inducing abortion, namely; manual or abdominal massage, use of inanimate objects, i.e. magnetic lead stone (bato balani), use of herbs (PANAKTOK, HUMAY, KUMINTANG, MAKABUHAY, AMPALAYA) and the use of sharp instruments (coconut husks and wire).
- (3) In a sample survey done in one community, the abortion rate for the period 1964—67 was 8.48% (of which 4.6% was illegally induced). Among the reasons given for induced abortion were to limit family size and to avoid further economic difficulties. The characteristics associated with cases are: older age, longer marriage, more pregnancies, better education, higher income and less knowledge and practice of family planning.

- (4) Other traditional methods of contraception are abstinence, coitus interruptus and herbal methods. The roots of SAMBONG, KAMARIA, MAM-IN, SARSAPARILYA, AGOHO or MAKABUHAY were mentioned as common contraceptives. DRUGS — CORTAL, ASPIRIN, QUININE and large dose of hormonal pills were also mentioned as abortifacients.

Studies on traditional methods of fertility control are still being pursued. The UP-College of Medicine is currently conducting a three phase research which will involve a study of the action and effects of the chemical substances of some herbs (Phase I) and pharmacokinetic and toxicological studies of the said herbs (Phase 2).

#### Gaps in Population Research

Considering the volume of available research on population, the problem is less on adequacy but more on the utilization of findings and recommendations.

Several reasons were identified for non-utilization of several research studies during the Research Utilization Workshop held in Manila in 1977. These are:

- (1) It seems that some research projects undertaken were not evolved from what policy makers or programme managers perceive as information or knowledge needed for making decisions, nor presented in a form useful to the policy makers and/or programme implementors. With the exception of a few, the research work did not satisfy what implementors consider as applicable, practical, feasible and/or viable.
- (2) Research studies do not reach policy makers and users at the right time. The time lag between start to finish and dissemination for review by users is quite long to be used as basis for decision, development of new strategies or changing direction of on-going programmes.

Taking all the above reasons into consideration, the Commission on Population has taken steps to develop a research plan wherein priorities are to be clearly established and the link between research and policy is made clear. Such research plan will indicate for what purpose particular research projects are needed and when. Efforts are directed to open communications between researchers and users.

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# SINGAPORE

*Country Paper*

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**Inventory of Previous and on-going Research by The  
Depart of Ob-Gyn, University of *Singapore*.**

**Oral Pills**

1. Trials Comparing various dose requires of oral pill; also national various synthetic oestrogens.
2. Effect of pills on Carbohydrate metabolism
3. Effect of pills on Coagulation.

**IUD**

1. Trial Comparing various Type of IUD.
2. Extopic pregnancies and IUD.

**Menstrual Regulation**

1. Comparison of flexible and rigid Canulas for surgical menstrual regulation.

2. Medical MR with prostaglandins.

**Abortion**

1. Psychosocial aspect of abortion.
2. Safety of outpatient abortion compared with inpatient abortion.
3. Safety of local anaesthesia.
4. Prostaglandin for preoperative cervical dilatation in multiparous pregnancies and midtrimester abortion.

**Sterilization**

1. Concurrent versus interval sterilization in relation to abortion — both medical and psychological aspects.
2. Sterilization failures.
3. Safety of various method of sterilization.

# HONG KONG

*Country Paper*

**Inventory of previous on going research in Hong Kong on the followings:**

**Projects on which are the appropriate Asian women on oral pills:**

1. **Hong Kong Family Planning Association:**
  - a) KAP Survey of Hong Kong.
  - b) Impact of Industrialization on Fertility in Hong Kong.
  - c) The Family Planning Requirements for the Housing Estates in Hong Kong.
2. **Department of Obstetrics & Gynaecology, University of Hong Kong:**
  - a) Coagulation changes in females on oral pills.
  - b) Hyperprolactinaemia.
  - c) Hormonal profile and Ovarian Maturation in Hong Kong Adolescence.

**Traditional Methods on abortion and other methods:**

Department of Biology & Biochemistry Department, Chinese University of Hong Kong: Non-steroidal contraceptive compounds from Chinese herbal drugs.

**Studies in I.U.D.:**

- a) **Hong Kong Family Planning Association:**  
A comparative study of the Performance of 4 I.U.D.'s in Hong Kong.
- b) **Department of Obstetrics & Gynaecology, University of Hong Kong:**  
The dosage and effectiveness of continuous infusion of Prostaglandin in first trimester abortions.

**Trophoblastic Diseases:**

Department of Obstetrics & Gynaecology, University of Hong Kong.

**Laboratory Research:**

- a) **Department of Zoology and Physiology, University of Hong Kong:**  
Study of Spermatogenesis and Sperm Maturation.
- b) **Department of Anatomy, University of Hong Kong:**  
Hormonal Influence on tissue culture.

# JAPAN

## Country Paper

### ORAL PILLS

The Ministry of Health and Welfare of Japan has not yet approved the use of steroidal preparations as contraceptives. At present, four different varieties of combined estrogen/gestagen preparations which contain 50 ug of either ethinyl estradiol or Mestranol are commercially available and physicians are prescribing them for women who wish to use oral pills.

Strictly speaking, however, these drugs were approved by the central drug control agency as a therapeutic regimen for functional uterine bleeding, dysmenorrhea, or ovarian dysfunction and not for use as contraceptives. Thus under these circumstances, no pharmaceutical company has plans to market the so called 'low dosage estrogen pills.' The medical committee of the Japan Family Planning Association now has a plan to start a clinical investigation as to the effectiveness of these "low dosage pills," however, it is not yet certain whether permission to import the drug can be obtained.

### TRADITIONAL METHODS ON ABORTION

Since 1948, when induced abortion was legalized, the standard method for induced abortion at the first trimester has been dilatation and curettage. Some physicians are also using the suction method while laminaria tents have been used to dilate the nulliparous cervix.

Recently, T. Wagatsuma et al. published a clinical study of the MR-Kit made by IPAS, and a Japanese company will import the kit as soon as the government's approval on the instrument is obtained.

As to the technique of mid-trimester abortion, previously dilation of the cervix with the laminaria tent followed by an insertion of a rubber balloon with a pitocin drip to stimulate uterine contractions was the standard method. Now more and more physicians are using an extra amniotic infusion of Prostaglandin F<sub>2α</sub>.

Recently, clinical tests on the effectiveness of vaginal suppositories containing a newly synthesized Prostaglandin analogue 16, 16-Dimethyl-Trans-deta<sub>2</sub>-Prostaglandin E<sub>1</sub> methyl ester have been carried out with satisfactory results.

### STUDIES ON IUD

It is well known that Japan is one of the few countries where clinical effectiveness of the IUD has been investigated from as early as the 1930's. In 1974, the Ministry of Health and Welfare changed the regulations which control the approval of the IUD. Under present regulations, any pharmaceutical agent who plans to obtain governmental approval for either manufacture or import of an IUD, must present clinical data of not less than 500 cases in whom the IUDs were inserted at more than five different institutions. Basic data which prove the safety and non-toxicity of the material of the IUD are also required.

In 1974, two ring-type IUDs developed in Japan, the Ohta-ring and the Yusei-ring were officially approved, followed by the approval of the Lippes Loop and the FD-1, another Japanese produced IUD (figure 1) in 1977.

Up to now, two other non-medicated IUDs, the SAF-T-Coil and the Dalkon Shield, two copper impregnated IUDs, the T-Cu 200 and the Cu-7 as well as the progesterone IUD have been clinically tried and have shown satisfactory results (Tables 1 and 2). Preliminary clinical tests of the ML-250 have recently been started (Table 3). All of these IUDs except for the Dalkon Shield are presently waiting the approval of the Japanese government. Unfortunately, however, the Ministry of Health and Welfare holds a somewhat conservative attitude toward the clinical application of medicated IUDs, therefore, it is not yet certain when they will be approved.

In 1978, T. Wagatsuma received a research grant from the special programme of research on human reproduction of the WHO and has started a so-called MBL study with three different IUDs: the T-Cu 200 C, the Cu-7, and the FD-1. So far, the amount of menstrual blood loss of normal Japanese women of reproductive age was determined as background data, and their mean value is slightly higher than those obtained in the U.S. or in Scandinavia with the same method.

Aside from these clinical studies, several scientists are interested in the morphological and enzymatic changes of the endometrium caused by the insertion of the IUD, and several papers have been published on this subject.

Figure 1: Newly designed IUD, FD-1

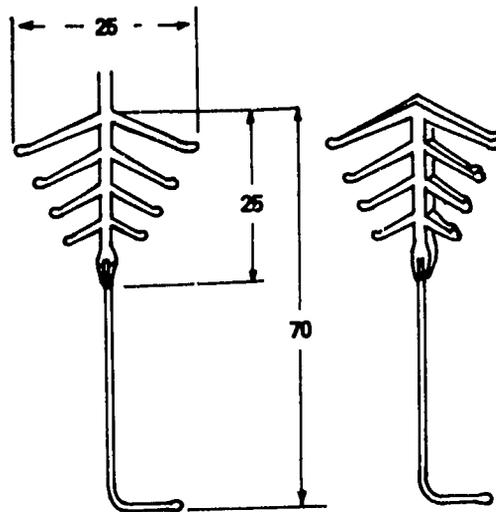


TABLE I – RESULTS OF CLINICAL TRIALS WITH NON-MEDICATED IUDS IN JAPAN

NET CUMULATIVE TERMINATION RATES PER 100 WOMEN  
(12 MONTHS OF USE)

	LIPPES 1	LOOP 11	FD-1	Dalkon Shield
Accidental Pregnancy	3.1	3.0	3.7	3.5
Expulsion	9.3	7.3	1.7	0.8
Removals				
Bleeding/Pain	5.7	6.9	2.7	3.8
Other Medical Reason	0	0.8	0.7	0.5
Planning Pregnancy	2.4	5.9	1.3	1.4
Other Personal Reason	2.6	1.4	0.3	1.5
Total Termination	28.2	25.3	10.4	11.5
Net Cumulative Continuation Rates	71.8	74.7	89.6	88.5
Number of Insertions	395	568	671	761
Women-months of Use	2,412*	5,367**	9,624***	8,343
	* 36 months	** 15 months	*** 23 months	

Source: Lippes Loop Study Group, 1977 (II)  
Wagatsuma, 1974 (I)  
Wagatsuma, et al., 1977  
Dalkon Shield Study Group, 1970

**TABLE II — RESULTS OF CLINICAL TRIALS WITH MEDICATED IUDS IN JAPAN**

**NET CUMULATIVE TERMINATION RATES PER 100 WOMEN**

**(12 MONTHS OF USE)**

	<b>Gravigard</b>	<b>T—Cu 200</b>	<b>Progestasert</b>
Accidental Pregnancy	1.9	0.5	0.8
Expulsion	5.2	1.6	1.2
Removals			
Bleeding/Pain	2.4	3.4	4.3
Other Medical Reason	2.2	0.3	0.3
Planning Pregnancy	3.2	1.5	1.1
Other Personal Reason	0.9	0.3	1.1
<b>Total Termination</b>	<b>15.8</b>	<b>7.6</b>	<b>8.8</b>
<b>Net Cumulative</b>			
Continuation Rates	84.2	92.4	91.2
Number of Insertions	346	954	570
Woman-months of Use	5,534*	9,956*	8,343

\* 24 months

*Source:* Wagatsuma, 1974  
Copper-T study group, 1978  
UPS study group, 1974

**TABLE III — RESULTS OF CLINICAL TRIAL WITH ML — 250**

**NET CUMULATIVE TERMINATION RATES PER 100 WOMEN**

	<b>6 Months</b>	<b>ML—250 Cu 12 Months</b>	<b>24 Months</b>
Accidental Pregnancy	0	0	1.5
Spontaneous Expulsion	1.1	1.1	2.6
Removals:			
Bleeding/Pain	0	5.0	8.1
Other Medicals	1.1	2.2	4.2
Planning Pregnancy	0	2.5	8.8
<b>Total</b>	<b>2.2</b>	<b>10.8</b>	<b>25.2</b>
<b>Net Cumulative</b>			
Continuation Rates	97.8	89.2	74.8
Woman-months of Use:			
Number of Insertions	91	997.5	1,546

Wagatsuma, 1979.

# KOREA

## Country Paper

### A. Oral Contraceptives

Various kinds of oral contraceptives have been used over the past 10 years and many clinical and experimental studies have been conducted with the steroidal contraceptives in Korea.

There are several research findings on the incidence of the common side effects or complaints to oral contraceptives (Table A-1). The agent was mostly administered from day 5 to 25 of the menstrual cycle except Microcult. Individual cycles varied from 1 to 10 or more cycles.

In all studies, each clients was interviewed to determine her objective and subjective symptoms and was given a general physical examination including a complete pelvic examination.

Certain unpleasant but not serious side effects were compared by various kinds of oral contraceptives. Common side effects reported were related to menstruation: spotting, hypomenorrhea, dysmenorrhea, amenorrhea, hypermenorrhea, G-I troubles: indigestion, nausea & vomiting, appetite change, leukorrhea, breast tenderness, chloasma, headache, low back pain, weight change, and other minor complaints.

The side effects or complaints were most notable during the first 3 cycles, diminishing spontaneously thereafter.

In the termination of oral contraceptive use, Table 2 shows termination rate for medical reasons accounted.

Lee<sup>17)</sup> describes the prevalence of candida infestation was 69% (out of 200 cases) in pill users. Candida infestation rate was 80% in oral users for the first 6 months of pill use and gradually decreasing to 22.2% in the period 9 to 12 months then peaking at 100% in the period 19 to 21 months and finally

decreasing to 50% after 37 months of oral pill use.

Kwon<sup>15)</sup> reported that the volume of breast milk from mothers using hormonal contraceptive (Eugynon) decreases in periods between post-1 cycle and post-4 cycles. Starting in periods following the use of the 5th cycles, however, there appears to be no noticeable change.

Yang<sup>18)</sup> reported the effect of oral contraceptive (Lindiol) on active pulmonary TB patients prevalence and incidence rates of tuberculosis among oral contraceptive users and control non-users showed no significant differences for the period of study. It would be safe to advise oral contraceptive pill to women of child bearing age without prior screening of tuberculosis.

Lee Chung Bin<sup>16)</sup> examined four consecutive a typical fibroadenomas in women taking oral contraceptives and compared with 14 fibroadenomas in lactating and pregnant women and 100 common fibroadenomas. They appeared partly similar to those seen in lactating and pregnant period. It was suggestive that a typicality of the fibroadenomas of the women receiving oral contraceptives may be related to high hormonal milieu.

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TABLE A-I

## INCIDENCE OF SIDE EFFECTS BY THE VARIOUS KINDS OF ORAL CONTRACEPTIVES

Side Effects	Kinds													
	1) D-Norges-trel	2) Lindiol 5mg	3) Norinyl 1+50	4) Serial -28	5) Eugynon	6) Eugynon E.D.	7) Demu-len	8) Microcult	9) Microgynon	10) Minovular E.D.	11) Neovular	12) Various kinds	13) Ovulen 1mg	14) Lindiol 2.5mg
Spotting	1.3	0.45	3.4	1.1	0.82	0.92	1.6	6.6	1.7	1.9	0.6	0.5	2.2	1.4
Break through bleeding	0.5		1.2	0.2			0.3	2.7	0.5					
Amenorrhea		0.55	0.8	1.1	0.36	0.53	0.6	2.2	0.5	0.2	0.06	0.2	0.8	0.4
Hypomenorrhea		11.90			0.63	5.24	3.7	0.05		1.0		1.3	3.8	4.8
Hypermenorrhea		6.3			0.36	1.36						0.2	0.6	1.0
Dysmenorrhea	0.5		1.7	2.8						0.6	3.1	0.4		
Leukorrhea			4.3	5.2	2.45	1.75	2.4	0.2	0.8	1.5	2.8	0.5		1.2
Prolonged mens						0.05								
Nausea, vomiting	1.4	2.8	6.0	8.6	3.62	1.46	2.5	1.4	4.1	2.1	2.46	1.4	4.2	2.7
Digestion poor	0.9		7.3	4.5	1.27	2.09	1.1	0.3	0.5	1.3	1.0	0.7		
" good			7.9	2.4	0.82	0.15								
Appetite poor			11.0	2.2	1.45	0.39		0.2		0.6	0.6	0.1		
" good			10.9	2.3	0.36	0.15				1.0	1.06	0.1		
Weight increase		20.0	16.6	4.2		6.63							3.2	3.3
" decrease		3.6	13.8	2.0							2.3	0.02	2.4	1.4
Lactation increase		3.6									0.4			
" decrease		11.8												
Breast discomfort		5.9	1.9	0.3			0.4		0.2	0.4	0.4	0.2	0.7	0.6
Libido increase		12.2		0.7					(0.2)			0.1	0.4	0.3
" decrease		3.6		0.5								0.01	0.4	0.2
Low abd. pain & backache			1.9	5.7	1.17	1.75		0.3	0.8		1.2	0.2		
Headache	2.3		5.9	6.1	2.54	0.92	1.2	0.3	1.5	1.2	0.6	0.4	0.4	
Fatigue, dizziness	0.6					0.15								
Chloasma	0.9		1.2	3.9	0.28		0.4	0.05		0.6	2.4	0.4		
Nervousness			1.0	1.4	1.45		0.1		0.5	0.2	0.4			
Varicosity														
Urticaria						0.05						0.1		
Acne						3.35						0.03		
No. of acceptors	209	139	467	441	510	327	418	501	447	420	382	1,389	147	254

12) include Anovular, Lyndiol, Eugynon, Eugynon E.D., Ovulen, Ovural, and Orthonovum.

**TABLE A-2**  
**TERMINATION RATE FOR MEDICAL REASONS**

Author (Year)	Kinds	Rate (%)
Kwak (1966) <sup>2)</sup>	Lindiol 5 mg	6.2
Kwak (1968) <sup>5)</sup>	Eugynon	0.4
Kwak + Lee (1974) <sup>13)</sup>	Ovulen 1.0mg	5.4
Kwak + Song (1973) <sup>12)</sup>	Various kinds*	18.3
Kwak, et al. (1969) <sup>14)</sup>	Lindiol 2.5mg	4.72
Kwak, et al. (1971) <sup>6)</sup>	Eugynon E.D.	5.2

\* includes Anovular, Lindiol, Eugynon, Eugynon E.D., Ovulen, Ovural, and Orthonovum.

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ceptives on Tuberculosis," *Korean Jr. of Ob & Gyn*, 15(6), June 1972.

In Korea, the list of titles for the on-going research projects on oral contraceptives are as follows:

1. Effects of oral contraceptives on metabolic processes  
Objectives:
  - a) To determine if oral contraceptives influence cortisol, renin-angiotansin-aldosterone and thyroxine levels.
  - b) To elucidate if oral contraceptives suppress the secretion of hormones which are involved in lactogenesis and milk ejection.
  - c) To demonstrate if oral contraceptive steroids being taken by lactating mothers pass into milk.
2. Comparative study of an oral combination contraceptive preparation in tablet and "paper pill" form.  
Objectives:
  - a) To study the effect of a treatment advantages of cost and patient acceptability with conventional tableted oral contraceptive and "paper pill" form.
3. Study of prevalence of signs of vitamin deficiency in association with oral contraceptives.  
Objectives:
  - a) To determine if the prevalence rate of the clinical signs and symptoms of vitamine deficiency is significantly increased in a group for women using oral contraceptive hormones as compared to a group of women not using oral contraceptive hormones.
4. Comparative study of the biochemical effects of combined estrogen/progesterone oral contraceptives containing 50mg or less of estrogen.  
Objectives:
  - a) To investigate whether different amounts of the same estrogen, or combination the same progestogen induce different metabolic reactions.
  - b) To investigate whether the same amounts of different estrogen, or combination the different progestogens induce different metabolic reactions.

#### B. Abortion Method

There are several research findings on the procedures practicing induced abortion (Table B-1).

Hong<sup>1)</sup> revealed that in large city area, 94% of induced abortions have been performed by surgical procedures. Surgical methods, mainly D & C, also include abdominal surgery and insertion of objects.

As revealed in Seoul area, surgical procedures predominated, 93% of abortions having been thus performed in rural areas<sup>2)</sup>.

Hong<sup>3)</sup> reported that more than 90% of abortees had experienced by curettage as a whole country and 90% in Seoul, 93% in urban and 89% in rural area.

Hong<sup>4)</sup> conducted the survey based on the interviews of providers at clinics and hospitals.

In the first trimester abortions D & C technique was one time or another utilized by 95% of providers, suction by 65.7% and MR by 42.8%. About two-thirds (63.7%) of physicians practicing menstrual regulation technique administer anesthetics and 66.2% provides no analgesics. The size of cannula utilized are 5mm in 44.7 percent, 4mm in 18.6%, and 6mm in 15.1% respectively. The majority (85.2%) utilizes electric vacuum pump and 7.2% Karman Syringe as a source of negative pressure. Curetting is often (84.6%) used for assurance of complete evacuation after the procedure. Administration of either antibiotics or oxytocics are found in 94.5%. Suction

**TABLE B-1: — DISTRIBUTION OF PROCEDURE FOR INDUCED ABORTION**

Authors (Year)	Area & Facility	Year of Data Collection	Sampling, Study Population	Method of Data Collection	Results
Hong (1967)	Rural	1965.8— 1965.10	Eligible wives aged 20 to 44 years who were living with their husbands, 2,084 in number.	Interview	(1)
Hong (1966)	Large city	1964.7— 1964.8	743 women who acknowledged they had experienced at least one induced abortion (1,484 cases)	Interview	(2)
Hong (1972)	Nation-wide	1971.9— 1971.11	Ever married women who acknowledged they had experienced one or more induced abortion, 1,288 in number.	Interview	(3)
			No. Case		
			Seoul 356 574		
			Urban 379 608		
			Rural 553 788		
Hong (1978)	Seoul	1977.10— 1978.3	726 medical facilities where induced abortion was provided.	Interview	(4), (5) (6), (7)
			Private clinic: 684		
			hospital: 41		
			family planning clinic: 1		

(1) Percent Distribution of Cases Grouped on Basis of Method by Agent Performing Abortion

	Total		Operative Procedure	Method Used		
	No.	%		Drugs	Intrauterine Chemicals	Others
All agents	142	100	93	93	3	1
Specialist	107	100	99	—	1	—
G.P.	20	100	85	—	10	5
Others	15	100	60	27	7	7

(2) Number of Cases by Method of Termination

Method	All Cases	
	Number	% dist.
Curettage	1,390	94
Intra-uterine application	25	2
Injection of medicine	31	2
Intake of medicine*	17	1
Other	21	1
Total	1,484	100

\* May include ergot preparation, quinine pills and extract of tongkui. It is improbable that an antimetabolite such as antifolic acid is dispensed as an abortifacient.

## (3) Number of First and Last Abortion Cases Method of Termination

Method	Seoul	All Cases (%)	
		Urban	Rural
Curettage	90	93	89
Aspiration	2	*	*
Herb Medicine	*	*	1
Injection	2	1	2
Other	5	5	8
Total (N)	100 (574)	100 (608)	100 (788)

\* Less than 0.5%.

## (4) Termination Procedures for 1st Trimester Abortion

Procedures Utilized	Number	Percent
D & C, Suction, MR	257	35.4
D & C	219	30.2
D & C, Suction	186	25.6
D & C, MR	27	3.7
Suction, MR	24	3.3
Suction	9	1.3
MR	2	0.3
D & C, Suction, MR, Prostaglandin	1	0.1
Other	1	0.1
Total	726	100.0

## (5) Anesthetics Administered by Procedures

Anesthetics	MR		Suction		D & C	
	No.	%	No.	%	No.	%
Thiopental Sodium	109	35.0	261	54.6	431	62.4
Propanidid	50	16.1	67	14.0	84	12.1
Trichloroethylene	12	3.9	14	2.9	24	3.5
Ketamine	2	0.4	2	0.4	2	0.3
Procain or Lidocaine	4	1.3	70	14.7	12	1.7
Multiple Agents	21	6.8	6	1.3	94	13.6
Not Administered	113	36.3	58	12.1	44	6.4
Total	311	100.0	478	100.0	691	100.0

## (6) Analgesics Administered by Procedures

Analgesics	MR		Suction		D & C	
	No.	%	No.	%	No.	%
Pethidine HC1	46	14.8	75	15.7	99	14.3
Baralgin-amide	14	4.5	20	4.2	36	5.2
Diazepam	4	1.3	7	1.5	7	1.0
Hyoscine-nbutylbromide	4	1.3	10	2.1	11	1.6
Tilidine HC1	6	1.9	9	1.9	8	1.2
Other*	7	2.3	13	2.6	33	4.7
Multiple Agents	24	7.7	43	9.0	50	7.3
Not Administered	206	66.2	301	63.0	447	64.7
Total	311	100.0	478	100.0	691	100.0

\* Other agents include valethamate bromide, sulpyrin, trospium chloride, papaverine HC1, acetyl salicylate, valenthamide bromide, phenobarbital sodium, mefenamic acid, morphine HC1, dihydrocoieine bitartrate, and sodium phenyldimethyl-pyrazolone-methylamine-methance sulfonate.

(7) Procedures for Mid-Trimester Abortion

Procedures	Number	Percent
Metreurynter	322	36.2
Infusion of Oxytocics	251	28.2
Bougie	205	23.0
Laminaria	53	6.0
Prostaglandin, Intra or Extra Amniotic	31	3.5
Saline, Intra or Extra Amnoitic	18	2.0
Hysterotomy, Abdominal or Vaginal	8	0.9
D & C	2	0.2
Total	890	100.0

technique is utilized by two-thirds of practitioners (65.8%), and responsible for 30.3% of first trimester abortions. In majority of cases (99%), evacuation is preceded by dilatation of cervix in which laminaria tenting is often accompanied (77.6%). As to anesthetics, Thiopenthal Sodium (54.6%), Propomid (14.0%), and local anesthetics (14.7%) are principal drugs used but some practitioners (2.1%) do not use any. About one-third (37%) uses analgesics and majority (97.1%) administer either antibiotics or oxytocics postoperatively. This technique has been practiced from the initiation of their practice in 18.4% and shifted from conventional procedure, D & C, in 81.6% and become popular since about 1968. D & C procedure is most widely used (95.0%) and is only procedure for the first trimester abortion in 30.1% of practitioners. Dull curette is utilized in 63.8%, sharp one in 21.9%, and the remainder uses both types. The administration of drugs pre and post operatively differs not appreciably from that of suction technique.

In midtrimester abortion the major procedures utilized are metreuryntor (36.2%), oxytocics infusion (28.2%), Bougie (23.0%), Laminaria (6.0%), Prostaglandin (3.5%), saline solution (2%), and some of them are used frequently combined.

Table B-2 indicate the side effects in MR technique. Nausea & vomiting, faintness, uterine perforation, and cer-

vical injury are immediate complications and infection, spotting, and continued pregnancy are delayed.

Kim<sup>5)</sup> and Na<sup>6)</sup> reported incomplete aspiration was detected in 21.6% & 29.4% of 8 weeks group from the 8 LMP each other and in 42.6% & 48.3% of 9-12 weeks group.

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TABLE B-2: - COMPLICATIONS OF INDUCED ABORTION

Complication	Na <sup>6)</sup>	Whang <sup>7)</sup>	Kim <sup>5)</sup>
Immediate	(N = 1,830)	(N = 695)	
Nausea & vomiting	1.4	1.4	1.4
Uterine perforation	0.05*	0.1	
Cervical injury	0.4		
Faintness	0.3		
Delayed	(N = 1,339)		
Infection	1.0	0.4	1.1
Spotting	0.9	1.9	0.7
Continue pregnancy	0.1**	0.5	0.2**
Retained products of conception	0.1		

\* Cased by post-aspiration metal curettage.

\*\* Ectopic pregnancy.

tions," *Korean Jr. of Fertility and Sterility*, 3(2): 13—28, 1976.

7. Whang, M.C., et al., "A Clinical Study on Menstrual Regulation," *Korean Jr. of Ob & Gyn*, 18(8): 699—708, 1975.

The titles for the on-going research projects on induced abortion are as follows:

1. A midtrimester abortion study  
Objectives:
  - a) To document the immediate and delayed complication of midtrimester abortion by urea, PGF2 and laminaria.
  - b) To develop a methodology for the management of complications associated with induced abortion in Korea.
2. Controlled clinical trial of flexible vs. rigid cannulas for the early termination of pregnancy by endometrial aspiration.  
Objectives:
  - (a) To test the safety and effectiveness of different cannulas used for the early termination of pregnancy (up to 45 days since LMP) when cervical dilatation is not required. Flexible with one hole, flexible with 2 holes, rigid with one hole, and rigid with 2 holes cannulas are being used.

### C. IUD

Various types of IUD was introduced in Korea, but Lippes' loop was only inserted by government programme and Lippes' loop and other types such as cu-T, cu-7, Alza-T were inserted by clinical trials and self-supporting.

There are several research findings on the cumulative pregnancy, expulsion, and removal rates in IUD inserted (Table C—1). Cumulative rates were compared by the type of IUD, time of insertion, and data collection method. In the national survey data cumulative rates were higher than clinical trial data.

Shin<sup>15</sup>) performed the study on the size of the Lippes' loop (Table C—2). Cumulative pregnancy, expulsion and removal rates for the 1st 12 months after insertion by the size of the loop. These were reported that the largest one, size 30mm, seemed give better results in protection from pregnancy expulsion and removal. Side effects or complications noted in active users were less frequent with larger size than smaller one.

A relatively high discontinuation rate caused by medical reasons was recorded in Korea. Major reasons for removal during the first year appeared to be bleeding and pain (Table C—3).

Ahn and Kwak<sup>11, 10</sup>) examined the relationship between position of IUD and side effects by the hystero-graphic examination (Table C—4). Position of IUD in uterine cavity was divided into 3 groups; normal position, downward position and distortion of shape. The complaints expressed by the loop in abnormal position were slightly more than those wearing the IUD in normal position.

Choe<sup>21</sup>) studied to compare the continuation rates of IUD acceptors recruited by volunteers workers and those recruited by government family planning workers. The results was presented that there was no significant differences in the length of IUD retention between the acceptors by the volunteer workers and the government family planning workers.

In the comparative study on effectiveness and patient satisfaction for IUD insertion by physician and trained paramedical personnel such as a licensed nurse and midwife (Kong<sup>61</sup>), no statistical difference was observed especially regarding side effects caused by insertion and total termination rate.

Kim<sup>31</sup>) performed a comparative study with cu-7, cu-T and Lippes' loop inserted immediately after the artificial termination of early pregnancy to compare their contraceptive effectiveness. Cumulative pregnancy rate obtained with cu-7 at the end of first year was 1.7% 100 insertions, 2.1 in cu-T, and 2.2 in Lippes' loop. The expulsion rate obtained with cu-7 was 3.7, 2.2 in Lippes' loop, and no spontaneous expulsion was recorded with cu-T.

**TABLE C—1: — NET CUMULATIVE PREGNANCY, EXPULSION AND REMOVAL RATES PER 100 AT THE END OF 1ST YEAR**

Cumulative Rate	Lippes' Loop			Various kinds 8)	cu-T		cu-7		Alza-T 4)
	5)	3)	12)		3)	14)	3)	4)	
Pregnancy	2.3	2.2	3.0	1.17	2.1	0.3	1.7	1.4	2.0
Expulsion	7.2	2.2	12.6	7.26	—	5.9	3.7	4.1	2.3
Removal	15.5	22.1	26.5	11.65*	16.9	2.3	23.9	9.4	7.0
Total termination rate	24.5	26.5	42.1	20.08	19.0	29.2	27.3	14.9	11.3
No. of adopted	3,879	92		7,011	95	528	95	161	193

3) immediate postabortion IUD insertion

8) includes lippes' loop, margulies coil, organon loop, and cu-T

12) gross rate in national survey

\* removal for bleeding and or pain.

**TABLE C-2: — CUMULATIVE DISCONTINUATION RATE AND SIDE EFFECTS BY THE SIZE OF LIPPES' LOOP**

	24mm	27½ mm	30mm
<i>Cumulative rate</i>			
Pregnancy	4.1	2.8	1.2
Expulsion	6.1	7.2	2.7
Removal (medical reasons)	13.2	15.0	8.0
<i>Side effects</i>			
Hypermenorrhea	18.5	20.3	15.9
Spotting	19.9	16.2	16.6
Bleeding	5.1	3.8	3.2
Abd. cramps, backache	17.8	12.8	13.3

**TABLE C-3:— REMOVAL RATE FOR MEDICAL REASONS**

	Lippes' Loop		Various Kinds		cu-T		cu-7		Alza-T
	5)	3)	8)	14)	3)	9)	4)	3)	4)
Bleeding	3.9	1.1	5.7	3.0	2.1	3.2	3.1	5.3	4.2
Pain	5.5	5.4	14.7	17.2	2.1	9.1	1.9	1.1	1.0
Discharge	0.6	—	2.2	—	—	—	—	1.1	—
Infection	0.7	—	0.7	—	—	0.7	—	—	—
Pregnancy	—	—	2.5	—	—	0.4	—	—	—
Others	0.2	—	—	1.7	—	—	—	1.1	—
No. of examined	3,879	92	7,011	95	528	441	161	95	193

3) data in national survey.

4) immediate postabortion IUD insertion.

8) includes Lippes' Loop, Margulies Coil, Organon Loop, and Cu-T.

**TABLE C-4: — RELATIONSHIP BETWEEN SIDE EFFECTS AND POSITION OF IUD**

Side Effect	Ahn 1)		Kwak & Ahn 10)	
	Normal	Abnormal	Normal	Abnormal
Hypermenorrhea	21.5	26.7	19.5	26.1
Prolonged mens	13.8	33.3	—	—
Intermenstrual bleeding	13.8	6.7	16.1	17.4
Dysmenorrhea	27.6	20.0	16.1	13.0
Abd. pain	7.7	13.3	5.9	13.0
Lumbago	6.1	6.7	5.9	8.7
Vaginal discharge	3.0	13.3	2.5	8.7
No. of examined	65	15	118	23

The major reasons for removal appeared to be bleeding and pain and also the side effects observed on 48 hour follow-up visit were bleeding and pain.

Kwak<sup>7)</sup> reported that histologically the endometrium showed essentially normal pattern except for hyperplasia. Hyperplasia observed may be in keeping with the Grafenber's idea of a "non-inflammatory hypertrophy which he believes is the mechanism of action in preventing pregnancy.

Park & Kim<sup>13)</sup> performed a histopathologic study by endometrial biopsies obtained from cu-7 users and Alza-T (hormone releasing IUD) users on their 12-month follow-up visit in order to observe the nature and the incidences of abnormal endometrial findings.

Hyperplastic change was observed 15.4% of the cu-7 users and 2.9% in Alza-T users. Pseudodecidual reaction was not observed in cu-7 users, but 23.6% in Alza-T users. 59% of the cu-7 users and 73.5% of the Alza-T used exhibited significant degree of small round cell infiltration.

Kim<sup>5)</sup> reported that 78.5% of the women who had their devices (Lippes' loop) removed for planned pregnancy have been followed up became pregnant within 1 year after removal.

Lee<sup>11)</sup> reported the number of poorly visible or invisible loops radiographically was increased in the users of more than thirty months, which was assumed to be due to the gradual less of radiopaque material, barium sulfate, from the devices by use.

Ahn<sup>1)</sup> reported the heavier loops were the more elastic and there was no correlation between the duration of wearing and the elasticity of the IUD.

Kwak & Song<sup>9)</sup> performed cervical cytologic study for cancer before and after insertion of cu-T and was no evidence that the presence of device caused a progression of cytology toward cancer.

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The list of titles for the on-going research projects on IUD are as follows:

- A comparative study on the effectiveness of immediate postabortion intrauterine contraceptive device insertion. Objectives:
  - To compare their contraceptive effectiveness and acceptability of immediate postabortion insertion of Lippes' loop, cu-7 and cu-T.
- Case-control study on the relative risk of ectopic pregnancy and pelvic inflammatory disease associated with IUD use. Objectives:
  - To estimate the relative risk by type of device, age, parity, marital status and past gynecological history.
  - To assess whether there is interaction between the risk of PID and ectopic pregnancy.
- Multi-center study of the microbiology and histology of the fallopian tube in IUD users. Objectives:
  - To determine if intrauterine device users have an increase likelihood of developing salpingitis. Whether, - there is any microbiological contamination of the fallopian tube in IUD users vs. non-IUD

users.

- there is any histological evidence of non-bacterial or non-viral salpingitis in IUD users vs. non-IUD users.
- if there is microbiological contamination of the fallopian tube in either IUD users or control or both, there is a commonly infecting organism whether bacterial or viral.
- if there is microbiological contamination of the fallopian tube in either IUD users or controls or both, there is histological changes which correlate with positive microbiology and, if there are, the changes are more obvious in IUD users.

4. Hormone releasing vaginal rings.

Objectives:

- a) To evaluate the effectiveness of this new method of contraception.
- b) To determine its acceptability by evaluating what degree of disturbance of menstruation occurs
- c) What the local tolerance of the form of contraception is.

5. Long-term effect of the IUD on the human endometrium. Histologic, histochemical and ultrastructural studies.

Objectives:

- a) To search for morphologic evidence of possible anti-fertility mechanisms and also side effects of long terms wearing of the IUD on the human endometrium by concomitant light microscopic, histochemical and ultrastructural investigations.

**D. Trophoblastic Disease**

Trophoblastic disease is a common disease in Korean women. Here are some research findings on incidence of trophoblastic disease. Studies were mostly undertaken for the clinical analysis and evaluation on the women with trophoblastic disease who had been admitted and treated at hospital. The following features were the comparison of the result (Table D-1).

Rhee<sup>3</sup>) reported that the peak incidence of hydatidiform mole was in the twenties (60.9%), that of destructive mole in the forties (44.4%), and that of choriocarcinoma in the thirties (43.1%).

In cases of choriocarcinoma, hydatidiform mole as their previous pregnancy were reported above 30% 1), 2), 3) Also antecedent pregnancy was abortion in 49.2% of hydatidiform mole and 50.1% of choriocarcinoma.

In the patient with chorioadenoma destruens, 2) remission rate was 76%. In patient with choriocarcinoma remission rate was 51%, mortality rate was 26% and recurrence rate was 12% respectively.

**TABLE D-1: — COMPARISON THE INCIDENCE OF TROPHOBLASTIC DISEASE IN KOREAN WOMEN**

Authors	Year of Data Collection	No. of Delivery	No. of Trophoblastic Disease	Hydatidiform Mole	Destructive Mole	Chorio-carcinoma
Lee <sup>2)</sup>	1961-1972	15,123	187 (1:81)	94 (1:161)	17 (1:889)	76 (1:199)
Rhee <sup>3)</sup>	1962-1971	11,996	163 (1:74)	87 (1:137)	18 (1:667)	58 (1:207)

( ): refers to the ratio occurred once to all delivery.

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1. Choi, S.K. et al. "Clinical Characteristics of Trophoblastic Disease in Korean Women," *Korean Jr. of Ob & Gyn*, 19(9), September 1976.
2. Lee, Y.H. "Clinical Study of the Trophoblastic Tumor," *Korean Jr. of Ob & Gyn*, 16(6), June 1973.
3. Rhee, E.D. et al. "An Observation on Trophoblastic Tumor from Clinical Statistical Viewpoint," *Korean Jr. of Ob & Gyn*, 16(8), August 1973.

**E. Traditional Medicine for Fertility Control**

In Korea, numerous plant or animal preparation have been used for the purpose of fertility control. But these descriptions are based upon the experience of human trial for hundred years.

Kim<sup>1</sup>) studied the contraceptive effects of 6 kinds of herbal medicine: Bombyx Testa Ovum, Lithospermi Radix, Woon Dae Ja, Yu Jun Mercury, Si Ja Dae, and Pteropi Stercus. Evaporated extract from individual herb medicine were administered to female rats orally. Bombyx Testa Ovum, Lithospermi Radix, Woon Dae Ja, Yu Jun Mercury, and Si Ja Dae were not entirely showed the contraceptive actions, but only the pteropi stercus was found 79% of contraceptive effect.

Lee<sup>2</sup>) surveyed literally the plants and the animals with fertility regulation activities which have been used in Korea. Lists of 110 plants and 17 animals covering most of the natural products with reputed antifertility effects in Korea are in Table E-1 and E-2.

**REFERENCE**

1. Kim, Kwang Ho, "The Contraceptive Effects of the Several Herb Medicine," *Bulletin of Kyung Hee Pharmaceutical Sciences*, 4:51-54, Seoul, Kyung Hee University, College of Pharmacy, 1976.
2. Lee, E.B., et al. "Plants and Animals Used for Fertility Regulation in Korea," *Korean Jr. of Pharmacognosy*, 8(2), June 1977.

In Korea, the following title of the research is on-going.

1. A hex center collaborative approach for the isolation of fertility regulating component from 246 plants.  
Objective:  
a) To isolate fertility regulating component from 40 kinds of plants in Korea.

TABLE E-1: — PLANTS USED FOR FERTILITY REGULATION IN KOREA

Family Name	Plant Name	Purpose of Use	Part in Use
Amarantaceae	Achyranthes japonica	A	rt
Amarantaceae	Amaranthus ascendens	A	h
Amarantaceae	Celosia cristata	C	
Amaryllidaceae	Narcissus tazetta var. chinensis	C	
Araceae	Arisaema sp.	A	rh
Aristolochiaceae	Asarun maculatum	IM	rt
Auriculariaceae	Auricularia polytricha	C	
Balsaminaceae	Impatiens balsamina	C, IM	h
Bignoniaceae	Campsis grandiflora	IM	f
Borraginaceae	Lithospermum erythrorhizom	C(p)	rh
Campanulaceae	Adenophora remotiflora	A	
Caryophyllaceae	Dianthus sinensis	A, IM	h, s
Caryophyllaceae	Melandium firmum	IM	h
Celastraceae	Euonymus alatus	A	
Compositae	Artemisia asiatica	IM	
Compositae	Artemisia keiskeana	IM	s
Compositae	Atractylodes japonica	IM	rh
Compositae	Carthamus tinctorius	A, C, IM	f
Compositae	Chrysanthemum indicum	IM	f
Compositae	Chrysanthemum sitiricum	IM	
Compositae	Echinops setifer	IM	
Compositae	Helianthus annus	IM	
Convolvulaceae	Pharbitis Nil	A	s
Cornaceae	Macrocarpium officinale	IM	
Cruciferae	Brassica campestris var. nipooleifera	C	s
Cruciferae	Brassica juncea	C(p)	s
Cucurbitaceae	Cucurbita moschata var. toonas	A, IM	v
Cucurbitaceae	Trichosanthes cucumeroides	A, C	rt
Cucurbitaceae	Trichosanthes Kirilowii var. japonica	C	rt
Cyperaceae	Cyperus rotundus	A, IM	rh
Cyperaceae	Scirpus maritinus	IM	rh
Ebenaceae	Diospyros kaki	C	
Eucommiaceae	Eucommia ulmoides	A	
Euphorbiaceae	Croton tiglium	A, IM	s
Euphorbiaceae	Euphorbia pekinensis	A, IM	rt
Euphorbiaceae	Ricinus communis	IL	s
Ginkgonaceae	Ginkgo biloba	IL	
Gramineae	Coix Lacryma-Jobi var. mayuen	A	s
Gramineae	Hordeum sativum	A, C	sp
Gramineae	Imperata cylindrica var. koenigii	IM	rt
Gramineae	Phyllostachys edulis	IM	
Gramineae	Zea Mays	A	
Irideae	Crocus sativus	IM	f
Labiatae	Leonurus sibiricus	IL, IM	h
Labiatae	Mentha saccharinensis	IM	l
Labiatae	Ocimum sanctum	C	h
Labiatae	Perilla frutescens var. crispa	A	
Labiatae	Salvia multicornhiza	A, IM	rt
Lardizabalaceae	Akebia quinata	A, IM	
Lauraceae	Cinnamomum cassia	A, C (p), IM	b
Leguminosae	Caesalpinia sappan	IM	
Leguminosae	Gleditschia japonica	A	
Leguminosae	Glycine Max	IM	s
Leguminosae	Glycyrrhiza glabra	C	rh
Leguminosae	Phaseolous radiatus	C	d
Leguminosae	Pueraria thunbergiana	A, C(P)	rt, f
Leguminosae	Robinia pseudo-acacia	C	f
Liliaceae	Aloe sp.	IM	ex
Liliaceae	Hosta undulata	A	rh
Liliaceae	Smilax china	C	
Loganiaceae	Strychnos ignatii	A, IL	
Loranthaceae	Viscum coloratum	IM	
Lythraceae	Lagerstoemia indica	IM	
Malvaceae	Althaea rosea	A, IL, IM	h, s

Malvaceae	<i>Malva verticillata</i>	A, IL	
Moraceae	<i>Cannabis sativa</i>	A, IL, IM	rt, s
Musaceae	<i>Musa basjoo</i>	IM	
Oleaceae	<i>Forsythia koreana</i>	IM	fr
Palmae	<i>Trachycarpus fortunei</i>	C(p)	s
Papaveraceae	<i>Cordatis</i> sp.	A, IM	rh
Pedaliaceae	<i>Sesamum indicum</i>	IM	s
Phytolaccaceae	<i>Phytolacca esculenta</i>	A	f, rt
Plantaginaceae	<i>Plantago</i> sp.	A, IL	s
Polygonaceae	<i>Fagopyrum vulgare</i>	C	
Polygonaceae	<i>Reynoutria cuspidatum</i>	IM	rt
Polygonaceae	<i>Rheum unduratum</i>	IM	rh
Polyporaceae	<i>Poria cocos</i>	IM	
Ranunculaceae	<i>Aconitum japonicum</i>	A	rh
Ranunculaceae	<i>Clematis mandshurica</i>	A, IM	rt
Ranunculaceae	<i>Paeonia albiflora</i>	IM	rh
Ranunculaceae	<i>Paeonia suffruticosa</i>	A, IM	rb
Ranunculaceae	<i>Pulsatilla koreana</i>	C	rt, f
Rhamnaceae	<i>Zizyphus jujuba</i> var. <i>inermis</i>	IM	fr
Rosaceae	<i>Crataegus pinnatifida</i>	IM	
Rosaceae	<i>Duchesnea chrysantha</i>	IM	fr
Rosaceae	<i>Prunus persica</i>	A, IM	s
Rosaceae	<i>Rosa multiflora</i>	IM	fr
Rosaceae	<i>Sanquisorba officinalis</i> var. <i>carnea</i>	IM	
Rubiaceae	<i>Gardenia jasminoides</i>	C	f
Rubiaceae	<i>Rubia akane</i>	A, IM	rh
Rutaceae	<i>Zathoxyulm pipericum</i>	IM	
Scrophulariaceae	<i>Rehmannia gluticosa</i>	A	
Solanaceae	<i>Physalis francheti</i>	A, IL, IM	h, rt
Solanaceae	<i>Solanum melongena</i>	C	f
Solanaceae	<i>Solanum nigrum</i>	A	
Taxaceae	<i>Taxus cuspidata</i>	IM	l
Thymelaeaceae	<i>Aquillaria agallocha</i>	IM	
Ulmaceae	<i>Ulmus japonica</i>	A, IL	b
Ulmaceae	<i>Celtis sinensis</i>	IM	
Umbelliferae	<i>Angelica dahurica</i>	IL, IM	rt
Umbelliferae	<i>Angelica gigas</i>	IM	rt
Umbelliferae	<i>Cnidium officinale</i>	A, IM	rh
Urticaceae	<i>Boehmeria frutescens</i>	A, IL	
Usneaeae	<i>Usnea diffracta</i>	IM	
Valerianaceae	<i>Valeriana officinalis</i> var. <i>latifolia</i>	IM	
Valerianaceae	<i>Patrinia scabiosaefolia</i>	IM	
Verbenaceae	<i>Verbena officinalis</i>	IM	h
Verbenaceae	<i>Vitex cannabifolia</i>	IM	rt
Zingiberaceae	<i>Curcuma longa</i>	IM	rh
Zingiberaceae	<i>Curcuma zedoaria</i>	IM	rh

A: abortion, C: contraception; C(p): permanent contraception, IL: induction of labor, IM: induction of menstruation, br: bark, ex: extract, f: flower, fr: fruit, h: herb, l: leaf, rb: root bark, rh: rhizome, rt: root, s: seed, v: vine, a: same species used in the other country, b: other plant in the same genus used in the other country, c: reported to have estrogenic activity, d: plants reported to show antifertility activities in laboratory animals.

**TABLE E-2: — ANIMALS USED FOR FERTILITY REGULATION IN KOREA.**

<b>Family Name</b>	<b>Animal Name</b>	<b>Purpose of Use</b>	<b>Part in Use</b>
Acridiidae	<i>Oxya velox</i>	IL	w
Cervidae	<i>Cervus sp.</i>	IL	h
Cervidae	<i>Moschus moschiferus sacchalinensis</i>	A, IL	m
Chelonidae	<i>Chelonia japonica</i>	IL	c
Cicindelidae	<i>Cicindela chinensis</i>	IM	w
Cicodidae	<i>Oncotympana coreana</i>	IL	c
Crustacea	<i>Percepio sp.</i>	IM	w
Diptera	<i>Tabanus sp.</i>	A, IM	w
Falconidae	<i>Buteo burmanicus</i>	IM	w
Grapsidae	<i>Eriocheir sp.</i>	A	c
Hirudinea	<i>Hirudo nipponia</i>	A, IM	w
Lacertilia	<i>Phrynocephalus frintatis</i>	IM	w
Lepismadae	<i>Lepisma villosa</i>	A, IM	w
Lepitoptera	<i>Bombyx mori</i>	C(p), IL	e
Ranidae	<i>Rana nigromaculata</i>	C	w
Scropendridae	<i>Scropendra rubiginosus</i>	A, IM	w
Trionychidae	<i>Amyda maackii</i>	A, IL, IM	w

A: abortion, C: contraception, C(p): permanent contraception, IL: induction of labor, IM: induction of menstruation, c: cortex, e: eggs, h: horn, m: musk, w: whole animal.

# TAIWAN

## Country Paper

### INTRODUCTION

The family planning programme in Taiwan Area, which has been carried out by some voluntary organizations or as the study projects since 1959 was expanded as a national programme in 1964. In 1968 the regulations governing the implementation of family planning was promulgated by the Executive Yuan (Cabinet) and the Population Policy of the R.O.C. was announced in 1969.

Delivery of family planning services has been integrated as part of overall health care. To date, there are 363 public health stations, 864 contracted physicians for IUD insertion and 635 physicians for surgical sterilization, 454 full time field workers as well as 1,500 nurses and midwives are providing family planning services to the people. Four methods of contraception: Lippies Loop and Ota Ring, oral contraceptive, condom and male and female sterilization are available to all married couples desirous of spacing, limiting or preventing pregnancies. Annually, about 350,000 new acceptors are recruited and of which about 50% accept IUD, 15% oral pill, 20% condom and 15% sterilization. The family planning practice prevalence rate among married couples aged 20—44 was estimated at 65% as of 1976.

As of December 1978, the crude birth rate was 24.2 per thousand, the crude death rate, 4.7 resulting in the natural increase rate of 19.5. In accordance with the third Three-Year Reinforcement Family Planning Programme, July 1979 — June 1982, which set a target of reducing the crude birth rate to 22.1 per thousand by 1982.

### Contraceptive Research

Research is a basic activities in the national programme from the start. Findings from studies undertaken enable us to adopt necessary policies and programme strategies that are deemed to help achieve the goals of population growth reduction and improve the health status of the population.

Population/family planning related research activities in Taiwan Area, R.O.C. can be categorized broadly into:

1) research on demographic levels, patterns and trends;

- 2) research on socio-economic and demographic interrelationships; and,
- 3) programme-oriented research.

This paper deals largely to the last category, particularly the medical aspect of contraceptive researches.

#### I. Systematic Analysis of Contraceptive Acceptors:

All contraceptive acceptor data are compiled based on the results of analysis of returned coupons for all types of acceptors collected from the public, private and military hospitals and clinics as well as health stations where such services are provided.

The data are used as a mean to evaluate the workers performance including work unit credits calculation for field workers, the auditing basis for payment to the physicians for service, and various findings obtained from the characteristics of the acceptors serve as a feedback for the operation of the family planning programme and are important director for programme planning.

As of May 1979, the cumulative number of acceptors including 2,161,818 IUD insertions, 654,538 pill and 548,963 condom users, 177,027 tubectomies and 15,658 vasectomies. As far as the socio-demographic and reproductive characteristics of the acceptors are concerned, they have been becoming younger, having fewer children, and higher proportion of contraceptive practice has been for child birth spacing. For example, based on 1978 data analysis, 61.6% of the IUD acceptors were younger than 30, 72.3% of them had only three or fewer children at the time of insertion and about a quarter (26.7%) of the acceptors used the method for child birth spacing. The median age of pill and condom users were 26 and 27 respectively and the median number of children for pill and condom acceptors were both 2.2. The proportion accepting to space childbirth for pill users was 40.5% and the corresponding figure for condom acceptors was 40.8%.

In regard to sterilization, almost half (49.9%) of couples accepted sterilization at the wife's age below 29 and the average number of children was 3.4.

#### II. Oral Contraceptives:

1. The first island-wide pill acceptor follow-up survey was conducted in 1968 by the Institute of Family Planning. 2,217 pill acceptors were interviewed. The major finding from the study indicated as follows. The average months of use of the pill for continuing cases was 10.3 months against 4.0 months for the terminated ones. The cumulative termination rate was 49.8% for medical reasons, 9.2% for personal reasons and 8.6% for supply and other reasons. Nausea, vomiting and other G.I. disturbances, breakthrough bleedings and menstrual complication were the four major types of side-effects for those who terminated for medical reasons.

2. An experimental study was carried out in 1968—1969 in three matching groups of townships in Taiwan. Each group of township, with 100,000—150,000 married women 20—44, was offered only one type of pill; Ouvlen-21, Ouvlen-Fe-28 or Primovlar-21. The acceptors were followed-up four months later to compare the use-effectiveness of each type of pill. The comparison between Ouvlen 21 and Primovlar 21 with Ouvlen-Fe-28 pills indicated that the Ouvlen-Fe-28 has slightly better continuation rate than the other two types. The comparison between the lower estrogen and the higher showed that the lower had higher continuation due to fewer side effects.

3. Medical follow-up of pill users was conducted for 26 months by the OBGYN Department of Chung Shing Municipal Hospital in Taipei City during 1974—1977. The study subjects were divided into groups; the A group included 5 patients using Primovlar-ED for treating Endometriosis for more than two years, B1 group composed of 675 cases taking pill for approximately one year and B2 group including 228 cases used pill for more than 3 months. B.P., body weight and clinical signs and symptoms were recorded regularly. Laboratory examinations for blood (including blood routine, bleeding time and prothrombin), urine, pap smears and E.K.G. were carried out every 3 months.

Three types of pills were used in the study:

- 1) Primovlar-ED-28: Norgestral 0.5 mg., Ethinyl estradiol 0.05 mg.;
- 2) Neovlar-ED-28: d-Norgestral 0.25 mg., Ethinyl estradiol 0.05 mg.;
- 3) Ovral-28: Norgestral 0.5 mg., Ethinyl estradiol 0.05 mg.

Major findings include:

- 1) Complaints:
  - a. Reduced menstrual flow was found in almost 50% of women who took pills for more than 6 months. This phenomenon has been one of the important causes led to discontinuation of pill acceptors.
  - b. 40% of women who used pills for more than 6 months complained increased leucorrhoea.
- 2) Laboratory Examination:
  - a. Blood pictures, bleeding time, and prothrombin time were found to be in normal range.
  - b. Liver function tests were carried out to 6 cases with SGOT 40 SFU (2 cases) and SGPT 40 SFU

(4 cases) and found that no jaundice and hepatitis was found among these tested.

- 3) 9 cases with abnormal EKG changes were found not associated with the duration of pill used.

### III. IUD

In 1962 Lippes Loop was introduced in Taiwan and has been adopted as the main method of contraception in the national family planning programme. Ota Ring was used by clinician even before loop was introduced and has also been adopted by the programme since 1975. Other types of IUDs such as Cu-7, Cu-T, multiloop were inserted by clinical trials and self-supporting.

Several researches have been conducted and the following summarize the findings which are more concerned with medical aspects:

1. Medical follow-up study for 1,500 women who accepted either loop or coil was carried out in 1962 by Taichung Study Center. The users were asked to return to a clinic for examination. Findings include data on termination rates, reasons for termination and pregnancy rates.
2. Histological Study of the Endometrium of IUD Users was conducted by Dr. Wei, P.Y. and others in 1967. Endometrial biopsies of 422 IUD users were studied. The incidence of abnormal endometrial changes among IUD users was determined.
3. Several Taichung IUD medical follow-up studies were conducted and the findings are summarized as follows:
  - 1) Ota ring and loop size No. 4 are no better than loop size No. 3 even if preferred by the inserting doctors;
  - 2) the use of loop does not seem to increase the incidence of carcinoma;
  - 3) calcium deposition on the loop intensifies with duration of use but does not seem to increase the incidence of removal.
4. In 1971, a study on Sonographic Visualization of Coexisting Gestation Sac and IUD in the uterus and a consideration of causative factor of accidental pregnancy was conducted by Dr. Wei, P.Y. and others. 107 women wearing various types of IUD were studied using B scan at the OBGYN Dept. of the National Taiwan University Hospital. The position of IUD in suit was obtained with satisfactory result. Besides, other findings, such as complications associated with pregnancy in the very early stage of development, myoma uteri, ad-nexal cyst, ectopic gestation and etc.
5. A follow-up study of copper T-20 was conducted in 1972 by the Provincial Institute of Family Planning. 1,445 of 1,581 women accepted the device was covered in the study. Important findings include:
  - 1) 35% of women discontinued the device at the end of the first year after insertion;
  - 2) of the discontinued, 26% removed the device, 2.5% became pregnant and 6% expelled;
  - 3) of the removed, 75.8% were due to side-effect

14.5% on personal reasons, and 9.7% were seeking for pregnancy;

- 4) side-effects encountered were mainly bleeding, pain and menstrual disorders.

#### IV. Sterilization

Since 1974, sterilization has been adopted as the programme method, the number of acceptors increased considerably (mostly female) from 7,000 in 1974 to 50,000 in 1979. About 80% of the sterilizations were performed by the contracted private physicians. The following summary describes studies conducted in sterilization.

1. In 1974, the National Health Administration conducted a follow-up survey for 958 cases residing in Taoyuan County and Taipei City received tubal ligation during 1957—1973. Of these, 56% of them received ligation within three years. They were interviewed by a group of well trained public health nurses. Questions asked to the women included: socio-demographic characteristics, reproductive behavior, contraception experience before ligation, psycho-sexual and physical health conditions after ligation.

The important findings summarized are:

- 1) 84% of them received ligation soon after delivery and 16% during the interval.
  - 2) Only 16% had the surgery purely for ligation purpose and the majority was carried out with other surgical procedures.
  - 3) Concerning the procedures, 96% were through laparotomy, 3% through vagina route and 0.63% by laparoscopy.
  - 4) In regard to anesthesia, they reported that 40% received general anesthesia, 38% by spinal anesthesia and 22% by local anesthesia.
  - 5) 83% of ligations were performed by the private practicing physicians and the rest by government hospitals.
  - 6) Regarding menstrual history after ligation, 78% reported no change and 22% observed some changes in the reduction of menstrual fluid but this seems related with age increases.
  - 7) Reporting of physical health condition, 65% mentioned no change and 17% said they feel better fit than before.
  - 8) More than 80% experienced no changes in their psycho-sexual relations with their husband and other family members. For the 17% with some changes, they expressed that they were happier, emotionally more stable and became more interested in household matters and etc.
2. A study for 519 cases, residing in Taichung City and

County received tubal ligation during Jan. — May 1974 were followed up in Sept. — Nov. of the same year by the Provincial Institute of Family Planning. In other words, the cases were followed up between 6 — 11 months after ligation. This study was conducted by interviewing of the women by well experienced public health nurses and family planning field workers and by reviewing of their medical records in the clinics where ligation was performed.

The socio-demographic data of the study revealed that the average age at the time of ligation was 30.4 for the acceptors and 35.0 for their husbands. The educational levels for the cases were 22% below primary, 68% had primary and about 15% had secondary education. The corresponding figures for the husband were 10%, 60% and 30% respectively. 80% had 3 — 5 living children and the mean was 4, one child higher than the national figure. 27% of the women have never used any contraception before ligation and among the used ones, 58% had experience with loop, 28% with oral pills and 20% had condoms. The average number of pregnancy each woman had was 5 and 33% of them had experience of one or more abortions.

Important findings obtained from the medical records were as follows: 86% of the operations were done through laparotomy and 14% by vaginal route. Methods of ligation, 52% used Madlener technique and 34% used Pomeroy technique. Concerning length of hospitalization, 53% reported under 7 days and 25% were on the O.P.D. basis. Concerning complications following ligation, due to incomplete recording, only 114 (22%) case records with notes. Of these records, 57 cases (50%) were found with same complaint. The important ones were endometritis (9.6%) spotting (16.7%), lower abdominal pain (9.6%) and some menstrual complication (15%).

Comments regarding after ligation, 83% reported satisfactory and 75% expressed that they will recommend the method to the others. 80% of the women reported no change in their sexual desire, 5% with increase but 10% expressed decrease.

3. A follow up study jointly sponsored by the Maternal and Child Health Center, Taiwan Area, and the NHA for 200 vasectomy cases with their spouses and a control group was initiated in 1978 and expect to complete in 1980. This programme is designed to follow up the psycho-social aspect of the men currently received vasectomy at MCH Center and their spouses before and after vasectomy, their physical health conditions and complications after sterilization.

The interview of the 200 cases and 150 of their spouses before vasectomy was conducted at the MCH Center by public health nurse, health educators and psychologists. As of May 1979, psycho-sexual tests, using developed forms for 95 vasectomized cases, 44 of their wives for the first (3 months after vasectomy) and the second time (one year after vasectomy) were carried out. The same tests were also conducted to 53 couples of the control group. The project is still ongoing.

# PRIMARY HEALTH CARE WITH SPECIAL REFERENCE TO NUTRITION, MCH AND FAMILY PLANNING

*Dr. Somboon Vachrotai*

Ministry of Health leaders in most countries of Asia have long recognized the need to strengthen the government health care delivery system and extend basic health services to cover the majority of the population, over ¾ of which reside in underserved rural areas. In Thailand, as the government health services searches for alternative methods for extending basic health services to the majority of rural villagers, a concept of primary health care is evolving which builds on existing traditional and indigenous patterns of health care, utilizes village volunteers and available community resources for health development, and stresses the government role in helping the rural people to help themselves. The primary health care approach for rural health development incorporates both modern knowledge and traditional wisdom in evolving methods that are simple, but effective, in meeting the dominant health needs of the rural majority.

Here, in this country, the Pitsunalohe Project, the Saraphi Project, and now the Lampang Health Development Project are vanguard efforts which have helped to evolve the current Primary Health Care approach to MCH, nutrition and family planning in Thailand. In 1974, the Ministry of Public Health inaugurated the Lampang Health Development Project to develop a provincial model for integrated health services and primary health care. The health development strategy of the Lampang Project involves four key features:

- (a) developing primary health care workers for every village;
- (b) developing wechakorn, or community health paraprofessionals, for every hospital and rural health center;
- (c) developing private sector involvement and community participation in primary health care work; and,
- (d) integrating medical care, health promotion and disease prevention services and developing improved management practices from the provincial level to the health center level.

The Ministry of Public Health has drawn on the experience of the Lampang Project in formulating the national health policy and plan. The Ministry's most ambitious effort is the national village health volunteer and village health communicator scheme for rural primary health care expansion. The national health plan includes several features which have been developed, replicated and adapted from the Lampang Project

experience. For example:

- (1) Development and utilization of ¼ million village health volunteers and communicators;
- (2) New clinical care extenders including nurse and auxiliary midwife practitioners;
- (3) Community medicine departments for all provincial hospitals; and,
- (4) Integration of health services and improved health services management.

A high level of commitment by the government health service system to the implementation and the maintenance of primary health care workers is crucial to the success of the programme. A substantial change within the government health service is required for optimal support of primary health care workers. Ideally, the reorganization of the government health system should occur before the selection and training of primary health care workers, but it can occur concomitantly as it is in Thailand.

The primary health manpower development effort for an extensive primary health care scheme to operate in concert with government health services will place a heavy demand on available resources. The limitations of government training resources and the limited educational background of primary health care trainees require that the training methods and the technologies applied for primary health care work be low-cost, simple, appropriate and clearly specify the essential link between the primary health care volunteers and the government rural health workers.

Clearly, in Thailand, "health for all by the year 2000" still remains a formidable task. We have, however, recognized the potential of the human resources that are waiting to be mobilized. We are developing a "grass-roots" primary health care manpower force comprising traditional midwives, village health post volunteers and communicators that will promote rural health and development efforts through organized community effort. By combining traditional wisdom and modern technology we are forging a new health care system and health technology appropriate for reaching 50,000 rural villages and capable of serving 50 million Thai people.

## ANNEX

### ACTIVITIES AND TRAINING OF WECHAKORN, COMMUNITY HEALTH PARAPHYSICIANS

#### Activities

Wechakorn, formerly nurses, midwives and sanitarians, are trained in a one-year competency-based training programme and deployed to all rural health centers and district hospitals to extend competent clinical services to the sub-district level, and to greatly expand the capacity of the entire provincial health system to provide curative services and health promotion and disease prevention services. The trained Wechakorn is able to:

1. Provide medical care for patients suffering from common illnesses and injuries, under the remote supervision of a physician.
2. Provide first-aid and supportive care for serious or complicated cases, and refer these patients to a physician at the district or provincial hospital.
3. Supervise the health center personnel in providing simple medical care, health promotion services and disease prevention services.
4. Supervise and guide the work of village health post volunteers.
5. Administer health center work and assist in clinical and administrative work of the district and provincial hospitals.
6. Promote and guide community health development programmes such as nutritional surveillance and community nutrition improvement programmes.

#### Training

The one-year training programme includes the following topics:

1. Core Skills:
  - (a) History taking and medical terminology. 30 hours
  - (b) Physical examination, anatomy and physiology 60 hours
  - (c) Laboratory examination 30 hours
  - (d) Use of a formulary 6 hours
  - (e) Introduction of comprehensive health care 6 hours
  - (f) How to use protocol 6 hours
2. General Clinics
  - (a) Skin problems 30 hours
  - (b) Ear, Eye, Nose and Throat problems 30 hours
  - (c) Chest problems 30 hours
  - (d) Abdominal problems 30 hours
  - (e) Genito-Urinary/Kidney, Ureter, Bladder problems 30 hours
  - (f) Diarrhea/Vomiting/Dehydration 12 hours
  - (g) General problems 30 hours
3. Emergencies
4. Maternal and Child Health
  - (a) Maternal and Child Health Care 30 hours
  - (b) Family Planning 24 hours
5. Community Health and Field Supervision
  - (a) Nutrition problems 30 hours
  - (b) Prevention 30 hours
  - (c) Vital Statistics 18 hours
  - (d) Community Health Education 18 hours
  - (e) Supervision 12 hours

# PRIMARY HEALTH CARE WITH SPECIAL REFERENCE TO NUTRITION, MCH AND FAMILY PLANNING

*Jae-Mo Yang, M.D.*

## CHAPTER I. INTRODUCTION AND OBJECTIVES

There is no doubt that during the 20th century, particularly since the 2nd World War, medical knowledge and medical technology made remarkable development unprecedented in human history. But, unfortunately, such highly developed modern medical care services are mostly provided by highly qualified specialist at urban hospital at high cost that hardly accessible to the masses, and medical education also has been grossly misled to such direction.

From the 4th Five-year Development Planning period (1977—1981) the government of Korea firmly decided to pay attention to the health and welfare aspect of her people and began to put as much emphasis on social development as economic development. But the immediate question encountered was how to achieve such goal. Compared with the national education service, which made the primary education compulsory decades ago and now planning to extend it to the secondary (high school) education, unfortunately, in the health care field the need of utmost priority of primary health care has been recognized only recently.

Now that such problem is well recognized, the challenge and task vested in modern medical education and health care service planning is to ensure a comprehensive health care of adequate quality to every body, regardless of old or young, rich or poor, through the development of ideal and efficient health care delivery system with the utmost priority in primary health care.

Yonsei University has three projects in the area of primary health care: namely, Kangwha Community Health Project started from 1975, A Study on New Approach in Maximization of Family Planning and Health Services in Rural Korea: Comparison between New Village Health Worker and New Village Movement Leader started from 1977, An Experimental Study on the Integration of Health and Family Planning with the "Saemaul" Movement started from 1978. Following description is primarily the experience of the Kangwha Community Health Project.

When the Kangwha Community Health (Teaching) Project of Yonsei University was started in 1973 the problems which the Korean health care delivery system suffered from were typical of developing countries. Health care was unevenly distributed among the people, too costly for the majority to afford, disease and hospital-oriented although most disease were caused by preventable conditions. Number, education and distribution of health manpower were inappropriate to actual needs of the population. Health problems remained unrecognized and unattended to in the face of abundant need because of poverty, but equally so because of lack of health knowledge, health consciousness and health concern among the people and the government.

Even though nowadays the health service scene in Korea has changed greatly from the initial period of the project due to rapid economic growth, and even though the general outline of the national health plan for the next 5 years has been formulated, the major health problems are still similar to that of 5 years ago. The most striking change that has occurred in the last five years is the development of the rural community itself led by "Saemaul undong". Health is again left behind even in the "Saemaul undong". With this rapid community development the income and the health status of farmers have much improved; however, the health care delivery system has not been significantly improved yet.

Up to the present time, the health care delivery system in rural Korea has been based on a centrally controlled system offering mainly public health and preventive medicine programmes, and having very poor infrastructures connecting grass root activities. Each gun (county) has one health center with one public health officer whose major role is inevitably public health administration. Many of the health centers have been unable to recruit the public health officer.

The major portion of the subsidy to add to the salary of the health officer is from the central government. Major health programs of the local health center are assigned and directed by the central government. The health center is usually built with support from the central government. Additional facilities and equipment are mostly supplied by the central government. Therefore, the community voice has not much input in the

decision making process for its own health programme. The community is simply a passive receiver of health services. It is necessary to establish a certain mechanism so that the community can participate actively in the health programmes for its own people, if a new system is to be designed.

Administratively, the myun (township), where the majority of the rural population reside, is the official terminal unit for comprehensive public administration. Each myun has a government health subcenter building which is supposed to provide primary health care service to the rural population. One midwife is sometimes provided for MCH services, and two nurse aides for T.B. and F.P. care are dispatched by the health center to provide preventive health services to the myun area. But the functions of these health workers have not been integrated into the health subcenter; they are supervised by the township chief and work in the myun office instead of the health subcenter building.

In addition, a few experiments on the improvement of the health care delivery system in rural Korea revealed that the present myun health workers, usually three nurse aides with nine months training, are not enough to cover the basic needs of primary health care in their entire target population.

Another weak point of the health care delivery system in rural Korea is the dual system of health services. The preventive medicine and public health programme are under the government's jurisdiction and the curative service is mostly in the hands of local practitioners. No integrated programmes of efforts have ever been attempted. Even though it is not sufficient, the government preventive service system usually reaches the village people; however, the curative service is available only for those who seek it and are able to afford it, and is generally rendered by the private practitioners. In addition, the curative service is often beyond geographical reach of the rural residents.

In short, the health care services for the rural population are totally inadequate. Therefore, it was strongly felt that a new more effective and feasible comprehensive health care delivery system should be developed and organized in order to provide adequate health care services for the rural population. The integration of preventive and curative services with a good channel of referral from the grass roots upward should be an essential part of the new system, in order that the health care system can effectively respond to actual community health needs.

Yonsei University Medical Center recognized this challenge early and planned to develop a demonstration project through which the medical and nursing students could be educated in the principles of community health. A grant became available for this purpose in May 1974, from the Central Agency for Protestant Development Aid in Bonn, West Germany (75%) and the United Board for Christian Higher Education in Asia, New York, U.S.A. (25%).

The project includes introduction of a new category of health personnel at the grass-root level, based on successful experiences in other countries. In this project a new type of health worker called Family Health Worker (FHW) is being introduced into the village. This new frontline worker is a housewife from the village, chosen by the village, integrated into the community power structure and acting as village health representative.

Through such an approach it will become possible to streamline, with the help of community input, the offered

services in response to community demands and to ensure the best utilization of existing facilities and services.

At the myun area, a comprehensive primary health care center (myun health subcenter) with referral channel to a hospital was designed and organized in order to function as a nucleus or center for the health care services to the rural population. A financing mechanism to make the system viable was also developed in the project.

The project was developed as a field area for community-based medical and nursing education in rural community health, and for the provision of necessary statistical and observational data for classroom teaching.

A project planning, implementing and coordinating team, which had already been established 5 months before funds became available, concerned itself first with development of the necessary concepts and strategies for planning.

This meant, before other considerations, to identify those problems which the project should try to solve conceptually and pragmatically, and those problems which would come up during implementation of a basic care project into a specific community. These considerations included the fact that modern health services often have difficulties in relating their advantages effectively to non-Western communities. This difficulty of introducing modern health services into traditional non-Western communities is a result of the fact that a traditional culture and worldview of the people in the region has existed for millenia, and that the health and illness behaviour of the people are different from what they are in the West. Although modernization changes almost every aspect of social life in Korea with breath taking speed, health and illness behaviour are less easily affected. Modern medicine in Korea has not yet sufficiently taken this behaviour into account.

Furthermore, the inability of health services to adequately cover health needs with the existing health professional such as physicians and nurse alone, is a proven fact, documented by literature from almost every country, Korea being no exception.

Finally there is the fact that no new community service can be established independently of other community organizations. It can never exist in a vacuum. To become successful it must always become integrated with already established institutions and must interrelate its functions with those of other community institutions. A strong project may become successful in itself but it may become counter productive in the total context of community life. A weak project may become marginal, unsuccessful and totally rejected by the community it intended to serve.

After identifying these problems the project team evolved a philosophy and strategies which would guide the planned change process in the communities and the implementation of the project in a manner that would solve all of them to the degree possible under existing circumstances.

## The Goal

The goal of this strategic plan was: To establish a functioning, effective basic care system that utilizes all existing resources efficiently and effectively, that is itself an organic part of community life, that successfully improves community health status, and that is suitable for research and for education of students in basic community health care. At the heart

of this strategic plan were the following broad objectives:

1. To develop functional community health services at village and township levels in adequate relation to community life and structure, with adequate community cooperation, with a community health team in which roles and functions of each worker are defined in relation to the services and in relation to each other.
2. To stimulate and foster community self-help activity, health awareness, interest in improving health conditions and willingness to cooperate with the health services.
3. To develop a data base for demographic, morbidity and health services data which allows the health status of the community to be determined and to follow its development over time, and which allows for development and structure of educational material and research programmes for students in basic health care.
4. To produce new medical leadership with the necessary critical view of health services and the skills to conduct them; persons familiar with the broad and complicated issues of basic health care in this country, with the potential to find and contribute to adequate solutions, and with desire and ability to rehabilitate the efficiency and effectiveness of the medical profession in the rapidly changing socio-economic and cultural environment of the Korean community.

## CHAPTER II. DESCRIPTION OF THE STUDY AREA

The Project is located in Kangwha gun, an island 421.4 km<sup>2</sup> in size, Gyeonggi Province, approximately 58 km distant from Yonsei University campus in Seoul. The rural island district has been chosen because of its proximity, its rural characteristics and the unlikeliness that it will be absorbed into the rapid urbanization process around the capital. It can be reached in a one hour fifteen minutes, drive by car, passing over a bridge which connects the island with the mainland.

The Project is being developed in two out of thirteen myuns as the first activity of a long range programme to develop the entire island district into a teaching demonstration and research area for delivery of comprehensive health care to rural Korean people. The two myuns are Sunwon and Naega myuns.

The total population in the target area was 12,306 in 1975 and 11,262 in 1977. During the three years of the project period the total population has decreased. The population structure was that of pyramid shape with guitar appearance which is the typical shape of the rural population in Korea.

The gross migration rate in 1977 was 190.2 per 1,000 with 49.5 in-migration and 149.4 out-migration rates. Therefore, the net migration was done by people under 30 years of age.

The crude birth rates were 24.4 in 1975, 19.3 in 1976 and 20.3 per 1,000 in 1977. The crude death rates were 9.5 in 1975, 9.6 in 1976 and 8.1 per 1,000 in 1977. Therefore, the natural population increases were 14.9 in 1975 and 12.2 per 1,000 in 1977.

70% of total population was engaged in farming, 6.8% in commerce, 4.2% in fishery and 3.7% in public offices.

The production of rice in the island is sufficient to be self-supporting and ginseng production is one of the largest cash crops of the islanders. Other than agriculture, this island has been famous for its small-scale textile industry.

The average annual income per year per family was W780,000 (\$1,510) in 1975 and W1,300,000 (\$2,700) in 1977. The rate of families owning a T.V. was 45.1% and the rate owning a radio was close to 100% in 1977.

10.9% of the heads of households are graduates of high school and above, 11.9% junior high school, 55.1% elementary school and 22.7% had no schooling. Most of the un-schooled however are those whose age is over 60. There has been a very rapid trend toward college education among the younger generation.

No physician was practicing in the project area before the project began. 7 physicians, however, are practicing privately in the eup area where the local government office is located. 2 dentists and 6 herb doctors are practicing on the island, and 7 drug stores are functioning in the project area.

Each myun has a health sub-center building as is typical for rural townships, plus one midwife for MCH services and two nurse aides for TB and FP care are dispatched by the health center to cover township preventive health services. But these health workers do not work in the health subcenter building and they are supervised by the township chief. The availability of a midwife was not typical, but because of their long experience in the community great support for the project was expected.

There were no public health nurses available and equipment amounted to a bare minimum allowing some preventive care in MCH, TB and FP services. In other words, prior to project implementation the services, or rather lack of services, in health care were comparable with any other typical rural area.

Villages are classified into three groups according to the criteria set by the Saemaul Undong (New Village Campaign). They are: completely independent village, partially independent village and dependent village. In the entire country, there were only 12 independent villages out of 159 villages in 1973; however, it increased to 51 in 1977. The dependent villages decreased from 61 in 1973 to 12 in 1977. In the project area as of 1977 there were no dependent villages out of 20 villages.

0.56% of 2,376 house in the project area in 1977 had a toilet made of cement concrete and 34% used traditional toilets. 10% of houses were improving their toilets.

41% of total households was receiving piped water, 18.5% used their own wells and 40.4% used spring water. 31% of wells were classified as perfect in terms of sanitation standard, 34.3% as acceptable and rest of them as unacceptable. This situation was, however, improving very fast along with Saemaul Undong.

Administratively, Kangwha country is composed of 12 myuns (townships) and 1 eup (smallest city). Each myun has a myun chief who is connected, supervised and directed by the county chief.

In the county there are 96 legal villages and 159 administrative villages. In each administrative village one officially recognized village chief is nominated by the government. The total number of natural villages is 311. Each village is divided into 7-8 bans which is the terminal unit of the community.

There were 1,112 bans in the entire county. The ban meets at least once in every month at the same time nation wide.

The center of the local administration is the county government. The policy office and the education council were independent from the county office, but with good cooperation.

Public health is administered by the health center, and the health center director is nominated by the county chief.

In myun areas, other than the myun office, the agriculture guidance office, police branch, a company of home guards, agriculture cooperatives and post office are considered to be the important power groups.

In a myun, usually 2–3 elementary schools and one junior high school or high school are located depending on the size of myuns.

Christianity was introduced 80 years ago in this country. Therefore, the ministers have been very much influential in the community affairs.

### CHAPTER III. SYSTEM AND PROGRAMME INPUT

In this Chapter the system and programme input of the project excluding the educational part, the planning management part are summarized briefly.

#### A. Relation of the Project with the Existing Health Systems

##### 1. The Government system

Even though the Kangwha Community Health Project was planned and initiated by the professors of Yonsei University College of Medicine, the plan was implemented through the existing government system. Therefore, before the project started, a contract was entered between the County Chief and Yonsei University College of Medicine. The health center director was the most important person in implementing the plan.

Yonsei University College of Medicine supplied three physicians to cover the two target townships and the health center. These physicians were on the government payrolls. The project itself recruited two nursing supervisors to help government health workers and FHW technically. These two nurses were paid by the project.

##### 2. Private practitioners

In the project area, there was no private practitioner; however, in the Eup area 6–7 physicians practiced privately.

It was true that most of the innovative community health projects had conflicts with the existing private practitioners. At the planning stage a principle was set to maintain mutually complementing relationships with the existing physician.

Based on this principle, the project was introduced to them first and their participation was asked in the project. The project referred patients to their offices and they were contracted as insurance physicians. They participated particularly in the student teaching with much interest. The relationship

has been good and this enabled us to plan the 50 bed community hospital together.

#### B. Health Care Delivery System of the Project

##### 1. General outline of basic health care delivery model

The health care delivery system in Korea had been mainly based on free enterprise without a national health plan when the Kangwha Community Health Project was planned. A basic concept of the organization of a comprehensive health care delivery system was never formulated. The community health concept was only starting to be appreciated by a few concerned health professionals.

In the planning stage of our project, the general outline of the basic health care delivery model for the rural area was developed. In formulating this model, basic philosophy and principles of community health, health status of the community, existing and available health resources and systems, the official administrative system, community characteristics and past experiences were all taken into consideration.

At the beginning of the project, the concept of the organization of health care services at the grass roots level (health post) was written in detail in terms of selecting village health workers, their role and functions, and necessary training and equipment.

The detailed plan of the organization of Myun level and above health care services, however, was not clearly established because of lack of information, budget and experience. Therefore, the entire model was to be completed with the growth of the project. Fortunately, the organization of Myun level health care services was completed by the end of 1976 after a series of surveys and studies.

The entire model turned out not to be very innovative. The new model was largely an expanded and strengthened form of the existing system with little modification.

A health post is placed in each village (average population: 500–600) and simple health service is handled by the family health worker (see following details). A Myun health subcenter is placed in each Myun and serves a population of 10,000 on the average. The Myun health subcenter plays the role of the comprehensive rural health care service center which is the official terminal unit for the primary health care service. This center is staffed with a community physician, a midwife, a public health nurse and other health workers (see following details). An existing Gun health center was strengthened without modifying its role in the model.

Community health care, in order to be comprehensive, must include hospital services. Five to ten percent of the patients in the townships will need the sophisticated services of a community hospital. Kangwha does not have such services available. Patients who need them must be sent to Seoul.

Approximately a 50-bed community hospital, staffed with mostly experienced general practitioners and a few specialists, would be needed to cover the approximate 100,000 population in Kangwha setting. The hospital has been planned and is about to be approved by a donor agency in collaboration with a community fund raising group.

##### 2. Development and organization of grass roots health services through a village-based family health worker

Lack of health consciousness in the communities is one of the most serious drawbacks in the attempt to provide effective health care to the rural population. Likewise, entirely hospital-based education of key health manpower hinders them in becoming familiar with community health conditions and problems. But it is here where the sources of disease are, where its impact is felt, and where not only the physical aspects of illness in an individual are of importance, but also the mental and social implications and the impact on the family and community. What is known and practiced in an urban hospital with wealthy, westernized, well-motivated clientele, where the physician is the highest authority on health, must be put into the perspective of the rural, traditional home, where education and economy are poor, where cultural taboos are powerful, where motivation and knowledge of health issues are lacking, where preventable and easily curable diseases lead for too often to misery and disaster and where the physician's authority does not necessarily outweigh a mother-in-law's impact on health practices in the family. The best approach to grass-roots level health care is not through the physician but through the people themselves. However, the physician can help them to get there, and his education should prepare him to do so. In the project, the village-based family health worker now has the most important role in bringing about change both in community health and in enhancing community-based education of health manpower. The crucial aspects of this new worker are concept, objectives for implementation, functions, service package and training. They were developed by the project staff well in advance of the actual project and will be described briefly.

### 1) The concept of the family health worker

The Family Health Worker (FHW) is a married village housewife, 20–45 years old, healthy, in good community standing with at least primary school education, a history of social activity in her community and interest in the challenge of the offered work. She is the village health representative, supported by village leaders and committees and technically supervised by the government health workers in the township. She is given a nominal salary (W8,500—\$18) per month, and it was planned that within 2 years she is expected to be supported financially by the village.

### 2) Objectives in family health worker implementation

The FHWs are now well established in their villages, strongly motivated and convinced that their activity makes a difference in the health of the community. They appear to be able to fulfill the objectives set forth for their implementation which were:

- to bridge health manpower shortages at the grass-level through simple service in MCH, FP and TB care,
- to enhance community health consciousness through health education,
- to serve as a communication channel for reciprocal understanding of health issues and problems between traditional villagers and city-educated faculty and students,
- to protect the communities from dependency on university input,
- to collect essential data on health,
- to create in the communities an atmosphere for cooperation with the teaching project that stimulates students to creatively think of how health problems can be solved through exploitation of community resources.

### 3) Functions of the family health worker

The FHW functions include activities at the household and health post level. Bi-monthly household visits are made to every household in the community, and weekly health post consultations, usually at the worker's own home, are being held at hours most convenient for village mothers. The functions of the FHW include case finding, simple service, referral, follow-up and health education in MCH, FP and TB care. One additional major function is the collection and recording of vital statistics, morbidity and other activity data.

### 4) Selection of family health workers

The country health center director, together with the township administrator, invited the village chiefs to support the new programme by suggesting two FHW applicants from each village, giving on a printed form the social and family background, suitability according to the established criteria, and reasons for suggesting the applicant. The township health workers, together with the project public health nurse supervisor, interviewed the two applicants and made the final decision on selection of the trainee. The staff attached more importance to personal communicational ability than to intellectual ability and also gave due consideration to the health worker's preference.

### 5) Family health worker training

Basic training of FHWs lasted 4 weeks. Guidelines for teaching and behavioral objectives had been developed in advance according to the concept, function and implementation plan of the FHW, and they proved eventually to be adequate and successful in teaching, implementation and evaluation. The teaching staff consisted of township health workers, county health center staff members and project nursing supervisor. We tried not to invite teachers from outside and tried to maintain a teaching environment as realistic as possible. Content of instruction focused on the bare minimum of facts and skills the FHW had to master for effective programme implementation, and the instruction was made as interesting and as rewarding a learning experience as possible. It started with three days of orientation at the county level health related institutions. Thereafter, training continued at the local health subcenter focusing on child care, maternity care, family planning, TB care and record keeping based on predeveloped behavioural specific objectives. In addition, skills in home visiting and handling the contents of the FHW bag (first aid and routine MCH care equipment) were taught. The FHW learned to understand her role as village health representative, and to anticipate that students and project staff hoped to learn from and with her how health problems in her community could most satisfactorily be solved using existing resources.

Systems implementation and 2 months on-the-job training proceeded simultaneously. Retraining profited from the gained experiences. Retraining lasted 10 days concentrating on the questions that were raised by the FHWs. An understanding of the health care system and how the worker and the patient relate to it at specific points was stressed for each area. It also emphasized the workers' obligations in case finding, prevention, service, referral, follow up, and health education.

### 3. Development & organization of Myun (township) level health care services.

Administratively, the next level above the village is the Myun where the majority of the rural population resides.

To organize the Myun health service, a health subcenter was built in early 1970s by the government. However, its function & role have never been determined: consequently, types of health personnel, necessary facilities and equipment were not standardized. The Gun health center dispatched three health workers-namely MCH, FP & TB workers to the Myun area. Because of the insufficient supervisory system of the local health center, these three health workers were dispatched under the direct supervision of Myun chief.

Naturally, these health workers were using Myun administrative offices as their working center instead of a Myun health subcenter. Therefore, some of the Myun health subcenter buildings were empty and deserted. The situation of Kangwha health subcenter was no better than others.

How the subcenter should be developed and organized in order to provide basic health care to the entire township population was the next task for the project staff. This was also what concerned the government deeply in regards to the future health plan.

A series of studies such as health interview surveys, health care pattern surveys, time-activity studies with the health workers, morbidity studies, establishing priorities for the solution of health problems, determining basic health requirements, patient flow, and breakdown of programmes into operational terms were performed. They were used to identify community health needs and demands, health care patterns, types of diseases, necessary manpower, necessary space, facilities, equipment, capital costs, operation costs, other material, etc.

Based on the results from those studies and surveys, a model comprehensive health subcenter for rural population was developed quantitatively and has been implemented for the past three years to prove its feasibility in real situations.

The model of the comprehensive health subcenter will be described briefly below.

## 1) Reorganization of the existing government health system

### i) The township health workers

All three Myun government health workers are brought to the health subcenter from administrative office.

In the project area the existing MCH workers are qualified midwives. They are of great value of the project since they are already well accepted leaders in community health. Therefore, their roles are not changed in the new system. The TB and FP workers are nurse aides and uni-purpose health workers. In the new model they are called multi-purpose workers I & II (MPW I & II) and change their roles from uni-purpose to multi-purpose. The township is divided between the two into areas A and B. MPW I and II have the new function of supervising and supporting the services and activities of the FHWs in the field.

The Myun health workers (MPW) had to become thoroughly familiar with the community health concept and the FHW role and function. They had to comprehend their own changing role and function, their new relations with each other, with the FHWs at the village and their supervisors at the county level. Therefore, the new job descriptions and functions were handed to them in print, and they were given an opportunity to grow into their new role by actively participating in the selection and training of the FHWs.

## ii) Public physicians

The original government plan was to invite a physician to the health subcenter and let him practice there with a small government subsidy. They are called public physicians. About one third of Myun health subcenters in Korea have been staffed with a physician from this programme. They are only responsible for medical care. No role for supervision of preventive services was assigned. They are not part of an official health care delivery system.

In the new model, the public physician is appointed as a director of the health subcenter and is responsible for the entire primary comprehensive health care services rendered at the health subcenter. He supervises and trains health personnel. He plans health programmes and represents the health subcenter.

To assume these roles he should be well-oriented toward community health.

## 2) Additional manpower

In the new health subcenter model one public health nurse (or community health nurse) is being added to provide and supervise preventive health services other than maternity care.

The public health nurse who has been appointed by the project is being assigned to each Myun. She will be playing a very important role in coordinating supervising and planning at the health subcenter. She is a member of the project development committee together with the public doctor.

## 3) Functions & logistics of the new health subcenter

The functions of the health subcenter were determined quantitatively after identifying health needs, demand, priority, and basic health requirements.

The proposed 10 functions of the health subcenter were: medical care, MCH care, family planning, tuberculosis control, environmental sanitation, general health education, community & government relations, internal management and planning, training and supervision, and others.

The necessary number and types of manpower to perform the predetermined functions of the health subcenter, which covers a population of about 10,000, were calculated and their role and job descriptions were also developed in detail. The proposed manpower at the health subcenter consists of one community health physician, one public health nurse, one midwife, one MPW per 2,000 population, and one clinical aide.

The proposed size of space was 165m<sup>2</sup> with 9 rooms (one examination room, one treatment room, one counselling room, one maternity care room, one two-bed room, one room for laboratory and pharmacy, for reception and record keeping, and one waiting room). Necessary facilities, equipment, drugs and other materials were also calculated and standardized.

These new models were actually organized in real situations and implemented for the last three years.

## C. Mechanism of Community Participation

As stated previously, one of the project's characteristics was emphasis on community participation. In the project 3

mechanisms were developed together with the community people for participating actively and voluntarily in the health system.

### 1. Family health worker

The FHWs were selected by the community and they are community representatives who participated directly in all the health systems and programmes at the grass-roots level. The most important role of the FHWs was functioning as an entry point or bridging the gap between the community and the formal health care delivery system. Detailed descriptions of the FHW have already been presented in the previous sections.

### 2. Community health council

The Community Health Council was established in each Myun in order to reflect the community's voice in the health project and government health system and also to support FHW's activities.

The project staff members motivated the community leaders by contacting them individually or in groups, and by explaining to them the necessity of the formation of an opinion-leading body. The Community Health Council was proposed and formed out of the Community Defence Committee, which was the largest official Myun meeting comprising all formal and informal leaders. 12 council members were selected by vote at the meeting.

The council met once a month regularly. The major roles were; building of health subcenters, provision of lands for the building, organization of health insurance cooperatives, credit union to support FHW incentives, and other various supportive activities for the project's health programmes.

### 3. Health insurance plan

After the establishment of the new health care delivery model up to the Myun level, it has become apparent that a financing mechanism is necessary to make the system functional and to distribute its benefits. The present system, in which the government assigns physicians to health subcenters compulsorily in the absence of an efficient financing mechanism by the community, is inadequate.

It has been the general understanding that rural people are too poor to afford health services, and that the government must support financially the entire system. A survey of Kangwha as well as in other rural areas of Korea has shown not only the annual income of rural families has recently increased remarkably but that fairly large sums are spent to obtain health care.

In Kangwha, the average health expenditure of a rural family in 1975 was W25,000 per annum (\$52). This indicated that if we are able to mobilize the health expenses in a more systemic way it would probably cover health services more efficiently and effectively.

Consequently the community leaders and the project staff discussed suitable ways to mobilize local financial resources and agreed upon the development of a health insurance programme. In April 1976, two years after the project, a few months after the implementation of the new primary health care center, community leaders, through the community health council, organized the health insurance cooperative. An eleven-member board of trustees for the insurance programme, consisting of community leaders, interested persons

and members of the insurance programme itself, was selected. At the end of 1976 about 300 families enrolled in the cooperative and at the end of 1977 about 800 families enrolled in the cooperative. The number is slowly growing.

The monthly premium per person was W200 (\$0.42) and annual average premium per family was about W12,000 (\$25.00) initially and it was raised to W300 per person per month.

The cooperative has been self-supporting for the past two years. 80% of primary health care expenses and 50% of secondary care expenses are being paid by the cooperative.

Still the number of enrollees are small (only 20% of the target population). Most people in rural areas of Korea have little knowledge about health insurance until an unexpected illness occurs in their family. Furthermore, it is difficult to convince them that they should pay for the privilege of health services which they apparently do not need when they are healthy, and unfortunately cooperatives have a bad reputation in rural Korea.

It would take a long time to overcome these barriers. The government, however, has already started to show an interest in the development of national-scale health insurance programme. Therefore, in the near future, complete coverage of rural population could be realized.

### D. The Health Services at the Village and Myun Level

Services are being delivered at household, village and myun level, in child care, maternity care, family planning and TB care.

The child care programme is essentially build around a continuous weight survey conducted by the FHW. For this purpose she is given a scale and the necessary records. The record is filled out at birth and handed to the mother. Weight, vaccinations and incidence of disease are recorded on this chart. Through this a history of growth, development, vaccinations and previous illness becomes available at each contact of the child with the health services. All children under age two are weighed monthly, two-to four-year-olds quarterly, and five-to six-year-olds twice a year. Experiences with the "under fives" programme and "road to health chart" in Nigeria served as a blue-print in Kangwha to supervise the health of all pre-school children in the community through village auxiliaries having only rudimentary training. The contacts are used to identify and refer sick children and to educate the mother on growth and development of her child with regard to nutrition, vaccination and hygiene. Vaccinations are given at the health subcenter and village on the occasion of the regular MPW visit. Regular home visits help to identify sick children and weight and vaccination programme defaulters by means of the "road to health chart".

Maternity care starts with identification of a possibly pregnant woman at her home through inquiry about menstruation history, which is made of all eligible women. If the menstruation is delayed more than six weeks from the first day of last menstruation the woman is referred to the midwife (MCH worker) for diagnosis and counselling.

The consultation includes history, diagnosis, lab. tests, and an inquiry of whether the pregnancy is desired. If the pregnancy is not desired, and the patient is still within the first trimester, she is immediately referred to an OB/GYN at the county level for possible pregnancy termination.

Otherwise, the maternity record is filled out with a carbon copy to be handed to the FHW in charge. The patient is given printed and verbal instructions about pregnancy, childbirth, newborn and child care.

These instructions were developed to build her motivation and provide essential knowledge taking into account attitudes and conditions in her home environment. Major emphasis is on regular prenatal care, preparation for safe home delivery and child spacing, and instruction for the attendant. The patient is seen monthly by the FHW during the second trimester; there-after, bi-weekly; and during the last six weeks of pregnancy, weekly. On each occasion she examines the urine for albumin and sugar, screens for edema, inquiries for problems and records her findings in her copy of the maternity record which is presented to the MCH worker at the weekly meeting. Four to six weeks prior to delivery the patient is seen again by the MCH worker at the clinic for another thorough examination and instructions related to safe home delivery. This approach is maternity care allows the MCH worker to be aware at any point in time about the health condition of all pregnant women in her target area, to concentrate her attention on the high risk group and to attend all deliveries.

Many hazards from childbearing and for the new-born in the community can thus be more readily identified and eliminated. Moreover, motivation of expecting mothers to learn about healthy birth and upbringing of the expected child can be most effectively continued in the child care programme. Within five years the community will have in its mothers of pre-school children a core of individuals knowledgeable in basic issues concerning MCH who will be able to make intelligent demands of service providers, as well as assist in influencing the health behavior of new mothers.

The regular household visits also include identification of family planning needs, inquiry into family planning practice, family planning education, provision of supplies (condom, foam, pill), referral for loop insertion, vasectomy, and tubal ligation and follow-up of acceptors. Family Planning is so closely related to MCH that it can become quite naturally integrated with the MCH service packages of the different workers. Good rapport and communication with the clients on issues relating to child health, family welfare and maternal health can foster internal motivation for spacing and reduction of family size. It can be expected that the family planning programme will improve without additional input.

The TB programme is the only programme area involving a different target group, different knowledge and somewhat different activities. It can, however, be incorporated without too much difficulty. The FHW identifies suspects of her regular home visits, refers them and follows up on patients. She distributes drugs, identifies drug defaulters, educates patients and their families on home hygiene and ensures that all children in her community are properly BCG vaccinated.

## **CHAPTER IV. CHANGES OF HEALTH STATUS & PROGRAMME EVALUATION**

### **A. Changes of Health Status**

The ultimate goal of a health demonstration project is to improve the health status of the people. To see any effect of the project on the health of target community people, several health indicators were selected and compared, before and after the project or occasionally, with the control area.

Traditionally mortality statistics are one of the most commonly used health indicators. The crude death rate of the project area in 1975 was 9.5 per 1,000 population and was decreased to 8.7 in 1977. Age standardized crude death rates showed a more obvious decreasing trend. Leading causes of death in the project area were cerebrovascular diseases, malignancies, senile and ill defined diseases, suicide, and liver cirrhosis which are all non infectious origins. It is note worthy that deaths due to pulmonary tuberculosis and other infectious diseases ranked below fifth and it was an interesting finding that suicide ranked 4th through the period of 1975—1977.

Infant death rate decreased from 30.1 per 1,000 live births in 1975 to 21.8 in 1977. The number of deaths, however, was too small to obtain a meaningful rate.

It is also a valuable finding that no neonatal tetanus was developed since 1975 when two infants had died due to neonatal tetanus. The death rates for the 1—4 year age bracket can be valuable health indicators but the numerator was too small to calculate a meaningful rate.

Proportional mortality indicator (P.M.I.) in the project area showed no apparent trend. It seems that the P.M.I. is a relatively insensitive indicator to show any change of health status in a small population.

Morbidity statistics are a more direct measure of health status of the population. Morbidity information which was obtained through health interview surveys showed a decrease in rates for chronic conditions in the project area compared with the control area from 1975 to 1977. But it needs careful interpretation because of the limitations of the health interview survey.

Measles infection rates were selected as tracer indicators and were observed by birth cohort since the beginning of the project and for three years thereafter. The cumulative experience rates of measles in birth cohort 1971 through 1975 showed that there were marked decrease (60%) in the measles infection rates through all ages during the period.

Other possible health indicators other than mortality and morbidity, such as physical and physiological status of the people, was not possible to obtain because of either too short project period or too small target population.

### **B. Evaluation of Integrated Programmes for Maternal and Child Health and Family Planning Programme**

In the Kangwha Project the MCH programme integrated with the Family Planning Programme was considered to be the most basic and central programme. Therefore, the evaluation of this programme is of utmost importance.

Such indices of the programme output as maternal death rate, infant death rate, birth rate and natural population increases have already been described in Chapter II and the previous section. Therefore, in this Chapter, the indices and process indices were used as indices for the programme evaluation.

Since the baseline indices before the programme were not available, the annual changes of the indices after the implementation of the project were focused on. The sources of data used here were mostly household records, infant weight charts, vaccination records and pregnancy record of the project. These records were linked in one format made for each of all families with eligible couples. The indices of MCH programmes were observed by birth cohort. The following is a

summary of results.

## 1. Maternity care

- 1) The pregnancy outcome of the project period showed that 78.8% terminated as full term live-birth, 2.9% as spontaneous abortion, 17.1% as artificial abortion and 1.2% as still birth. The rate for full term live birth was 7% higher than that of other studies and the rate for the spontaneous abortion and still birth were slightly lower than other studies.
- 2) The prenatal care rates were improved annually. Only 1.1% of total pregnant women in 1977 did not receive any prenatal care.  
  
70% of pregnancies registered in the first trimester and received a satisfactory level of prenatal care in 1977.
- 3) 7.5% of total deliveries in 1975 and 12.1% in 1977 were institutional deliveries. More than 50% of deliveries were assisted by professionals either by midwife or physician. The same rates in average rural Korea are said to be 5–10%.
- 4) 80% of pregnant mothers received postnatal care and all risk cases detected through the prenatal and postnatal care referred and successfully managed.
- 5) No maternity deaths or serious complications were observed during the 3 years of the project period..

## 2. Child care

### 1) Vaccination rates

- i) 90% of birth cohort born in the project period received BCG vaccination. In 1977, 85.9% of children received BCG vaccination within 3 months as required by the T.B. Control Law.
- ii) 60% of birth cohort received small pox vaccination. This was because the project did not strongly encourage the small pox vaccination.
- iii) About 70% of children received three DPT vaccinations within one year and 90% received at least one or more.
- iv) The measles vaccination was not considered as a basic vaccination required by the law in Korea. It is a recommended vaccination for which the beneficiary should pay. As shown in figure 6–3 the measles vaccination rates observed by birth cohort showed a beautiful gradual increase in the earlier age annually.

This was considered to be a 2 to 3 times higher rate than that of other rural areas. This proves that the consciousness of the health of the community people substantially increased after the project.

### 2) The weight measurement of children

Those who were born during the three years of the project period received 5 times the weight measurements on the average within 12 months after birth. Less than 20% did not receive any measurement.

- 3) The health subcenter visit rates for child care increased

annually. The rate, particularly, jumped from in 1974 to in 1975, which was the initial year of the project.

## 3. Family planning

In 1974, before the project started, only 38% of the eligible women had practiced family planning. In 1977 three years after the project the experience rates of F.P. practice showed 72% and about 50% eligible women were current users of one of the F.P. methods. Permanent sterilization was performed on 14.3% of the eligible women.

All these input and process indices showed extremely high rates in the project area and in the project period compared with that of other areas. We conclude without hesitation that the good results were mainly contributed by the activities of FHVs.

## 4. Tuberculosis control programme

The ultimate objectives of the tuberculosis control programme would be reduce the incidence, prevalence, and mortality rates of tuberculosis in the community.

The incidence and prevalence surveys of tuberculosis are too costly and too complicated. Such a survey also needs to observe large number of population for a long time, because T.B. incidence and prevalence rates are not a very sensitive indicator for a short period of a programme. The annual T.B. mortality rates, however, were possible to obtain in the project.

The tuberculosis specific death rates decreased from 56.2 per 1,000 population in 1975 to 35.5 in 1977. The total number of deaths due to tuberculosis in the target area were only 7 in 1975 and 4 in 1977. Therefore, this together with the absence of the control data has to be carefully interpreted.

The evaluation of the tuberculosis control programme was centered more on lower level objectives: stage of registration, regularity of follow up, and improvement of cure rates.

The registration rates of new patients in the project area were higher than that of the control area through all 4 years.

Slightly earlier cases of tuberculosis assessed by sputum test were registered from the project area than the control area through the period of 1974 to 1977.

In order to evaluate regularity of follow up of the registered patients, regular X-ray check ups and sputum tests were analyzed. It was found that those who obtained regular follow up went up from 49% in 1974 to 59.6% in 1976 in the project area, while the same rate declined from 56.6% in 1974 to 5.6% in 1976 in the control area.

The complete cure rates of the registered patients in 1976 were 15.6% in the project area and only 3.8% in the control area.

## 5. Medical care programme

In evaluating the medical care programme, care is needed to observe quantitative aspects such as utilization of medical care institutes as well as qualitative aspects such as content, continuity, satisfaction of clients and the costs of the programme. But in this paper, only the quantitative aspect of medical care was assessed, and the subject of the qualitative portion is treated in chapter IX.

Increasing utilization of medical care implies two opposite meanings: increasing morbidity and decreasing unmet need of the population.

Considering an extremely low utilization of medical care institutes among rural people in Korea, one of the aims of the establishment of a health care delivery system would be an improvement of utilization rates.

The health subcenter utilization rates increased from 2.0 per 100 persons between July 1974 — June 1975, to 13.3 between July 1976 — June 1975, which is a sixfold increase.

In order to obtain the medical care utilization rates of the general population, two household health interview surveys were conducted. The utilization rates for acute conditions within the last two weeks and for chronic conditions within the last month showed not much difference between 1975 and 1977. The physician utilization rates, however, increased markedly from 0.15 per 100 population per year in 1975 to 1.63 in 1977, which is almost a ten-fold jump.

This means that by the establishment of a health care delivery system the health care patterns have been much changed.

## 6. Nutrition

According to the data of 1977 National Survey conducted by the Ministry of Health & Social Affairs, average calorie intake per day per adult in rural side 2,778 cal. is much more than that of national average 2,668 cal. and the average amount of protein consumption is about the same (rural 85g, national 84g), rural people have poorer nutritional status in following aspects:

- 1) Lower proportion of animal protein to total protein intake in rural area (20.9%) than urban average (27.5%).
- 2) Average fat intake in rural area is 32g versus urban average of 38g.
- 3) 88% of average iron intake is from vegetable food which has poor utilization than animal food.

Therefore 15mg as average iron intake per day per person in rural area is not sufficient for intake of Vitamin A, B1, B2, Niacin, and Vitamin C are, taking account of their cooking loss, grossly inadequate to meet the recommended allowances.

In addition to above mentioned inadequate intake of essential nutrients in general, the nutritional status of rural women, particularly during the period of pregnancy and confinement are further aggravated due to certain traditional behaviours:

- 1) During pregnancy, there are numerous foods to be avoided. Every client in the study area had heard of at least some of them and many adhered to one or the other taboo. Chicken, duck, eggs, and octopus are among the foods to be avoided. Most frequently they are believed to cause fetal malformation or danger of some spiritual kind.
- 2) On the other hand there are practically no awareness of the need for good nutrition in pregnancy. A woman's diet generally is bland — rice, soup, and kimchi three times a day. Pregnant or not, she serves the better things to husband and children.

- 3) After delivery all Korean women take seaweed soup and rice, to the exclusion or practically anything else, for at least three to seven days and some times longer even though on occasion they were not able to stand the sight of it. This custom of eating seaweed soup after birth in Korea is so old and ubiquitous among all classes and walks of society that nobody appears to be able to give a satisfactory reason for it any more.

Such culture oriented behaviour is hard to change.

## CHAPTER V. EVALUATION OF THE PERFORMANCE OF HEALTH WORKERS

In this chapter, activities of each health worker as a member of the team in the project were analyzed in order to identify work content, to measure work load and to determine adequacy of their functions and roles.

For the analysis of Family Health Worker's activity the monthly activity reports, daily activity records and the results of the interview survey of the residents were used. For the Multipurpose Health Worker, the time-activity studies of 6 Multipurpose Health Workers was performed with Health Workers in non-project areas in Kangwha gun as a control.

The analysis of the Public Health Nurse activities was based on their own experiences and the observation by the staff members of the project.

The physician's performance was excluded because their roles are versatile.

The performance of each health worker obtained from the analysis is summarized below.

### A. Family Health Worker

The amount in terms of number of F.H.Ws activities started to increased in the initial 6 months and thereafter it maintained a fairly constant level with seasonal fluctuations. The home visiting slowed down in the cold winter and busy planting and harvesting seasons.

The average work hours of F.H.W. was 3 hours per day to perform their roles adequately.

The average number of visits to a single home by F.H.W. are 14.7 times per year and the average number of visits to F.H.Ws made by a single resident was 8.2 times per year. The average number of total contacts between F.H.W. and a particular resident, therefore, totalled 23 times per year. This number is more than the expected or assigned number of contacts. This means that F.H.W's function is one of a community communication center.

70% of homes in a village visited regularly by F.H.W., 15% irregularly and 15% of households have never been visited by the F.H.W. This indicates that F.H.Ws have not visited a certain group of households with might be considered as households without problems or not visited for other private reasons.

F.H.Ws shared most of their time among child health, family planning and maternity care, which reflects the programme priority of the project itself.

The content of work was also analyzed. It was revealed that F.H.Ws spent most of their time on simple basic activities such as education & counselling, registration, weighing, pre- and post-natal care, etc. These activities are all within the capability of the workers. 70% of activities were performed during the home visiting, 25% at their home, 5% at the meeting.

The attendance rates to the regular weekly meeting exceeded 95% and 8 F.H.Ws dropped out during the past 4 years. 6 dropped out due to inevitable reasons, such as moving away or pregnancy, 2 were dropped due to poor performance.

#### B. Multipurpose Health Worker (MPW)

The average working hours of MPW were 8 hours 46 minutes per day. There was no difference between project workers and non-project workers. The Multipurpose Health Workers shared their time among three programmes (F.P., MCH, Tuberculosis) more or less equally as planned, while unipurpose health workers in other myuns spent most of their time in one programme. Therefore, the purpose of the MPW was considered to be achieved. The MPW spent 70% of their worktime for home visiting and 30% in the health subcenter while other myuns spent more time on internal supportive work. The midwife spent more time in the health subcenter compared with other MPW.

The MCH workers in two project myuns did not change in their post while other MPWs were changed once every two years on the average.

#### C. Public Health Nurses (PHN)

The major role of PHN was not to provide direct services to the population. They functioned as the team leader of the health workers at the myun level. In other words, education and training of FHW and MPW, coordination of health workers' activities, attending and leading the meetings, community relations, data collection for feedback and other managerial work constituted the major part of their roles.

At the beginning of the project one PHN covered both myuns; however, it was found that the workload was too much to handle. Therefore, from the second year one more PHN was added and they were assigned one myun each.

The PHN was the nucleus of all the project field activities.

### CHAPTER VI. COMMUNITY PARTICIPATION AND COMMUNITY'S ATTITUDES TOWARD THE PROJECT

As stated previously, the incorporation of the community's active voluntary participation was one of the important objectives of the project.

The first mechanism developed for community participation was the activities of the FHW, which were described in Chapter III separately in detail.

The second mechanism was the organization and function of the Community Health Council, one in each myun. The members were elected by vote of the community leaders, therefore it could at least represent the community. Even though the council was organized not by their initiatives at the beginning, the members later accepted health matters as one of their responsibilities and they were proud of being members. They initiated, with the help of the project staff, the

health insurance cooperatives and credit union later on.

The final evaluation, however, should come from the community people themselves and not from the representatives or leaders. Therefore, as a part of the evaluation of the project, a series of surveys were done to identify the community peoples' responses to the FHWs, community health councils and the health project itself. A brief summary of the result of the survey is described below.

#### A. Family Health Workers

To the question of whether they know of a certain lady who was serving the health needs of the community, 74.0% responded that they knew of her.

The second question asked them to indicate the FHW's roles. 88% of respondents could indicate one or more activities of the FHWs, and about 30% could indicate at least 3 items. The questions were asked without giving any references, therefore we can assume that they could recognize more activities.

The third question was whether they thought the FHW was helpful for the community people. 27.7% answered the FHW was very helpful, 35.2% helpful and 35% didn't know. The answers were analyzed less favourably. This means that the mothers of child-bearing age and with children were more closely served. Another reason for the unfavourable response was thought to be that the preventive health services rendered by FHW were not well recognized as helpful activities for their health.

To the question of whether they had ever visited a FHW, about 52% responded that they had visited a FHW at least once. About 10% of the housewives visited a FHW once in every 10 days. The main role of FHW was visiting houses actively instead of asking people to come to her. However, it turned out to be that many people actively utilized the FHW for their health instead. The determinants that made people visit the FHW were studied by multiple regression analysis. The results were the more active the FHW, the closer the relationship with the FHW, the closer the distance from the FHW, the more they knew about the FHW's activities, the more children they had, the older, the further from the health subcenter, the more they utilized or visited FHWs.

#### B. Community Health Councils

The question "Have you ever heard of the community health council?" was asked of 106 community leaders. 86.8% responded that they knew of the council. Another question was whether they thought the council functioned actively. 22.9% answered yes it was very active, 43.8% yes but could have been more active, and 21% not very active. The answers differed from one myun to another. This exactly represented the activities of the two different councils.

#### C. Health Insurance

The total number of enrollees of health insurance cooperatives was 315 families in 1977 and it increased to 562 families in 1978, which was about 22% of entire families in the project area. Besides, these two myuns, in the eup area another 150 families have started the health insurance cooperatives.

The premium collection rate was 75% as of August 1978. This was considered to be an excellent rate compared with other areas.

The average annual medical care utilization rates for outpatients among health insurance enrollees were 109.6/100 persons in 1975 and went up to 131.1/100 persons in 1977. The hospital admission rates, however, did not increase.

In 1975, before the health insurance was organized the physician visit rate was 4.7 per 100 disease events; however, it went up to 16.9 for health insurance enrollees and 13.3 for non-enrollees in 1977 after the project was implemented.

To the general population the question was asked in 1978 whether they had ever heard of health insurance. 60.3% answered yes and 39.7% no. But to the same question asked in 1975, only 9.1% had answered yes. It, therefore, was considered to be a remarkable improvement.

To the leaders of the community the question of whether the health insurance would be helpful was asked. 93.4% responded the insurance would be helpful and 6.6% answered they did not know.

Another question about optimum time to establish health insurance cooperatives for the community was asked of the leaders of the community. 39.2% responded it was already too late, 54.9% it was optimum and 5.9% it was too early.

To the general population, the question of whether they intended to enroll in the cooperatives was asked. 32.1% said yes in 1975 and 37.0% in 1978. The question asked in 1978 was to only those who were not enrolled. Therefore, the response was considered to be marked improvement.

#### D. Health Project Per Se

The question of whether you know of any additional or enforced health programmes in your village compared with other villages was asked without mentioning any details. 28.8% answered yes very well, 20.5% answered yes but not very well and 50.7% said no. After explaining about the activities of the project, another question was asked whether these activities were helpful. 60.5% responded favourably.

To the community leaders, the question that even without the support of the project should the health activities be continued by the community itself, was asked. 81.2% responded yes. This could be considered as a successful implementation of the project.

#### E. Health Subcenter Activities

Interviewees were asked to write down the roles of the health subcenter. About 50% mentioned the curative activity first and then child health, maternity care and family planning were listed next. People recognised the health subcenter as the comprehensive health care center but still the curative service received highest priority.

Another question was whether they had ever visited the health subcenter during the last 7 months and, if yes, what was the reason to visit. In 1975 48.9% responded yes, at least once in one's life, but in 1978 68.2% responded that they had visited the health subcenter at least once during the past 8 months. It indicates that the health subcenters have been well utilized after the start of project.

Main reason for visiting the health subcenter were: curative services, injection, maternity care, family planning and health counselling.

## CHAPTER VIII. SUMMARY AND RECOMMENDATION

During last 17 years the Republic of Korea has made rapid progress in economic development, however attention to health care development has been paid only recently. And there are many problems yet to be solved. To name a few of them: maldistribution and insufficient utilization of health care resources; wrong notion that increased production of medical doctors will automatically provide solution for the health care problem in rural area, while the medical education in Korea continues to be more or less in the Flexnerian age, and characterized by orientation towards biological and individual medicine and over specialization; nearly 90% of curative medicine is provided by private sector on fee-for-service payment system like ordinary commercial goods; and some misconception on "primary health care" as if it is a service of poor quality applicable in very poor underdeveloped countries where medical doctor is scarcely available, so it is rather silly to talk about "primary health care" in Korea where the per capita income exceeded US\$1,000 and has more than one medical doctor for every 2,000 population.

In recognition of the utmost importance of primary health care, Yonsei University, who started a community health teaching programme from 1957 and family planning programme from 1961, strengthened its teaching programme from 1973 by locating Kangwha County island 58km west from Seoul as the teaching and research field area. In order to develop and demonstrate a community health care project into the area, two townships, Naegje myun (population 6,568 in 1975, and 6,048 in 1977) and Sunwon myun (population 5,878 in 1975, and 5,207 in 1977) were chosen. In addition to the utilization of all existing resources in public health and private personal health care, the project introduced newly 20 "Family Health Worker" (one FHW per village) and two public health nurse, and remodeling of two health-sub-center buildings and equipment.

The village level FHWs were selected out of their own village women to the community, and they are community representatives who participate directly in all the health systems and programmes at the grass-roots level.

The most important role of the FHWs is functioning with community as an entry point or bridging the gap between the community and the formal health care delivery system. All FHWs were given pre-service training for 3 months including two months' on-the-job training.

At the township level, existing government health system was reorganized by converting the uni-purpose worker, TB and FP respectively, into multi-purpose worker by putting them into the FHW training course, and brought three of them (two nurse-aid multi-purpose worker and the one MCH midwife in each township) to the health sub-center from general administration office. And to the "public physician" a new role for overall supervision of preventive services was assigned in addition to private practice on curative medicine, so that he is the director of the health subcenter and is responsible for the entire township level comprehensive primary health care. The major role of PHN are in education, training of FHWs and multi-purpose workers, and coordination and managerial work in myun (township) level, as the nucleus of all field activities of the project.

A plan to establish a 50 bed county hospital by pooling financial resources of private practitioners in Kangwha and of Foreign Aid Organization to be run and governed by Kangwha Medical Association, Kangwha community representatives,

and Yonsei University jointly, is going on successfully. Meanwhile, patients need specialist's care and hospitalization are referred to a proper clinic in Kangnam eup or hospital in Seoul.

No need to mention that the secondary referral organization on preventive health care matter is the county health center.

In order to report and identify problems and make decision to solve them, there are two kind of regular weekly meetings in different level. Regular staff meeting is chaired by the Project Supervisor, attended by public physicians, nursing supervisors, director of local health center etc. Another regular meeting is the FHW-HW weekly meeting at township level. The meeting consisted of health workers, village FHWs, public physician and nursing supervisor. This meeting is presided by a FHW alternatively. If any problem raised does not find solution at this level, it is referred to the staff meeting.

Many records and formats were newly developed and used in addition to the existing government records. To name a few, household record, pregnancy registration card, chart for child immunization, weighing, road to health chart, family planning records, medical care records, and many others.

The incorporation of the community's active voluntary participation was one of the most important objectives of the project. The first mechanism developed for the purpose was the activities of the FHW. The second mechanism was the organization and functioning of the Community Health Council, one in each township. The members were elected by vote of the community leaders to represent each community. Even though the council was organized not by their own initiatives at the beginning the members later accepted health matters as one of their responsibilities and they were proud of being members. They initiated, with the help of the project staff, the health insurance cooperatives and credit union later on.

Three aspects of the project performance for 3 years (1975-1978) were carefully evaluated with a few technical limitation due to a rather small size of target population and a short period of observation. The first aspect is on the changes of health status, and evaluation on achievement on maternity care, child health care, family planning, tuberculosis control, and medical care programme compared with that of non project area. The second aspect of evaluation was on the performance of health workers with particular emphasis on Family Health worker and Multi-purpose Health Worker. The third aspect of evaluation was on the community participation and community's attitudes toward the project. To our satisfaction, the results of evaluation are extremely encouraging and successful.

Yonsei University is conducting another two projects on family planning programme integrated with village level primary health care. The one is to compare the performance of village female family health worker with that of male new village movement leader. Another one is to study the effectiveness of integration of village level family planning and health care with new village movement (women on purely voluntary bases without honorarium). Both projects are too early to get conclusion except that female FHW seems to have better performance over the male new village movement leaders.

## RECOMMENDATION

Assuming that health is one of fundamental human rights and governments are responsible in securing the health of their people, recognizing existing gap between the health haves and

have-nots which can not be solved by mere quantitative increase of medical professionals, hospital beds, and expensive medical technology; taking account of the outcome and experiences obtained from our studies; we recommend:

1. To accept primary health care by the government and leaders in Korea, with highest priority, as the key to achieving an acceptable level of health for all countries, whatever their level of development, and does not regard primary health care as a "medical care of poor quality for rural poor in developing countries only".
2. To make the primary health care universally accessible to individuals and families in the community of rural Korea in an efficient, acceptable and affordable way and with their full participation, a village level female volunteer "Family Health Worker" with their sufficient training must be introduced.
3. To convert existing township level unipurpose health workers with temporary employee status to multipurpose worker with permanent employee after adequate retraining given.
4. To have well training public health nurse, one in each township, to supervise overall activities of township level multi-purpose workers and village family health workers.
5. To so reorganize the administration channel that township level multi-purpose workers move their office from township office to health subcenter and report to their public health nurse but not to the township chief.
6. To organize a community health council in each administration level with full participation of community representatives to which ample power is given so that they feel and assume the responsibility of supporting their community health care programme.
7. To recognize technical difficulties involved in health insurance scheme in rural community and numerous disadvantages of fee-for-service payment system to medical practitioner, develop such alternative approach as prepayment health insurance system with government subsidiary support and capitation or salary payment system to medical doctor in rural community.
8. Understanding financial limitations of university or research organization has, government is requested to provide support so that such demonstration project and the people in the communities will not suffer from discontinuation after the termination of research input.
9. To recognize that any new scheme can not and must not be implemented all of sudden in one time all over the country, and that it takes time to build up sufficient number of experienced capable manpower. Therefore it must be started from rather a small number of well prepared community and be gradually expanded to other communities.
10. Existing national health manpower development pattern such as medical and nursing education and the training of allied personnel must be revised drastically, without further delay, in its goal and objectives, number, and methods to meet forthcoming future need in providing primary health care in Korea. Attention must be given to the importance of knowledge and skill in behavioral science, communication and management in the content of training.

## PROSPECTIVE STUDIES ON THE RISKS AND BENEFITS OF CONTRACEPTIONS

David A. Edelman, PhD.

Questions concerning the safety of various contraceptive methods, particularly oral contraceptives (OCs) and intra-uterine devices (IUDs) have inspired a number of prospective studies designed to assess some aspects of their safety. Up to now, most, if not all, of the major studies evaluating the safety of contraceptive methods have been conducted in the developed world (United States, United Kingdom, Europe). The relevance of these studies to the developing world (parts of Latin America and Africa, Asia, the Middle East) is not known. There continues to be a need for studies to evaluate the safety of contraceptive methods in both the developed and developing world.

It is likely that issues related to the safety of contraceptive methods will be the biggest deterrent to the expansion of contraceptive services and to the increase in the proportions of women of reproductive age using effective methods. An example is the decision of the Family Planning Association of Hong Kong to discontinue use of Depo-Provera (depot medroxy-progesterone acetate, Upjohn Co., Kalamazoo, MI, USA) following the decision of the United States Food and Drug Administration (FDA) not to approve the drug for contraceptive use in the United States. The decision of the FDA appeared to be based on political rather than scientific grounds. Questions raised by the FDA concerning the safety of Depo-Provera included the following:

- the significance of an increased incidence of mammary carcinomas in beagle dogs following the administration of Depo-Provera
- bleeding irregularities caused by Depo-Provera may require the administration of estrogens, which may be an added risk factor
- the risk of congenital malformations of the fetus for women who become pregnant while using Depo-Provera

Depo-Provera was being used in about 69 countries at the time the FDA made its decision, but insufficient data were available to answer the concerns of the FDA. The need for large prospective studies of the risks of all contraceptive methods, including Depo-Provera, is obvious.

A review of significant contraceptive safety studies that have been conducted during the past decade will help place the present needs in perspective.

The Walnut Creek Contraceptive Drug Study conducted by the Kaiser-Permanente Medical Care Programme is a prospective study to determine the side effects of OCs. The study compared the health status of about 18,000 women who used or did not use OCs. The study was specifically designed to assess the side effects of OC use and recently has been expanded to include evaluation of the side effects of other contraceptive methods.

Under the leadership of Dr. Christopher Tietze, the Co-operative Statistical Program (CSP) evaluated the safety and effectiveness of IUDs, including the Lippes Loop, Saf-T-Coil, Birming Bow, Margulies Spiral and Steel Ring. The CSP evaluated 23,917 first insertions of these devices. Of the types of IUDs evaluated by the CSP, only the Lippes Loop and Saf-T-Coil and still commercially available.

Copper-bearing IUDs, such as the Cu-7, TCU, Multiload and the Progestasert, a progesterone-releasing IUD, are in wide use today. These IUDs have not been evaluated in any programme the size of the CSP study.

In the United Kingdom, the Royal College of General Practitioners in 1968 undertook a prospective study of 23,611 OC acceptors and 22,766 non-acceptors. The purpose of this study was to evaluate the side effects and benefits associated with OC use.

Also in 1968, the Family Planning Association of England started a prospective study to provide an assessment of the benefits and risks of different methods of contraception. In this study, 17,032 women are being followed.

All of these prospective studies represent a large investment of time and effort. It is doubtful if these studies will provide definitive answers to the many issues regarding the risks and benefits of contraception. The number of subjects in the studies is perhaps too small to determine the risks of some rare adverse side effects. Increasing the size of the studies increases their management complexity. Case-control studies are better suited for the evaluation of rare adverse side effects than are prospective studies. Case-control studies permit an assessment of the relative risks of particular side effects for one type of contraceptive versus another, but do not permit assessment of the absolute risks of the side effects.

Organizations such as the IDRC, WHO and the IFRP are currently planning or undertaking studies to evaluate specific aspects of contraceptive safety. Since its inception in 1971, the IFRP has conducted a number of studies of the safety and efficacy of contraceptive methods including abortion, sterilization, IUDs, systemic contraceptives and barrier methods. To date, the IFRP has collected data on over 110,000 abortion procedures, 62,000 IUD insertions and 54,000 female sterilizations. In some of the studies, subjects have been followed for more than two years.

In spite of the impressive quantity of data collected by the IFRP, there are still many questions related to the safety of contraceptive methods that cannot be answered through the analyses of the IFRP's data. For example, studies conducted in the United States and Sweden indicate there is a three- to five-fold increased risk of pelvic inflammatory disease (PID) among women who use IUDs compared to those who do not use IUDs. Studies conducted by the IFRP have neither supported nor refuted this claim. Any study of PID needs to use uniform definitions of the disease, diagnostic criteria, etc. The principal purpose of the IFRP's studies has been to evaluate IUD-related events, such as pregnancy, expulsion and removal. The studies did not specifically focus on PID, and therefore any data relating to PID must be interpreted cautiously.

Ideally, large prospective studies need to be conducted in-

cluding many thousands of women using the major methods of contraception. These studies represent a major undertaking and are necessarily costly. The feasibility of such studies may be questioned. One of the major problems faced by any large multicentric study is that of obtaining uniformity of definition of disease categories, establishing uniform procedures for specific diagnoses and monitoring the uniformity of data collection and reporting. Also, since the risks and benefits of various contraceptive methods may vary from country to country, such large prospective studies may have to be replicated in a number of countries.

Each of the IGCC countries and other Asian countries needs to delineate the pertinent issues concerning the safety and benefits of various contraceptive methods. The contraceptive safety studies conducted by any country should reflect the needs of the country and not necessarily those of the funding agency. It is hoped that organizations such as the IFRP can help to design and support studies on contraceptive safety that meet the needs of individual countries and governments.

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## RETROSPECTIVE STUDIES, WITH SPECIAL REFERENCE TO DEPO-PROVERA

Dr. Malcolm Potts

Often, the major decisions in family planning revolve not around short-term clinical studies of contraceptive side effects but around knowledge of rare adverse events. Prospective studies of the type described by Edelman are easier to understand than retrospective studies, but are more difficult, expensive and time-consuming to conduct. A prospective study compares users and non-users of a drug or device over a number of years and explores as many benefits and risks of use as possible. A retrospective study begins not with the method of fertility control but with the disease and the suspicion

One of the several limitations of retrospective studies is that a condition must have come under suspicion as a possible side effect of the fertility regulation method. Therefore, most studies are more likely to revolve around risks than benefits, because usually when a contraceptive is used on a wide scale, possibly harmful side effects are likely to be more visible to alert physicians than beneficial ones — how do you find the patient who does not die because she uses the method?

One way in which questions are posed for retrospective studies is through animal experiments. The current interest in Depo-Provera illustrates this point and is a theme that MacDaniel will take up shortly. In this case, rhesus monkeys were given various doses of Depo-Provera for ten years. Among the 16 animals given 50 times the human dose for a decade, two appear to have developed malignancies of the uterus. Incidentally, more of the monkeys treated with Depo-Provera survived the ten years than the controls who did not receive any of the drug, which, in an aside, illustrates the problems of handling small numbers of subjects. On the evidence available, one could propose that Depo-Provera prolonged the life of monkeys!

When interviewing the risks and benefits of fertility control, many different perspectives must be kept in mind. Any single methodology is often inadequate for making decisions. This is obvious in the case of animal experiments. The rationale for giving high doses of a drug to a small number of animals is that it may uncover the type of side effect that could occur had it been administratively possible to give normal doses to a very large number of animals. Clearly, this is a hypothesis that can neither be proved or refuted, as in the case of Depo-Provera and monkeys. The animal experiments pose questions but do not provide information on which decisions can be made. Even if it were possible to treat large numbers (many

thousands) of animals with a drug under surveillance, it would still be difficult to interpret the results in the human situation. Although monkeys share more common factors with Homosapiens than beagle dogs, there are still important differences, and it seems to the case that Depo-Provera produces a prolific endometrium in the monkey, whereas in women it causes an atrophic endometrium. In addition, the life span of the monkeys differs from that of women, and it is difficult to translate ten years' usage in an animal to the equivalent impact on the human reproductive system.

But when questions have been posed, the prudent investigator must feel obliged to try to get data from the human situation. This is where case-control retrospective studies of particular conditions can give "quick-and-dirty" answers.

Once a disease condition has come under suspicion, then patients with that condition (for example, women who die or are admitted to a hospital with the condition) can be collected, surveyed and matched with a control group of women who have conditions that can reasonably be assumed not to be related in any way to the use of the drug (for example, emergency surgery, admission for automobile accident, etc.). Each group is then surveyed for previous use of the drug or device under suspicion. If women with the condition have used the drug or device more than the controlled group, then there is a suspicion that the good or bad side effect may be genuinely related to the use of the drug.

There are several pitfalls in retrospective studies. How adequate are the control groups? In the case of contraceptives, they are usually matched for age, parity and socio-economic background. But it may be necessary to match other variables; for example, carcinoma of the endometrium is more common in diabetics.

There are always difficulties in the recall of information concerning previous drug usage. Can we be certain that the woman was using Depo-Provera or was she having injections for some other purpose? Did the use of the drug or device precede the development of the disease? Are the relationships, biologically plausible? Are timescales reasonable? For example, in the case of a malignancy, it is unlikely that one would ascribe the cause of cancer to a drug that was used for a mere three to six months, or perhaps even for two to three years, prior to the development of the disease. Cancer has a long

latent period, and one may need to look back ten years or more into a person's life for antecedent causes.

The great advantage of a case-control retrospective study is that statistically meaningful answers can be given on as many as a hundred or so cases of the condition. This is in contrast to prospective studies, which may require several tens of thousands of cases. Moreover, results are available as soon as the study is complete, whereas with the prospective study, the observer may have to wait for several years before meaningful results become available. However, the results only answer certain questions. They can give a relative risk between users and controls, but cannot measure the absolute incidence of the disease under suspicion. Case-control retrospective studies by their nature can only look at conditions under suspicion; they cannot discover unpredictable side effects. Studies of this

type do not give a total perspective, but concentrate on single issues.

All prospective studies and most retrospective studies of contraceptive side effects have been conducted in developing countries. The IFRP is anxious to see studies that give such important results conducted in the developing world where the majority of pill, IUD and nearly all Depo-Provera users reside. The IFRP is exploring the possibility of designing a significant prospective study in the developing world, and the organization has responded rapidly to problems over Depo-Provera. It is likely that we will work with colleagues in Indonesia, Thailand and perhaps in one or two other countries to do studies of endometrial pathology. The IFRP is in close contact with the work of the WHO in the same field.

# QUESTIONS AND ANSWERS ABOUT DEPO PROVERA, THE CHIANG MAI EXPERIENCE AND THE RECENT U.S. FDA ACTION

Edwin B. McDaniel, M.D.

## Question 1)

*We have all heard that the U.S. Food and Drug Administration in March of this year notified the Upjohn Company, the manufacturer of Depo Provera, of the FDA's non-approval of this drug for use as a long-acting contraceptive in the U.S. Do you have any comments to make on the FDA's action?*

### Answer:

First of all, I think it is only fair to your readers to point out that this "non-approval" was not by the FDA's Medical Committee, but only by the Commissioner of the FDA. Now, for the second time the Commissioner has acted against his own expert Medical Advisory Committee on Obstetrics and Gynaecology. This committee, made up of recognized experts in the field of sex hormones, has studied the matter of "D.P." (We prefer to avoid using the trade name "Depo Provera") as a long-acting injectable contraceptive, has carefully weighed its advantages and disadvantages, and the data collected on its use in the U.S. and abroad, and has twice recommended to the Commissioner of the FDA that he approve its (somewhat limited) use for U.S. women. The committee remains of the same opinion even today. This committee sees no evidence that D.P. causes cancer of the breast or cervix, or other serious effects; and according to the *Denver Post* (Wizsh, Bureau) (early Sept., 1978) voted unanimously against the FDA action to disapprove the drug! Obviously, the Commissioner of the FDA (who incidently is a respected scientist) has a difficult job balancing many pressure groups. In this case, I am told that he was under strong pressure by Rep. Fountain (N. Car.) and the Nader consumer protection group not to approve D.P. as a contraceptive.

The groups would also like to ban the Contraceptive pill! I understand that members of the FDA's OB-Gyn. expert advisory committee and at least some of the FDA staff are most unhappy with the Commissioner's action; and I think you can understand why. He is not legally bound to act according to the advice of his own advisory committees. But we should note that he has left the door open to reconsider what he did. Even so, he did not ban D.P. He simply chose not to approve it for contraceptive purposes at that particular time. Therefore, my first comment would be **Let us not say this is an "FDA decision" but a decision by the Commissioner of FDA, acting contrary to the advice of his own expert committee.**

The FDA admits that they have no scientific evidence that the use of D.P. causes cancer of the cervix, breast, or other organs, and notes that the Beagle dog may not be a suitable test animal in D.P. research. Yet opponents of the approval of D.P. as a contraceptive, and the FDA Commissioner himself, continue to raise the specter of the Beagle hound as a reason for the non-approval of D.P. A recent review of a WHO panel of expert toxicologists concluded that the evidence derived from the Beagle dog is not relevant to the human, and that all progestogens, including the natural hormone progesterone itself, can cause breast cancer in this species, but not in women.

## Question 2)

*How is the injectable contraceptive D.P. used?*

### Answer:

Standard procedure is to give an injection of 150 mgs. in 1 ml. in an arm or hip muscle every 12 weeks, starting soon after delivery or miscarriage or early in the menstrual cycle in the case of menstruating women. In almost all women, there is a "safety period" extending for about three weeks after the due date for the next injection. So that, if for any reason, the woman is unable to come to the clinic on the appointed date for her new injection, she is still protected from an unwanted pregnancy. Most women experience a slight-to-mild dull ache at the site of injection for a few minutes to a few hours. But this, most women feel, is a small price to pay for protection against an unwanted pregnancy.

## Question 3)

*I have heard it said that you give a routine estrogen supplement to all women receiving D.P., and thereby you increase the risk of cancer and other complications in using D.P. Is this so?*

### Answer:

We discontinued routine estrogen supplement several years ago; because this was found to be unsuccessful in improving menstrual cycle control. We sometimes use oral or injectable estrogens nowadays for certain bleeding problems, but only for a short period of time, a matter of a few days.

#### Question 4)

*Do you see any real advantages of a long-acting injectable contraceptive over, say, the pills or the IUD, or more conventional methods, such as the condom and diaphragm?*

#### Answer:

In our experience over the past 13 years of using D.P. in more than 1/2 of a million injections, the outstanding attraction of the long-acting contraceptive injection in the minds of our 81,034 acceptors so far, is what I call the "4 F's" namely "Freedom From Fear of Forgetting". But aside from this, they also enjoy the ease and convenience of administration and the high effectiveness of this method. Also, many women have greater faith in the efficacy of medicine given by injection.

Of 142 women using this method for a year, on an average, only one woman will have an unexpected pregnancy. They also appreciate the fact that in case they later desire to have another baby, their chances of becoming pregnant and delivering a normal, full-term baby, according to our extensive data, are just as great as for women who have discontinued pills or an intrauterine device (IUD) for planned pregnancy; or indeed just as great as women using no birth control at all. However, there may be a delay prior to conception, due to the prolonged action of the drug.

D.P. has a lower failure rate than IUD's, condoms, foams, and jellies, or the so-called "safe-period", and does not produce pelvic infection and inflammation sometimes seen with IUD's. In addition, D.P. does not effect breast milk in nursing mothers, a very important factor in much of the developing world. It can be given within hours or days of delivery (or later) and does not interfere with the normal establishment and maintenance of the mother's supply of breast milk. Well-run studies in Egypt and Thailand seem to show that in many mother's, D.P. enhances the quantity of mother's milk.

#### Question 5)

*In view of the tremendous popularity of the injectable contraceptive in your programme, would you say that this is the ideal contraceptive?*

#### Answer:

No. There is no method of contraception that can be considered ideal or that is suitable for every one. The drawbacks to the use of the injectable contraceptive, in our experience, are:

- Amenorrhoea** (cessation of menstrual periods). This is not actually harmful in any way, but can be a worry to some women in some cultures. Education and repeated reassurance on the part of family planning staff can make a big difference here.
- Irregular "periods"**. There may come more often than once a month and come at unpredictable times. In many women, but not all, this condition will go on to amenorrhoea (above).
- spotting**: a slight soiling of the underwear every day or two, or perhaps less often. Not dangerous, but can be bothersome and discouraging.

#### d. Sometimes heavy periods

If any of these problems are important to the user of D.P. and a bigger price in inconvenience than she cares to pay for insurance against an unwanted pregnancy, we advise her to change to pills or to an IUD, or, best of all, if she already has her desired number of children, to an interval sterilization by the increasingly popular "minilap" technique, or to a vasectomy for the husband. We are constantly looking for newer, more effective, more convenient methods of safe contraception with a minimum of undesirable side effects.

#### Question 6)

*Is Depo Provera useful for anything besides contraception?*

#### Answer:

Yes, indeed. In fact, D.P. has been used for certain non-contraceptive purposes for many years, such as for threatened and habitual miscarriage (incidentally, in very large doses, with no apparently ill effect). It is currently used in the treatment of a painful female pelvic condition known as "endometriosis", and has also shown great promise in bringing relief and prolongation of life in persons suffering from a blood disease called "sickle-cell anemia", of which there are an estimated two million sufferers in the U.S. alone, to say nothing of many more millions in Africa. D.P. is being used experimentally in relieving difficult breathing associated with a distressing heart-lung condition called "Pickwickian Syndrome", with good results. But undoubtedly, its most dramatic benefits are seen in its use in the palliative treatment of cancer of the upper part of the uterus. I have personally seen huge, positive-diagnosed, inoperable cancers at the uterus rapidly dwindle and disappear. The uterus has been surgically removed, and the same pathologist who made a positive diagnosis of cancer on the previous scrapings from inside the uterus can no longer find the cancer, even by examining many, many microscopic sections!

#### Question 7)

*About how many injections of D.P. have you given during your 13 years of using this method in Thailand?*

#### Answer:

Since we started our programme using D.P. in April, 1965, through the month of October, 1978, we have given 777,658 or just over 1/2 of a million injections. In our experience there has not been a single case of allergic shock (such as is sometimes seen with Penicillin injections) or other serious reactions. Last year we gave an average of 432 injections every working day, six days a week, representing about 75% of our total family planning work. We now have an experience of using this method equivalent to 187,488 women using it for a year, though many women have used it much more than a year. A few weeks ago we were honored when our statistician, Mr. Tieng Panthaisong, with his degree in medical demography from the London School of Hygiene and Tropical Medicine, was asked to testify before the Select Committee on Population of the House of Representatives on the safety of D.P. He was able to give convincing proof of the return of fertility in women discontinuing D.P. for a planned pregnancy. It is refreshing to see this Select Committee begin to tap the vast store of data, research, and expertise available outside the U.S.

### Question 8)

*Is it possible then, that in your view, D.P. is actually a very safe contraceptive?*

#### Answer:

Yes, our own experience and that of any other programmes around the world bears this out. To the best of my knowledge, among the estimated one million or so D.P. users around the world, there has never been a death caused by D.P. This is more than one can say for the "pills", in which the danger of blood clots going to the heart, brain, and lungs is a real one in women over 35 who are heavy smokers. The blood clotting dangers of the pills are generally thought to be due to the estrogen sex-hormone content. D.P. contains no estrogen, and so is probably safer than pills in this respect. Above all, the practice of contraception by the pill (in women under 35), IUD, or D.P. is far less risky than pregnancy (particularly an unwanted pregnancy) and delivery itself, even in Western countries.

The first Asian Regional Workshop on injectable Contraceptives, attended by over 50 delegates from 9 Asian countries (with experts from the U.S., Britain, and Germany), most of whom had extensive personal experience with the use of D.P. contraceptive injections, concluded that D.P. was a safe, acceptable, and suitable method of contraception for widespread use.

### Question 9)

*In newspaper and popular magazines we read that when dogs were injected with D.P. they developed breast nodules, some of which turned out to be cancer. Do you think this means this is a risk of breast cancer in humans using D.P.?*

#### Answer:

I think that this question can best be answered by quoting from the WHO report on the "Safety of the Long-Acting Injectable Contraceptive Depo-Provera." This report is the outcome of the "Assessment of DMPA by the Toxicology Review Panel of the WHO Special Programme of Research in Human Reproduction." Panel meetings were held in Geneva 18-22 September, 1978.

"This Panel undertook an in-depth examination of unpublished data provided by the manufacturer of the drug, and from WHO sponsored research, and data from the scientific literature. Representatives of the drug regulatory authorities from India, Mexico, Sweden, Thailand, United Kingdom and the United States were present as observers throughout the meeting."

"The Panel concluded that studies on DMPA in rodents and monkeys revealed no toxic manifestations which might indicate a risk with this drug when used by women. Studies in the beagle dog have shown that DMPA can cause breast tumours, and in some cases these tumours may become malignant. This was one of the main concerns expressed by Commissioner Kenney in his letter of 25 July 1978 to Ministries of Health explaining the US FDA's decision with regard to the marketing of the drug as a contraceptive in the United States of America. The Toxicology Review Panel examined a large volume of published and unpublished information on the effects on the beagle of a variety of progestogenic steroids, including DMPA, and reached the following conclusions:

Considerable reservations must be expressed over the relevance of the findings in the beagle dog to the possible toxicity of long-acting progestogens in humans. Significant differences in the response to progestogen treatment between dogs and women have been demonstrated — there is evidence that the healthy beagle dog's breasts contain a reservoir of microscopic neoplasms which may grow and occasionally become malignant in response to prolonged over-stimulation by progestogens, especially by those compounds particularly active in the canine species. Progesterone treatment stimulates progesterone receptors in the breast of the dog, but not in the rat, nor in the human. The available evidence suggests that all investigated progestogen including progesterone itself, are able to promote mammary tumours in the beagle dog.

For these reasons, the beagle dog does not appear to be an appropriate animal model for the evaluation of carcinogenic risks associated with progestogens, and the Panel recommended that an alternative, more appropriate species be identified for the assessment of the chronic toxicology of progestogens."

### Question 10)

*Are there any Western countries with good drug regulatory bodies who have approved the use of D.P. as an injectable contraceptive?*

#### Answer:

Yes, it has been approved in 10 European countries, including Belgium, the Netherlands, Sweden, West Germany, Switzerland, and, to a limited extent, Great Britain. It is also approved in New Zealand. It is being furnished to developing countries by Sweden, Great Britain, and Canada.

### Question 11)

*Are there any international health or family planning organizations who do approve the use of D.P. for contraception?*

#### Answer:

Besides the WHO, already mentioned in the previous question, one must speak of the International Planned Parenthood Federation. The Central Medical Committee of the IPPF, in its meeting in London in April, 1975, said (in part) "..... after receiving the evidence on use-effectiveness and safety of injectable contraceptives, the Committee concludes that they represent a most dependable and useful method of family planning, and that the IPPF system should continue to distribute them through family planning associations".

This policy statement was reaffirmed by the IPPF Central Medical Committee at its meeting in London, 20-22 April, 1978.

In addition to WHO and IPPF approval, it should be noted that such responsible bodies as the United Nations Fund for Population Assistance (UNFPA), and the Swedish, British, and Canadian Governments are furnishing large amounts of D.P. to developing countries. We should also note that the FDA non-approval was linked with a comment that the decision should not be interpreted to condemn use outside the U.S.A.

**Question (2)**

*Is the FDA decision a final one, or is there a possibility that the Commissioner of FDA will yet change his mind?*

**Answer:**

Health authorities of many developing countries where D.P. is being used or about to be used as a long-acting injectable contraceptive have petitioned the U.S. Government to reconsider the FDA decision to ban D.P., in order that their countries may use it without political opposition and so that the US - AID Population Programme can assist by supplying D.P. to countries requesting such aid.

In early August this year the House of Representatives Select Committee on Population, under the chairmanship of Rep. James Scheuer (Democrat - N.Y.) held several days of public hearings of the FDA Commissioner's decision not to approve D.P. Three of six FDA officials invited to the hearings failed to come. The Commissioner of FDA gave limited testimony, on grounds that he would soon have to be involved in the upcoming Upjohn Company's appeal against the FDA decision. Several renowned experts in the field of contraception gave their testimony.

It seems possible that FDA will be asked to reconsider the whole matter of the approval of D.P. The Upjohn Company has formally requested an FDA hearing on the issue; and the medical reviewers at the FDA are reviewing the company's evidence supporting this request.

In the meantime, the refusal of the Commissioners of the

FDA to act in accordance with the advice of their expert medical committees has, in effect, in my opinion, denied to American women and millions of women in other parts of the world, the use of a safe, effective, and convenient method of child spacing and limitation.

**Question (3)**

*Do you feel that the FDA is using the American tax payers' money wisely in continuing to appraise Depo Provera, which you and other workers feel is already proven safe?*

**Answer:**

I believe that the FDA as a whole is doing a sincere, honest, and necessary job in trying to protect the American public from dangerous or useless drugs.

I think that the United States and the world-wide medical profession, and general public deserve to be told that the FDA decision not to approve D.P. as an injectable contraceptive in the U.S. was not based on the best scientific evidence, and was contrary to the advice of the FDA's own expert medical committee. They deserve to be told why the Commissioner has acted in direct opposition to the repeated recommendations of his own expert advisory committee.

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# CAMPS – AN ALTERNATIVE DELIVERY SYSTEM FOR FAMILY PLANNING SERVICE

Dr. Dibya Shree Malla

## INTRODUCTION

The delivery system of health care service is one of the most important aspect of effective services organization. One always tries to get maximum possible effect with the use of available resources. So the organizations involved in the delivery of family planning service are exploring and making use of different type of delivery system to obtain the maximum output or result in a given period of time. From the reports published we have that camps organized to deliver a sterilization service (male and female) have been found very popular and effective and it has established itself an effective system for delivering the family planning service. Today, while we are discussing the various means of service delivery system as camps, out-reached clinic, mobile clinic and many other, I would like to put the camps as an alternative delivery system into prospective.

As camps are mainly organized and developed to reach the service to the people in rural areas, these are mainly seen in developing countries. Many a male and female sterilization camps have been organized in Nepal. The first laparoscopic sterilization camp has been organized in 1973 under the leadership of Dr. Kanti Giri. The aim of organizing a camp is to reach the target population in remote areas where the communities has no access to the services due to lack of communication and transport facilities. In a country like Nepal with such difficult geographical terrain, it seems to be one of the best delivery system. The reports of results of camps delivery system in different parts of our neighbouring country, India is as encouraging.

Laparoscopic Sterilization in Camps

Year	No of case	No of Camps
1972-73	215	1
1973-74	519	3
1974-75	59	2
1975-76	1,822	12
1976-77	5,566	18
1977-78	6,415	12
1978-79	11,629	18

From the above statistic it is observed that this laparoscopic Sterilization in Camps are getting more popular & cases served are increasing every year. Total cases of vasectomy cases in Camps are about 56,000 cases. The Sterilization Camps are usually conducted and/ organized by different agents providing family planning services as MCH & F.P. Project, Family Planning Association, Integration Health Project, Social organization like women organization Red Cross helps organizing community participation in disseminating information, and bringing clients to and from the camps.

Up till recent time camps have only been organized for sterilization, probably because sterilization require only one contact with the target population for the service to be effective. Today we are here to consider the possibility of organizing camps which aims to deliver the considerable amount of family planning service and care in a definite locality in a given time. The insertion of IUCD and delivery of injectable contraceptives can be organized in camps with the advantages that they require minimum time and are effective as temporary method of fertility control. They can be better followed up by less trained personnels.

The different aspects of camp organization have already been established with our experience in Nepal and other's in different parts of India.<sup>1</sup> They are given below:

### 1. Planning of a camp:

- An assessment of the need of the people in the area and the availability of the local facility is important.
- Target has to be set for that particular camp.
- Requirements to be prepared:
  - Community education programme.
  - Personnel
  - Equipments and suppliers
  - Budget

### 2. Implementation:

- Leadership in the team should be identified.

<sup>1</sup> Bibliography on human reproduction, Special supplement No. 6 – 1975 Sterilization – Male & Female, Page 47 – 53.

- (b) Person to person contact between the people in the team and the contact population is necessary.
- (c) Careful selection of cases for the particular procedure is mandatory.
- (d) To maintain the protocol of the procedure is very important.
- (e) The equipments and suppliers should be well care for.
- (f) Facilities and capabilities should be available for dealing with the immediate complications.

### 3. Follow up:

#### I. For the patients:

- (a) Instructions for the patients are very important, such as what should you expect and what should you do or not to do.
- (b) The persons should be clear whom he or she should contact in the time of need.

#### For laparoscopic sterilization

- a) What should you expect:
  - i) Vaginal bleeding may continue for 2 or 3 days.
  - ii) There may be some pain for which you should later APC provided.
- b) You should follow the instruction given here under
  - i) Avoid intercourse for two weeks.
  - ii) Report to the nearest health post after your next period.

- iii) In case of any complaint report immediately.

#### N.B. Since:

Conf. female sterilization — The Nepal experience a manual prepared by Dr. Karni Giri & Dr. Saraj Pacharni — 1976.

#### II. For the organization:

- (a) The scope and limitation of individual procedure should be assessed.
- (b) Trend and pattern of family planning acceptance should be recorded.
- (c) Cost effective evaluation of the camp should be carried out.
- (d) To develop a research programme in human reproduction and development management and implementation of the camps as an alternative delivery system of the family planning service.

I feel that camp is definitely an effective means of delivering family planning service to the remote and difficult areas of the country where medical facility is limited. One should always keep in mind that family planning service can not be separated from the maternal and child health care of the area.

I would like to extend thanks to MCH & F.P. Project for making the data's and material available for this paper.

# ORGANIZATION OF CLINICS/TRAINING/ EFFECTIVE REFERRAL SYSTEMS ON OUTREACH

Mr. Benjamin de Leon

## INTRODUCTION

This paper discusses the "National Population and Family Planning Outreach Project" or the "Outreach Project" as it relates to the clinic services component of the Philippine Population Programme. It also presents the training and referral systems which support the Outreach Project role of complementing the clinic-based delivery system.

While the paper traces past events and discusses present systems, it hints at the necessity of adopting future systems and linkages which would strengthen and reinforce the co-operation between the Commission on Population and the partner agencies.

## CLINIC SERVICES PERSPECTIVE

### The Fiscal Year 1970-1973<sup>1</sup>

The President directed the Commission on Population to implement its policies and recommendations, through Executive Order 233 on May 15, 1970. Acting on this mandate, the Commission took over the functions and duties of the Project Office for Maternal and Child Health, Department of Health, as overall central coordinating and planning body of the national population programme on July 1, 1970.

660 family planning clinics from eight service agencies were involved in the programme as of 1970. By 1973, the number of participation agencies increased to 27 with a total of 2,042 government and private clinics in actual operation.

### The Four Year Period 1974-1977

Between 1974-1977, 1,545 additional clinics were estab-

lished: 938 were from the agro-industrial sectors, 135 from government hospitals while the rest were based in rural health units and other private clinics. As of December 1977, 2,484 clinics had become operational. Today, family planning clinics come up to 3,600. The Commission's twin policy of multi-agency participation and integration guided this impressive expansion of clinic services outlets. Both government and private agencies and organization provided this broad base of support which paved the way for the programme to gain some headway.

### The KAP and Method Mix Gaps

Public awareness increased markedly from 36% in late 1968 to almost 80% in 1971. Family Planning practice, however, was as low as 28% in the urban sectors and 13% in the rural areas.

The study made on acceptors serviced by clinics established before 1974 showed that the ratio of contraceptive use declined as the distance from the residence to the clinic increased. There was also a marked shift from the use of more effective method to the less effective ones.

How to bring FP services closer to the people and how to enhance the regular services offered by the clinics were the crucial problems the Philippine Population Programme had to resolve.

## HISTORY AND RATIONAL OF OUTREACH PROJECT

The Outreach Project, launched by the Commission on Population in July 1976 was the response to the need of the Philippine Population Programme to provide family planning information and services to the barangays<sup>2</sup> in the rural areas.

<sup>1</sup>An overview of the Service Delivery Programme as of December 1977, Clinic Services Division, Commission on Population.

<sup>2</sup>Smallest political unit in the Philippines which is equivalent of a village or barrio. There are 30,670 barangays in the Philippines. About 70% of the Filipinos stay in these barangays.

The Outreach Project involved the creation of nationwide organizational structures partly managed by the local governments.<sup>3</sup>

This meant the recruitment, training and deployment of a corps of full-time workers in the provincial, city, district and municipal levels, as well as the establishments of barangay supply points.

Outreach personnel have been recruited on the basis of the following: *Residence* (they must come from and must be residing in the places where they are assigned); *education* (Outreach supervisors must be college graduates while FTOWs must have reached at least first year of college); *commitment* to population work and *good standing* in the community.

The Outreach structure is headed by the Provincial/City Population Officers (PPOs/CPOs) who work under the direct supervision of the provincial governors or city mayors. Directly under the PPOs/CPOs are the District Population Officers (DPOs) who, in turn, supervise four to five FTOWs, or a district with an estimated 10,000 Married Couples of Reproductive Age (MCRA) on the average. At the municipal level, each Full-Time Outreach Worker (FTOW) is responsible for 2,000 MCRA.

The FTOWs are basically information workers, service providers and community organizers. As service providers, their work is facilitated by the Barangay Supply Points they establish in every barrio. As community organizers, they coordinate with a team of development workers composed of partner agency workers in the municipality. The members of the team consult each other on the solution of development problems in their assigned communities.

As of March 1979, 3,254 Outreach personnel have been deployed nationwide. Of these, 132 are supervisors (PPO/CPO/Asst. PPO), 5 are Population Programme Managers (PPM), 425 are DPOs, 2,596 are FTOWs and 96 are Population Field Officers (PFO).<sup>4</sup>

30,670 Barangay Supply Points have also been established to date by the Full-Time Outreach Workers.

Barangay Supply Points Officers (BSPOs), recruited and trained by Full-Time Outreach Workers (FTOWs) man the Barangay Supply Points. The BSPOs are volunteers from the residents in the community primarily for their leadership qualities, credibility and willingness to help promote family planning.

The BSP functions as:

- (1) information center;
- (2) motivational/referral center; and
- (3) resupply center.

Furthermore, BSPOs are expected to lead or at least participate in community development undertakings.

## SERVICE DELIVERY SYSTEM

### The Service Network

As may be gleaned from the above discussion, family planning services may be availed of from an expanded network of both clinic-based and community-based workers.

The clinic-based family planning workers may be broadly classified further into the following type of clinics to which they are attached:

1. **Barangay Health Stations** — To expand the outreach of population-based Rural Health Units, the Ministry of Health implemented its Restructured Health Care Delivery System with the establishment of one Barangay Health Station (BHS) for every 5,000 population. A BHS is manned by a midwife trained in total health care of which family planning is an integral component.
2. **Rural Health Units and Family Planning Centers** — Town-based Rural Health Units of the Ministry of Health and/or Family Planning Centers or Clinics of private agencies are usually manned by a physician, a nurse and/or midwife who have undergone at least Basic Family Planning training.
3. **Sterilization Centers** — Voluntary surgical sterilization was included as a programme method in 1975. Centers or clinics with adequate facilities were established as sterilization centers and physicians were trained in either or both vasectomy and tubal ligation procedures.
4. **Hospital-based Family Planning Center** — Hospitals have been included as family planning service outlets mainly for sterilization services. Hospital physicians have undergone family planning training particularly on sterilization methods for both male and female acceptors.
5. **Mobile clinics** — To service remote and/or doctorless areas, itinerant sterilization teams have been organized. Each team is usually manned by a physician, a nurse and midwife.
6. **Full-Time Outreach Workers and Barangay Supply Point Officers** — These Outreach workers are based in their respective rural villages/barangays and towns. They closely work with clinics and serve as volunteers.

### The Delivery System

With the various existing family planning services now available a comprehensive and cohesive service delivery system is gradually being evolved. The Commission on Population, together with partner agencies, is moving towards the institutionalization of such a system with the adoption of a Coordinating Guidelines for Family Planning Service Delivery Promotion and Service Delivery.

<sup>3</sup> Local Governments are the provincial and city administrators which are bound by project contracts with the Commission on Population to implement Outreach and share in its funding. It is the hope of the Philippine Population Programme Planners that local governments would eventually manage and fund population programme on their own.

<sup>4</sup> Both PPMs and PFOs are deployed in Metro Manila covering four (4) municipalities and two private organizations. See Appendix A for actual accomplishments of Project Outreach compared to targets.

The Guidelines identify the roles and functions of clinic personnel and fieldworkers for the establishment of a Population and Family Planning Committee in each municipality whose members would decide and agree "on the territorial and functional delineation and complementation of partner agencies taking into consideration the resources, strengths and constraints of said agencies".

Thus, the Barangay Supply Point Officer who is a com-

munity-based worker assumes a limited role of supplying condoms and resupplying pills, while a family planning hospital with a trained physician and facilities can offer more services including surgical methods of contraception.

Thus, on the basis of qualifications and training of population workers and on the availability of facilities, one possible system of functional delineation would be the following:

Service Provider	Service Delivery Function	Specialization
1. Barangay Supply Point	Supply of Condoms/ Resupply of Pills in remote communities	Supply of Condoms/ Resupply of Pills/ Follow-up of clients in barangay
2. Full Time Outreach Workers	Supply of Condoms Resupply of Pills Dispense Pills in remote areas	Resupply of Pills in barangay IEC Follow-up
3. Barangay Health Station Midwife	Supply of Condoms Resupply of Pills Dispense Pills IUD Insertion	Resupply of Pills Dispense Pills IUD Insertion
4. RHU and Family Planning Clinic	Supply of Condoms Resupply of Pills Dispense Pills IUD Insertion Vasectomy Treatment of Minor complications Medical check-up and evaluation of clients	IUD Insertion Vasectomy Treatment of Minor complications Medical follow-up/ evaluation
5. Sterilization Centers and Mobile Itinerant Sterilization Team	Supply of Condoms Resupply of Pills Supply of Pills IUD Insertion Vasectomy Treatment of Minor complications Medical evaluation/ check-up	Treatment of Minor complications Clinical contraceptive services, i.e. sterilization, IUD insertion Medical check-up/ evaluation
6. Hospitals	Supply of Condoms Resupply of Pills Supply of Pills IUD Insertion Vasectomy Tubal ligation Treatment of Minor and major complications	Clinical contraceptive service i.e. sterilization, IUD Insertion Treatment of minor / major complications Medical follow-up/ evaluation

Such a system of functional delineation has the following advantages:

1. More service providers can attend to clients wanting relatively simple methods of contraception particularly in remote areas.
2. Service providers can utilize their qualifications and training to the maximum.
3. Clinics, centers and hospitals concentrating on the dispensing of clinical contraceptive methods can have more time to provide services other than family planning to clients.

At present, sterilization centers and hospitals already concentrate on their area of specialization. However, the Barangay Supply Point Officers, Full-Time Outreach Workers, Midwives of Barangay Health Stations and personnel of RHU/FP Clinics will have to be re-oriented along the areas of specialization for them. A prerequisite to such training is the acceptance and adoption of the described functional delineation system both by partner agencies at the national and local levels.

### Training System

Training for service providers is a necessary support to the service delivery system. Training for Outreach personnel is an ongoing and continuing process. The Full-Time Outreach Workers have undergone basic pre-service training focused on community organization, FP Technology and human relations and communication. They have also recently undergone a Refresher Course on Family Planning Technology. After this training, the workers may be licensed to dispense pills.

The Barangay Supply Point Officers have been trained informally and on a person to person basis by the Full-Time Outreach Workers. They are also trained formally for an average of 3 days. The training includes family planning technology, information and motivational skills and recording and monitoring systems.

Nurses and midwives are trained on comprehensive family planning technology which includes initial pill dispensing and IUD insertion. Physicians, on the other hand, are given special training as a backup to the trained nurses and midwives and in sterilization procedures.

### Referral System

The community-based population field workers, the BSPOs and the FTOWs have replaced the former clinic-based motivators in the programme. One of their basic function is to motivate and refer clients to service centers for contraceptive service, medical follow-up/evaluation or for treatment of minor/major complications.

The Coordination Guidelines for Family Planning Promotion and Service Delivery have defined the point of linkages and system of referrals among partner agencies to be implemented.

On the other hand, the clinics refer clients who need medical follow-up, or resupply of pills and condoms to the FTOW/fieldworkers.

The FTOW also coordinates with the clinic by referring to it acceptors demanding FP services which cannot be provided by the FTOW or BSP.

### CONCLUSION

An earlier assessment of the population programme stressed the need to augment the clinic-based delivery system to reach the couples in remote rural areas. As a response, the Outreach Project was launched utilizing community-based resources.

With the establishment of the Outreach Project, the need to delineate roles and functions among the service units and providers has been felt. A comprehensive, cohesive service delivery system gradually evolved and is now in the process of being institutionalized with the adoption of the Coordination Guidelines for Family Planning and Service Delivery by the Commission on Population and the participating agencies.

Training are being conducted and a referral system is being developed as support to the delivery system.

It may be concluded that the Outreach Project has become a viable and meaningful course of bringing population and family planning information and services within easy reach of married couples even in the remotest area. The Outreach project has proven to have an impact on fertility trends in the BSP-covered areas even while it still necessarily focuses much of its activity on the establishment of linkages and systems with partner agencies.

## APPENDIX "A"

**PERFORMANCE REPORT  
FOR POPULATION PLANNING II PROJECT  
OPERATIONAL YEAR III (January - March 1979)**

**I. SUB-PROJECT I - NATIONAL POPULATION AND FAMILY PLANNING OUTREACH PROJECT****A. OUTREACH PERSONNEL DEPLOYED**

	Projected	Actual	%
Supervisors (PPO/CPO/APPO)	133	132	99.25%
Population Programme Managers (PPM)	7	5	71.43%
DPOs	443	425	95.94%
FTOWs	2773	2586	93.62%
Population Field Officers* (PFO)	112	96	85.71%

**B. FIELD SUPPORT TEAMS**

For Operational Year III, thirteen (13) field support teams were deployed by the Regional Offices to assist in the implementation and monitoring of the Programme.

**C. FTOW REPLACEMENT TRAINED**

For the first quarter, a total of 66 FTOWs or 89.19% was recruited and trained as replacements. The target for the quarter was 74.

**D. BARANGAY SUPPLY POINTS (BSPs)**

The total number of projected BSPs to be established for 1979 is 43,161. As of March, 30,670 BSPs had been established for 71.06% accomplishment.

**E. LOCAL GOVERNMENT COUNTERPART**

Based on the 132 Project Contracts processed, the estimated local government counterpart for 1979 is P13,656,367.68. Out of this, P10,319,132.49 is in cash and P3,337,235.19 is in kind.

**F. PREVALENCE RATE\*\***

Out of a total estimated Married Couple of Reproductive Age (MCRA) of 4,759,638, 2,157,887 were covered by the BSPs established representing 45.34% coverage.

Out of this surveyed MCRA, the total number of current users is 815,061 for an estimated prevalence rate of 37.77%.

**G. METHOD MIX DISTRIBUTION**

The method mix distribution of the 815,061 current users is as follows:

METHOD	NO. OF CURRENT USERS	%
Condom	244,136	29.25%
Rhythm	177,014	21.72%
Pill	160,911	19.74%
Female Sterilization	85,961	10.55%
IUD	39,209	4.81%
Male Sterilization	13,171	1.62%
Others	94,660	11.61%

NOT FOR QUOTATION

**COORDINATION GUIDELINES  
FOR FAMILY PLANNING PROMOTION  
AND SERVICE DELIVERY**

**I. PLANNING****A. On Target Setting**

At all planning levels, partner agencies are involved in drawing up their collective targets in terms of inputs and outputs, on the basis of their individual capabilities.

**B. On Management Planning**

1. An integrated information system shall be developed by the Commission on Population (POPCOM) in consultation with partner agencies and utilized by POPCOM and partner agencies for management planning and control at all levels.

2. The planning process of POPCOM and the partner agencies shall be synchronized with the planning process of the National Economic and Development Authority (NEDA) and the Budget Commission.

**II. IMPLEMENTATION****A. Organization of Coordination Bodies**

1. Population/Family Planning Committees at the national, regional, provincial and city levels shall be strengthened. These committees shall review and provide support to activities mutually agreed on.

2. If there is a Municipal Development Council (MDC) operating in a locality, it shall initiate the organization of a Population/Family Planning Committee.

3. If no MDC is operating, an *Ad Hoc Committee* shall be initiated through the Mayor or the municipal coordinator designated by the Mayor. The District Population Officer (DPO) may assist the Mayor in initiating the creation of such a committee.

4. Where there are existing Population/Family Planning Committee such should be utilized and strengthened.

5. The Full-Time Outreach Workers (FTOWs) may serve as Executive Secretary to the Population/Family Planning Committee.

\* Both PPMs and PFOs are deployed in Metro Manila covering four municipalities and two private organizations (Tulungan Project and Philippine Confederation of Drivers Association.)

\*\*Three (3) structures did not report for the month. Two (2) Regional Reports represent accomplishment for February.

## B. On the Functions of Coordinating Bodies

1. The Population/Family Planning Committee shall agree on the territorial and functional delineation and complementation of partner agencies, recognizing the constraints of such agencies.
2. The Population/Family Planning Committee shall be encouraged to meet regularly for the purposes of planning, exchanging feedback and solving problems.
3. The Population/Family Planning Committee shall undertake an inventory of resources in order to identify outlets for maintenance.

## C. On Client Information/Education/Communication (IEC)

1. All fieldworkers engaged in full-time family planning activities shall have primary responsibility for IEC. Other fieldworkers, however, shall provide support to the IEC programme.
3. All IEC workers shall motivate clients and inform them of the comparative use effectiveness of each method.
4. POPCOM, in consultation with partner agencies, shall develop guidelines to ensure uniformity of IEC message and content.

## D. On Clients Referral

1. Clients with special counselling and other needs shall be referred to the appropriate agencies, e.g. clients with psycho-social difficulties shall be referred to the Ministry of Social Services and Development (MSSD) social workers.
2. Family Planning clinics and hospitals shall service all clients referred by all fieldworkers for IUD insertion and sterilization, clients with contra-indications/side effects arising from any available methods, clients needing medical check-up and clients preferring clinic/hospital services, and shall provide the necessary information on the services preferred.
3. Clients referred to clinics and other agencies shall take along the necessary referral slip.
4. POPCOM, in consultation with partner agencies shall develop a uniform client referral/information system.
5. All FP workers shall be encouraged to refer potential clients for all acceptable methods of contraception to static centers, i.e. existing clinics that are permanently located.
6. In areas where local capability for sterilization services has not been developed, referrals shall be made to itinerant sterilization teams when desired.
7. Itinerant teams shall inform the Population/Family Planning Committees of the activities and provide a list of their clients in the municipalities where they perform.

## E. On Contraceptive Services

1. Family Planning clinics and hospitals shall primarily responsible for providing Family Planning Clinical services to the eligible population.
2. In the case of initial pill dispensation, when desired, fieldworkers shall refer this to the clinics. In extremely remote areas, however, FTOWs shall be allowed to do initial dispensation. Clients so serviced shall be encouraged to visit the clinic for a more thorough physical examination at the earliest opportunity.
3. Other agencies shall refer potential clients to the nearest service provider.
4. To the extent that clinic personnel's time and resource allow, they shall continue to conduct field visits, in coordination with fieldworkers, to ensure medical back-up in remote areas.

## F. On Feedback Mechanism Regarding Dispensation

1. Information regarding action on referrals for contraceptive services shall be fed back to the referring agencies.
2. The FTOW shall provide FP clinics with a list and location of Barangay Service Points (BSPs) as well as with the list of clients served/resupplied/ followed-up for proper updating of clinic records.

## G. On Maintenance

1. Fieldworkers of all partner agencies shall incorporate continuing motivational efforts for maintenance of FP practice as part of their regular activities.
2. BSPs shall regularly resupply clients residing within the BSP's area of coverage, including those referred by the clinics.
3. The FTOW shall have the primary responsibility of supplying all community-based service units with contraceptive forms, and POPCOM-produced IEC materials.

## H. On Follow-up

1. Clinics and BSPs shall separately and periodically compile lists of registered FP clients and dropouts for follow-up and re-motivation. Clinics and BSPs shall determine which clients they cannot follow-up and shall refer them to the FTOW who in turn shall refer these clients to the FP committee, or directly to the other fieldworkers for follow-up if such a procedure has been agreed upon.

## III. CONTROL

### A. On Data Collection

1. All FP service units, particularly clinics and hospitals, shall accomplish the POPCOM-prescribed forms for collection by the FTOWs.
2. The FTOWs shall collect the POPCOM-prescribed

\* A separate guidelines on data collection and contraceptive distribution shall be devised for the Ministry of Labor.

forms from the service units no earlier than the fifth working day of the following month.

**B. Data Utilization for Planning and Control**

1. The Municipal Population/Family Planning Committee shall implement a management information

system which will principally consist of POPCOM-prescribed forms collected by FTOWs from service units.

2. The Municipal Population/Family Planning Committee shall assist in ensuring the validity of data in the areas.

# ORGANIZATION OF CLINICS – TRAINING/ EFFECTIVE REFERRAL SYSTEMS ON OUTREACH

Dechamorn Muangman, M.D. Dr. P.H. (Harvard)

The development of a 'Hydrogen Bomb' makes it appear very likely that atomic warfare might be the greatest threat to the survival of the human species on this planet, Earth. However, war is not the only great danger which confronts our civilization today. For the first time in the history of mankind, the RAPID POPULATION GROWTH has become another major global problem. This problem is comparable to a series of slow-timed hydrogen bombs affecting the health, social, and economic development of every developing nation so seriously that it could lead to eventual extinction of mankind.

Nobody knows exactly when man, or homo sapiens, first appear on this earth. Many anthropologists speculated that man have been here for perhaps two hundred thousand years. They estimated that at the beginning of the Christian Era, the world contained about one quarter of a billion persons. It took 1,600 years before another quarter billion persons were added to the world's population. More careful examination of a recent data reveals that between 1850 and 1950 (A.D.), the world's population has increased five-fold from about 500 million to 2.5 billion persons. This year, we are witnessing the world's population of approximately 4 billion people with the rate of growth of 2% per year and 85% of them are living in developing countries. It will take only 35 years for the world to double its population. Nowadays, several countries have already experienced pollutions, high crime rates, malnutrition, urban decay etc. which are related in varying degrees to the unprecedented rate of population growth. Could you imagine what this world will be like when it contains 8 billion people in 2009 A.D.? Why did the World's population growth rate increase so rapidly in the past 300 year? The answer may be traced to human achievements in the agricultural revolution, the industrial revolution and climaxed by the scientific evolution. The major outcome is a rapid decline in the death rates while fertility rates remain at a relatively high level.

If we take a closer look at the population problem in various regions of the world, the greatest trouble spot is being focused on the Asian continent. Not only does Asian now contain 2.2 billion people, it is also one of the most densely populated areas of the world. The majority of Asian countries have high birth rates with about 40–45% of the population under the age of 15. This large mass of young people constitutes a great FERTILITY POTENTIAL in the next 20 years.

Moreover, an increase in the average life expectancy of these people further promotes an increase in EFFECTIVE FERTILITY. Thus, the problem of rapid population growth in our region is very critical and a real challenging problem. Its association with poverty, famine, epidemics, and political instability are inevitable if not corrected in time.

The best approach to the POPULATION PROBLEM is FAMILY PLANNING. However, the solution is not as easy as it sounds. We will gain a much better understanding and insight into this problem if we look at Figure 1, "The population Explosion" Flow Chart. Here, we start out with eligible (fertile), male and female population. With family-planning motivation and birth control services, some will practice contraception and become NEW FAMILY PLANNING ACCEPTORS. However, large number of them still remain in the NON-F.P. ACCEPTOR group because of ignorance, unavailability of family-planning services, poverty, etc. If we could keep those new family-planning acceptors practicing contraception for a year or more, they will be called REGULAR FAMILY PLANNING USERS. This group will have an impact on the fertility problem if their size gets large enough. It should be pointed out that not all new family-planning acceptors will become regular family-planning users. Actually, we are losing a lot of them along the way due to bad rumours, contraceptive failures, other medical and non-medical reasons. Thus, these F.P. Dropouts combined with the non-F.P. acceptor group will then join the Pregnant Population which leads to the POPULATION EXPLOSION. As the population increases quite rapidly, the eligible population group will also increase and further aggravates the problem. Thus, if we want to decrease the "Pregnant Population" group we will have to expand:

- (1) the number of new F.P. acceptors which could be achieved by having family-planning services available to all of them at reasonable cost and with good motivation campaigns and
- (2) the number of regular F.P. users and to minimize the F.P. Dropout group by having good referral and back-up services. Therefore, the 2 very important keywords for a successful family-planning programme are HIGH NEW FP ACCEPTOR RATE and HIGH CONTINUATION RATE for the large number of eligible population.

We could obtain the two rates previously mentioned if we have **GOOD FAMILY-PLANNING SERVICES, ESSENTIAL ELEMENTS OF GOOD FAMILY-PLANNING SERVICES** are as follows:

### 1. ACCESSIBILITY

- Personal Accessibility* — Family planning services should be available to every person, rich or poor, at the time and place where he or she needs it.
- Comprehensive Family-Planning Services* — People should have access to a complete range of family planning services such as condoms, pills, IUD, sterilization, counselling, and even infertility service.
- Quantitative Adequacy* — There should be adequate number of family-planning service units in every community.

### 2. CONTINUITY OF SERVICES

- Good referral service
- Good follow-up service
- Good re-supply service

### 3. QUALITY OF SERVICE

- Reliable Services* — Family-planning workers should provide the public with the most effective, safe, and up-to-date contraceptives. Moreover, they should not exploit the population especially in terms of financial gain.
- Professional Competence* — Family Planning workers should be competent in their work according to the levels of their tasks and responsibility. This means that on-the-job training, in-service training, continuing education etc. are needed.
- Qualitative Adequacy* — There should be adequate number of the above qualified personnels for the whole community.

### 4. EFFICIENCY

- Efficient Administration* — by organizing, planning and using the scarce resources (man, money, materials) in the most effective and economical way.
- Efficient performance of family-planning workers*

With the above criteria in our mind, let's look at the family-planning services today. If we look at the family-planning services from the system analyst's point of view, we will see the whole picture quite clearly. There are 3 developmental stages of family planning services (i.e., Stage I (physicians play a dominant role), Stage II (paramedical personnels play a dominant role), and Stage III (community people play a dominant role). In Figure 2, in Stage I the physicians are sole providers of family planning services. This approach might give a high quality service but runs into the problem of inadequate services and the scarcity of personnels. In most developing countries, the ratio of a physician to the population is as low as 1/10 to 1/100 of that found in well-developed countries (Table 1). For example, in Thailand the average physician/population ratio is 1/7,000 which is already quite inadequate but in reality in rural areas where 85% of our people live similar ratio ranges

from 1/50,000 to 1/100,000. I personally feel that anyone who restricts the prescription of certain popular contraceptives such as oral pills to only a small number of physicians and stubbornly deny the service to a large mass of people has committed a very serious crime which should be rewarded only with a firing squad. Fortunately, most of our leaders are not behaving that way. So, several countries including Thailand have moved into Stage II where paramedical personnels such as nurses, midwives etc. are given more authority and responsibility in the family-planning services. A recent paper reviewed experiences in various countries of the use of paramedics to prescribe pills and to insert IUD. The conclusion was reached that it was safe and practical to allow persons other than physicians to do this job, and this action did not lower the quality of the service. In Thailand, a 1969 pilot study of the use of auxiliary midwives to prescribe pills (after 1 week of training) in 4 rural provinces resulted in 400% increase in the number of new pill acceptors within a year. So in mid 1970, the Ministry of Public Health of Thailand ruled that all auxiliary midwives could prescribe pills using the simple check list (Table 2). With utilization of our paramedics, our service units have increased from 350 to 3,000 and the number of pill acceptors also rose to even 400,000 in 1971. Similar scheme of check list for oral pill prescription is also known to be used in Pakistan, Indonesia, Ghana etc. Although the paramedical personnels help to increase the number of providers of pill service but it is still inadequate for the whole community. To illustrate some problems encountered in Stage II using Thailand as an example again, 3 main reasons for pill dropouts obtained from surveys are:

- Unavailability of family-planning service* — people have to travel quite a long distance to get the pills;
- No effective referral service* — side-effects cannot be handled effectively by medical staff at all levels;
- No effective information and motivation service* — there is no mechanism to dispel bad rumours on pills.

I strongly feel that within this year we should all try to start a new family-planning programme using community people to serve their own community. It means that we should move from Stage II into Stage III. In Stage III, family-planning volunteers who are non-medical will provide an extensive family-planning services to the eligible population. The contraceptives that they will choose to use should be effective in preventing pregnancy, low cost, safe, easy to use and to prescribe and require only short training for distributors. Condoms and oral pills seem to fit best without criteria. Suppose they use condoms and pills in their non-clinic distribution of contraceptives, what should be the relationship, roles, and services of both the medical and non-medical groups? Let's look at Figure 3. In this newest approach, there are 2 groups of providers of family-planning services (i.e., the smaller medical group and the larger non-medical group). It is necessary that these two groups should work very closely and do not come into conflict with each other. The non-medical group will need the back-up services from the medical group. The medical group in turn will provide other types of family-planning services which the non-medical group cannot do. The back-up services will help to maintain continuation rates of pills and condoms at high level. These back-up services by the clinics are as follows:

- F.P. Resupply Service (if non-medical group receive contraceptive supply from the medical group)
- Referral and Follow-up Services
- Clinical F.P. Services — such as sterilizations

- (4) Counselling Services  
 (5) Teaching and Training Services — such as the development to programmed instruction (text) for lay people  
 (6) Information and F.P. Motivation Services  
 (7) Operation and Biomedical Research Services — the medical group may participate in the study or invite other family-planning research organizations to undertake this task.

If lay people are going to play a major role in prescribing pills and condoms, we are going to see some changes in the roles and services of the medical group. Thus, the new clinic activities and roles of the medical group might be as in Table 3.

After looking at the possible clinic activities, the medical group still has a lot of work to do even if pills and condoms are taken away from them. The addition of the non-medical group into the family-planning scene will fulfil the gap in accessibility, continuity of services. The roles of the physicians in the near

TABLE I

RATIO OF PHYSICIAN PER 100,000 POPULATION IN VARIOUS DEVELOPING AND ALL-DEVELOPED COUNTRIES

Country	MD / 100,000 Population
<b>Developing Countries:</b>	
India	21
Pakistan	16
Brazil	42
Indonesia	3.2
Mexico	50
Nigeria	3.2
Philippines	75
Thailand	14
Turkey	35
Iran	26
U.A.R.	4
Korea	37
Colombia	40
Burma	8.4
South Vietnam	3
<b>Well-developed Countries:</b>	
Soviet Union	210
United States	148
Japan	109
United Kingdom	115

SOURCE: Cona, L., Oakley, D., "Consequences of Population Growth for Health Services in Less Developed Countries — An Initial Appraisal" Chapter X, Vol. II, In Rapid Population Growth, National Academy of Sciences, Johns Hopkins Press, Baltimore, 1971, pp 696.

TABLE II

CHECK LIST FOR MIDWIVES PRESCRIBING ORAL CONTRACEPTIVES IN THAILAND

PROCEDURE	YES	NO
<b>HISTORY:</b> (Ask if the patient has had any history of the following signs and symptoms)		
1. Yellow skin or yellow eyes		
2. Mass in the breast		
3. Discharge from the nipple		
4. Excessive menstrual period		
5. Increased frequency of menstrual periods		
6. Bleeding after sexual intercourse		
7. Swelling or severe pain in the legs		
8. Severe chest pain		
9. Unusual shortness of breath after exertion		
10. Severe headaches		
<b>PHYSICAL EXAMINATION:</b>		
1. Yellow skin and yellow eye colour		
2. Mass in the breast		
3. Nipple discharge		
4. Varicose veins		
5. Blood pressure (Yes = systolic above 160)		
6. Pulse (Yes = above 120/min.)		
<b>LABORATORY</b> (Use clinical):		
1. Sugar in urine		
2. Protein in urine		

Instructions: If all the above are answered in the NEGATIVE, the patient may receive oral contraceptives. If any of the answers is POSITIVE, the patient must be seen by a physician before oral contraceptives may be prescribed.

SOURCE: The National Family Planning Program, of Public Health, Thailand 1970.

future might be to handle surgical sterilizations, abortion, infertility problems and counselling. Paramedics might play a bigger role in IUD insertion, hormonal injection. The training of the medical group for the various tasks mentioned has to be carefully planned according to the local needs and demands and then implemented accordingly. Unbiased evaluation of their performance is also needed.

In conclusion, the non-clinic distribution of contraceptives is a new approach to the problem of rapid population growth. Medical group should be willing to help the non-medical group in order to limit in high continuation rates among family-planning acceptors. Moreover, they should see to it that the commercial people with profit-making motives do not exploit the poor population. If all of us could work together in harmony and in peace, I am sure that the population problem will eventually be solved and the human race will have a better world to live and enjoy for thousands of years.

TABLE III

POSSIBLE NEW CLINIC ACTIVITIES OF "MEDICAL" GROUP AND "NON-MEDICAL" GROUP  
IN THE NON-CLINICAL DISTRIBUTION OF FAMILY PLANNING SERVICES

Sex	F.P. Service	Medical Group		Non-Medical Group	
		M.D.	Paramed.	Community Volunteers	Commercial Outlets
Female	a. Non-Permanent Methods				
	1. Pill	-	-	+++	+++
	2. IUD	++	+++	-	-
	3. Hormonal Injection	++	+++	-	-
	4. Abortion	+++	-	-	-
	b. Permanent Method Female Sterilizations	+++	-	-	-
Male	a. Non-Permanent Method Condom	-	-	+++	+++
	b. Permanent Method Male Sterilizations	+++	-	-	-
Both Sexes	1. Follow-up Services (handle complications)	+++	++	-	-
	2. Counselling Services	+++	++	-	-
	3. Information of Motivation Services	+++	+++	+++	+++
	4. Infertility Service	+++	-	-	-
	- means no F.P. activity				
	+ means low F.P. activity				
	++ means intermediate F.P. activity				
	+++ means high F.P. activity				

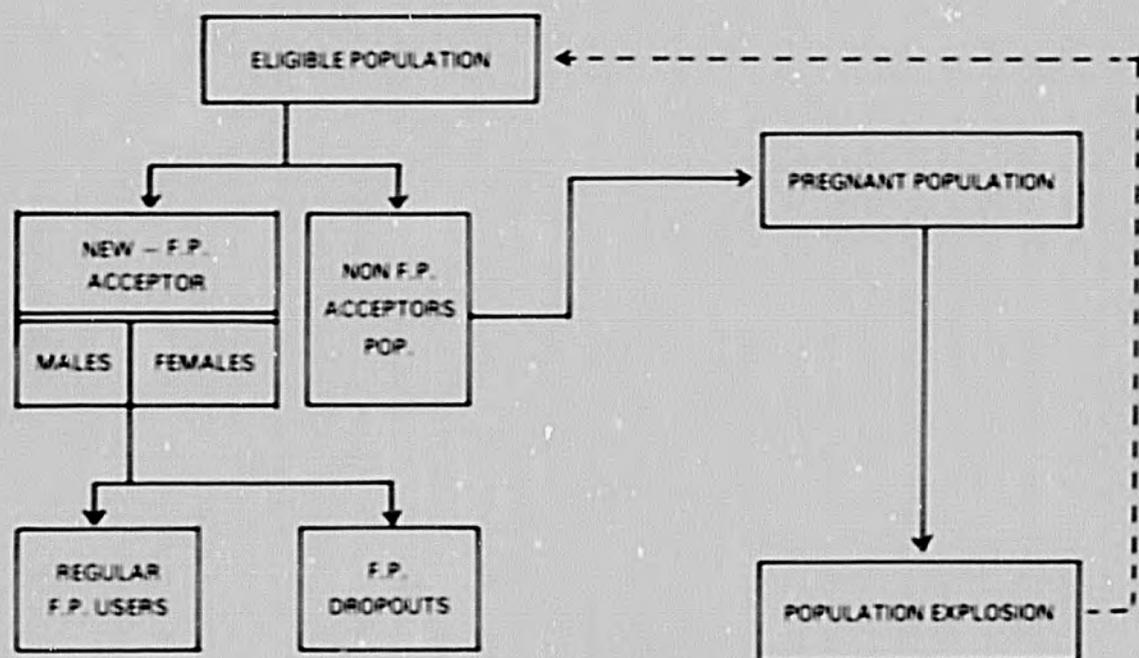


Figure 1 - "Population Explosion" Flow Chart.

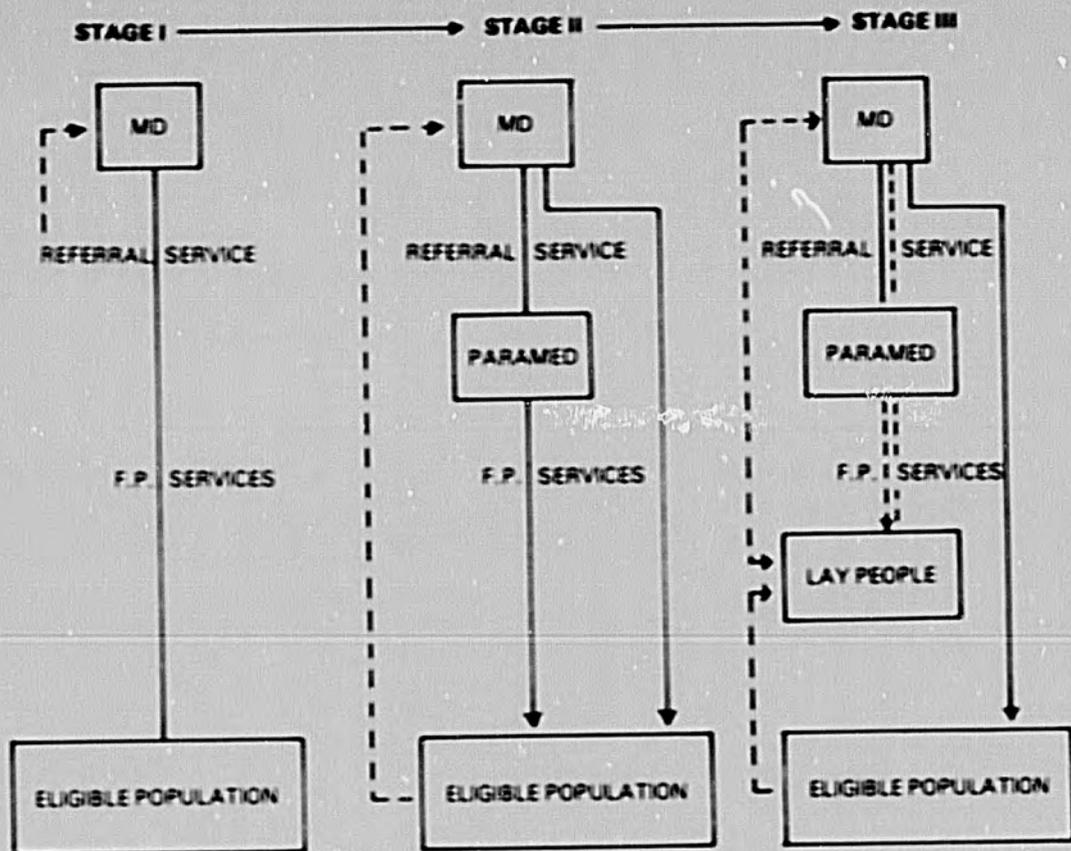


Figure 2 — Development Stages in Family Planning Service.

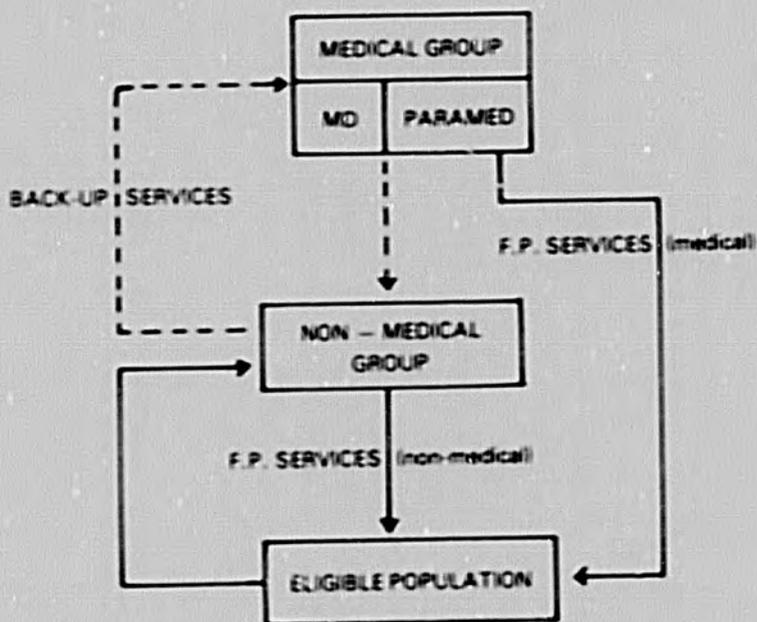


Figure 3 — Relationship between "Medical Group", "Non-Medical Group", and "Eligible Population" in Family Planning Services.

# ORGANIZATION OF CLINICS — TRAINING/EFFECTIVE REFERRAL SYSTEM — CLINIC MANAGEMENT

*Dr. Johan A. Malek Thambu  
Dr. Hamid Arshat  
Datn Dr. Nor Lily Aziz*

The plan developed by the National Family Planning Board for the implementation of the National Service Programme emphasised on the use of effective contraceptive methods and the clinic approach, which therefore determined the utilisation of medical or para medical personnel in the provision of service.

The national service programme is implemented in five main phases, beginning with Phase I in the metropolitan area and extending gradually to the rural areas in Phase IV and in Phase V, concentrating mainly on consolidating and strengthening of the urban Family Planning services and expansion into the rural areas.

In the service delivery of the National Family Planning Programme, the main implementing agencies are the National Family Planning Board, the Ministry of Health, the Federation of Family Planning Associations and the Private Sector Estates/Private Doctors. The National Family Planning Board which was set up in 1966 under the Prime Minister's Department is the coordinator of the Family Planning Programme.

## 1. THE NATIONAL FAMILY PLANNING PROGRAMME IMPLEMENTATION SCHEDULE

### Year 1966—1976 Contraceptive Service Delivery Approach

Phase I Covering large municipalities with Maternity

Hospitals and certain rural health centres as pilot study (year initiated 1967/1968)

Phase II Covering smaller towns and adjoining rural health centres (year initiated 1969)

Phase III Covering the remaining rural health centers via integration of Family Planning service delivery into the delivery system of the Ministry of Health (year initiated 1970/1972)

Phase IV Aimed at covering the rural areas whereby the services are provided by a combination of mobile units and Kampong Bidan (year initiated 1973)

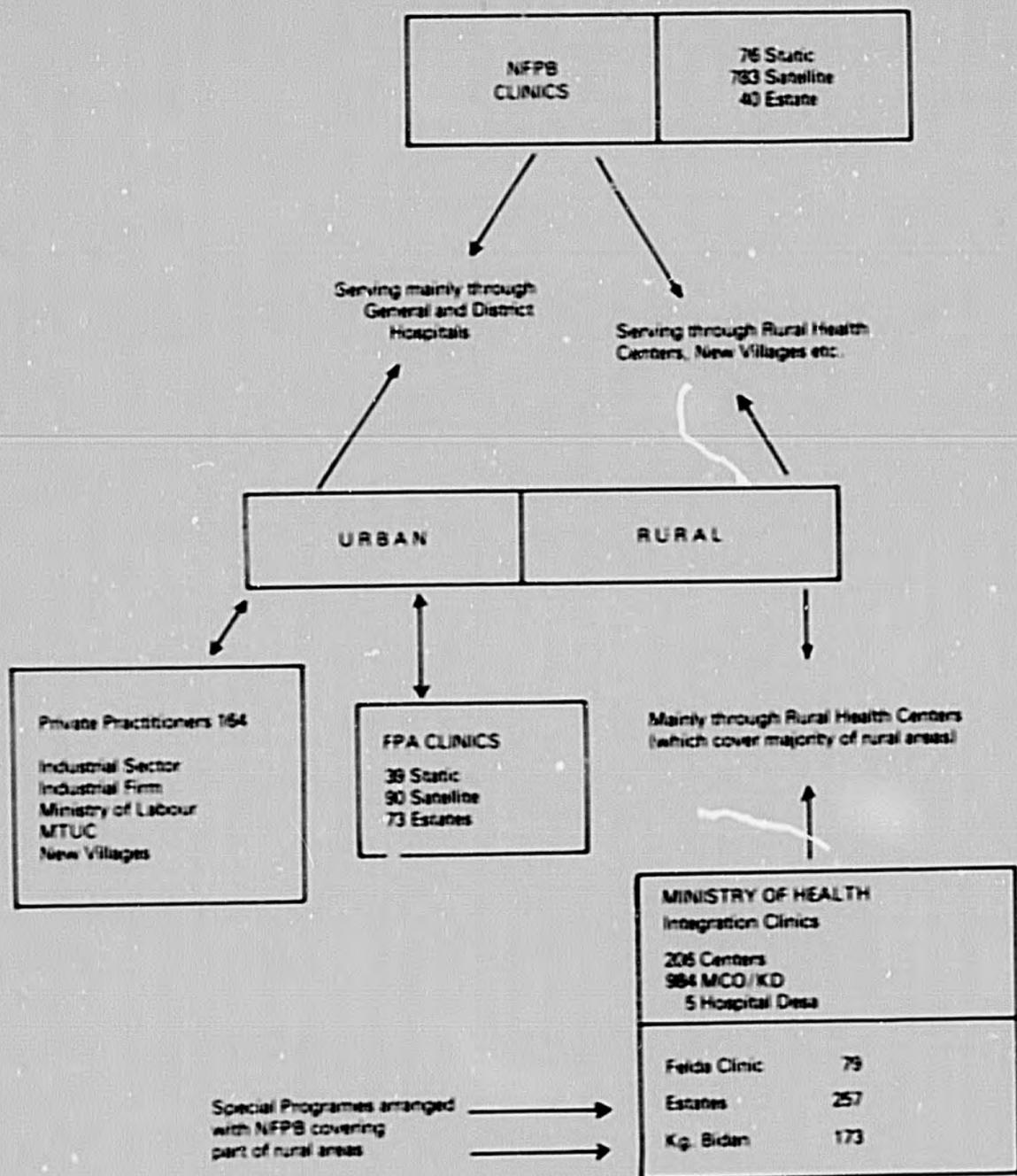
### Year 1976—1986 Contraceptive Service Delivery/Population Approach

Phase V Consolidation and strengthening of the urban Family Planning coverage and expansion into the other rural areas.

Utilizing multi-disciplinary informal approach.

Implementing 'Beyond Family Planning Policies'.

## 2. THE NATIONAL FAMILY PLANNING SERVICE PROGRAMME COVERAGE



### 3. Clinic Structure/Staffing Standard Staffing Pattern by Clinic Type in the National Programme

#### 3.1. National Family Planning Board Service Points

**Type A:** Maternal & Child Health/ Family Planning combined (State Administrative Centers)

**Type B:** State Clinic which are sited in the State Capitals

Staffing: 1 State Medical Officer  
1 Senior Supervisor  
1 Supervisor  
1 Nursing Sister  
2-3 Staff Nurses  
3-5 Assistant Nurses  
3-4 Family Planning Assistants  
1 Receptionist  
1 Clerical Assistant  
1 Driver

**Type C:** Regional Clinics - In larger States these regional clinics were set up to supplement state clinics

Staffing: 1 Nursing Sister  
1-2 Staff Nurses  
2 Trained Assistant Nurses  
3 Family Planning Assistants  
1 Clinic Assistant  
1 Clerk/Receptionist

**Type D:** District Clinics

Staffing: 1 Staff Nurse  
1 Trained Assistant Nurse  
2 Family Planning Assistants

**Type E:** Rural Clinic

Staffing: 1 Trained Assistant Nurse  
2 Family Planning Assistants

#### 3.2. Ministry of Health Service Points

**Type A:** There are three types:

1. Maternal & Child Health Centers (MCHC)
2. Rural Hospital (Hospital Desa)
3. Main Health Centers (MHC)

Staffing: 1 Medical & Health Officer  
1-2 Sisters  
1-3 Staff Nurses  
1-4 Staff Midwives

or

1 Medical Officer of Health  
1 Public Health Sister  
1-2 Public Health Nurses  
1-4 Trained Assistant Nurses

**Type B:** There are two types:

1. Health Sub-Center
2. Community Clinic (Klinik Desa)

Staffing: 1 Public Health Nurse or Staff Nurse  
2-4 Trained Assistant Nurses  
1-2 Staff Midwife

**Type C:** Midwife Clinic Cum Quarters (MCQ)  
Staffing: 1 Staff Midwife or Community Nurse.

#### 3.3. Federation of Family Planning Association (FFPA)

**Type A:** State FFPA Static Clinic

Staffing: 1 State Organizer  
1 Staff Nurse  
2 Midwives  
2 Field Workers  
1 Clerk  
1-2 Driver  
1 Amah

**Type B:** FFPA Satellite Clinic

Staffing: 1 Midwife  
1 Driver  
1 Clerk or Field Officer

**Type C:** Estate Clinic

Staffing: 1 Midwife  
1 Driver  
1 Amah

### 4. Specialised Clinic Services of the National Family Planning Board

Specialised clinical services would be provided for in the national center in Kuala Lumpur and four regional centers Johor Bahru, Ipoh, Penang and Kota Bharu.

#### 4.1. National Specialist and Medical Research Center

The national and the regional Specialist Centers would be managed by specially trained physicians called 'Family Planning Specialists'. This is a new medical speciality which the NFPB hope to create so that a new breed of doctors committed to the course of Family Planning could perform their duties to their academic and professional satisfactions. The curriculum and the training programme for this speciality are being designed to suit the type of activities available in the Specialist Centers and the clinical training will form a major component in this training programme.

The activities of the clinic would include consultation, counselling, minor surgical procedures, clinical research, teaching and medical record keeping.

##### 4.1.1. All aspects of contraceptive delivery service

This would be a referral center for all problems related to contraception usage (pills, IUCD and injectables).

Surgical contraception, male and female will be carried out in this center.

##### 4.1.2. Infertility and Endocrine

Consultation, counselling and minor procedures like semen analysis, semen studies, D & C, MR, Post coital test, tubal insufflation, hydrotubation, artificial insemination, cervical biopsy/cautery and testicular biopsy.

#### 4.1.3. Cancer Detection

Patients with abnormal Pap Smears or other symptoms related to genital cancer, screening will be done on women at risk.

#### 4.1.4. Family Counseling

Patients with marriage and sexual problems and those with history of congenital birth would be referred here. Activities include consultation and counselling sextherapy, ultrasound, amniocentesis and foetoscopy.

#### 4.1.5. Ultrasound and low dose mammography

There will be ultrasound service for cases suspected with foetal abnormality in early pregnancy. Low dose mammography will be available for breast cancer screening.

#### 4.1.6. Patient Information System

A computer compatible medical record system will be devised for the patient. A computer terminal will be located in the clinic and linked to the Research and Evaluation Division.

#### 4.1.7. Surgical Facilities

The center will have two operation theatres and a day ward of 16 beds.

#### 4.1.8. Specialised Laboratory Services

The laboratory facilities would have both the service and research component

1. Cytology laboratory
2. Endocrine Laboratory
3. Metabolic laboratory
4. Haematology laboratory
5. Physiology and pharmacology
6. Cytogenetic laboratory.

### 4.2. Regional Specialist Centers National Family Planning Board

4.2.1. **The Specialised Service** provided would be the same as the national center but on a smaller scale.

4.2.2. **Staffing:** The center will have two medical officers and part-time local clinical specialists.

4.2.3. **Surgical Facilities:** The center will have one operation theatre and a day ward of 5 beds.

4.2.4. **Laboratory Service:** Simple tests like urine analysis, routine blood count, pregnancy testing, cytological screening and semen analysis.

4.2.5. **The Center will coordinate** the collection of specimen for special tests, arrange for

transportation and retrieve results from national center.

### 5. Training of Family Planning Personnel

It has been recognised that training of family planning personnel is an essential component in the effective implementation of the family planning programme. As the National Body, the NFPB was empowered to implement, coordinate and administer the training component of the National Programme. Various types of training courses have been conducted not only for the Board's staff but also for all personnel from the Ministry of Health, FFPAM, State FPA's, other governmental and non-governmental agencies. Training sessions include orientation, initial and periodic refresher and in service courses. The curriculum for all family planning training courses conducted in the country are standardized by the Board.

The training of Health Personnel is the joint responsibility of the Board and the Ministry of Health, while FFPAM continued to play a supportive role. The training of supervisory health personnel are provided centrally by the Board, while the training of the 2700 auxiliary health staff (i.e. Assistant Nurses and Midwives) are provided at the five regional training centers. Ten (10) trainers, four (4) from the Board and six (6) from the Ministry of Health were recruited and trained to manage the training courses at the regional centers. The FFPAM and the Ministry of Health also provide family planning training to their own staff and their training activities are coordinated by the Board to ensure the standardisation of the course curriculum. The achievement made in training so far is quite considerable considering the fact that only 199 staff were trained in family planning in 1967 and this was increased to a peak of 2480 in 1975 and in 1978 a total of 1164 staff had been trained. This means a cumulative total of 14,843 staff had been provided with family planning training since 1967, the details are NFPB 8656 staff, Ministry of Health 3639 staff and FFPAM 2553 staff in a total of 463 courses.

### 6. Clinic Referral and Clinic Management

In the National Service Programme, a cafeteria system is followed but in spite of this the oral contraceptive is the method favoured by most of the new acceptors as shown below:

Type of Contraceptive	% of acceptors
Pill (oral contraceptives)	87.6%
Surgical contraception (female sterilisation & vasectomy)	5.8%
Condom	4.5%
IUCD	1.3%
Others (foam, rhythm, jelly, diaphragm, injectables)	1.0%

In the service delivery of the National Programme, the distribution of new acceptors among the main implementing agencies are:

Agency	% of New Acceptors
NFPB	50%
Ministry of Health	30%
FFPAM	15%
Others	5%

## 7. Clinic Management

The following procedure is carried out in the clinic management of new acceptors.

- 7.1. The family planning nurse interviews the potential new acceptors. The nurse explains the currently available methods. Counselling plays an important part and with proper counselling, acceptor and continuation. Rates are high and dropouts to the programme can be minimised.
- 7.2. The cafeteria system is followed and the acceptor is followed to choose the method.
- 7.3. If the acceptor selects the pill, then the Nurse goes through the Nurse check list to ensure safety and ascertain that there are no contra-indications.

(Nurse check list see Appendix II).

If in doubt, she will consult Nurse in charge of the clinic. If the Nurse in charge is herself in doubt the pill is not prescribed, and she consults the doctor for advice.

- 7.4. If there are no contra-indications the family planning Nurse will give the acceptor 1 month supply. If there are contra-indications, another method is recommended.
- 7.5. The acceptors who is followed up in the clinic is advised on the need for a medical check up by a doctor and the acceptor is examined within 6 months. If she refuses medical examination, a record is made in her card about the refusal.

(Doctor check list see Appendix III).

- 7.6. Guidelines for doctors on the contra-indications absolute and relative are provided. (See Appendix III).
- 7.7. Guidelines for Nurses and Doctors on the use of oral contraceptives. (See Appendix IV).

## 8. Injectables

Injectable contraceptives are used in the National Family Planning Programme, the number of new acceptors on this method is small. For 1978, a total of 19,498 vials of DMPA were used in the National Programme.

Guidelines have been prepared for use by Nursing personnel and doctors. (See Appendix V).

## 9. Surgical Contraception

Acceptors requesting surgical contraception are referred to the doctor. At present vasectomy is carried in the Family Planning Clinic but female sterilisation are referred to the

Government Hospital/University Hospitals. Once the specialist centers are ready, all surgical procedures will be carried in those centers.

## 10. IUCD

In the Malaysian Family Planning Programme, IUCD were inserted by the doctors. The NFPB conducted a pilot project where IUCD were inserted by the Family Planning Nurse and the results showed that IUCD insertion by para medics was safe and patient acceptability was high. The IUCD's used are Lippes Loop and copper bearing devices.

## 11. Barrier Method

All the barrier methods are easily available and the family planning nurse after counselling prescribes them. Condom is gaining popularity.

In the Malaysian National Family Planning Programme with a clinic based delivery system of contraceptives, the family planning para medic or nurse in a remote rural clinic is able to offer the pill to an acceptor under the medical umbrella protection of the clinic based system. Such a system is a clinic based CBFP service (clinic based community based family planning service).

With our good infrastructure of clinics and referral system, problems related to the contraceptive delivery service can easily be solved. In our efforts to give a full and comprehensive service to the family planning acceptor, the concept of specialist center has been introduced to our National Programme.

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This form is to be completed by a doctor and attached to the client's card:

Referred by: \_\_\_\_\_ on \_\_\_\_\_

Reason for Referral: Routine examination/ \_\_\_\_\_

Date pill commenced \_\_\_\_\_ Type \_\_\_\_\_

	No	Yes	
1. Any hospitalisation?	<input type="checkbox"/>	<input type="checkbox"/>	_____
Any operation?			_____
2. Date of last delivery:	<input type="checkbox"/>	<input type="checkbox"/>	_____
(a) Pregnancy complications			_____
(b) Delivery complications			_____
3. Are you breast-feeding your child?	<input type="checkbox"/>	<input type="checkbox"/>	_____

	No	Yes	
4. Serious illness – enquire:	<input type="checkbox"/>	<input type="checkbox"/>	_____
(a) Lumps in breasts			_____
(b) Varicose veins			_____
(c) Jaundice			_____
(d) Hypertension			_____
(e) Diabetes			_____
(f) Asthma			_____
(g) Fits (e.g. Epilepsy)			_____
(h) Headaches (Migraine)			_____
(i) Eczema			_____
(j) Thyroid			_____
(k) Heart disease			_____
(l) Chronic diarrhoea	_____		

	No	Yes	
5. Are you on long term drug therapy?	<input type="checkbox"/>	<input type="checkbox"/>	_____
(a) Rifampicin for T. B.			_____
(b) Antidepressant and other psychotropic drugs			_____
(c) Anticonvulsants			_____
(d) Antidiabetic			_____
(e) Antihypertensive			_____
(f) Anticoagulant	_____		

6. Record body weight in kilograms
7. Examine urine sugar and albumin
8. General examination
9. Vaginal examination
10. Pap smear
11. High vaginal swab
12. Other relevant examinations


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### APPENDIX III

#### SECTION I - PRACTICAL GUIDELINES ON THE USE OF ORAL CONTRACEPTIVES (AMENDED)

##### 1. Absolute Contra-indications:

- 1.1. Pregnancy
- 1.2. Liver Disease
- 1.3. Thrombo-embolism, pulmonary embolism and deep vein thrombosis
- 1.4. Heart Disease
- 1.5. Carcinoma of Breast
- 1.6. Central nervous system disorders
  - (a) Women with diseases of central nervous system and those who had cerebrovascular accidents should not be given oral contraceptives.
  - (b) Epilepsy
  - (c) Neuro-ophthalmological conditions

##### 2. Debatable or relative contra-indications

- 2.1. Pituitary dysfunctions as manifested by amenorrhoea or oligomenorrhoea. Oral contraceptives may disturb further the hypothalamo-pituitary ovarian axis.
- 2.2. Abnormal vaginal bleeding  
Intermenstrual, post-coital and any other forms of abnormal vaginal bleeding should be investigated prior to prescription of oral contraceptives.
- 2.3. Migraine may be aggravated by oral contraceptives.
- 2.4. Varicose veins
- 2.5. Hypertension
- 2.6. Abnormal carbohydrate metabolism diabetes mellitus
- 2.7. Fibroid
- 2.8. Rheumatic conditions
- 2.9. Asthma
- 2.10. Depression and other psychiatric conditions
- 2.11. Thyroid disease thyrotoxicosis.

##### 3. Counselling

The following should be reviewed and counselled individually, preferably by a doctor before commencing oral contraceptives.

##### 3.1. Alopecia, Chloasma and other skin disorders

These are directly related to the oestrogen component of the pills. If alopecia, chloasma or skin eczema develop during previous pregnancies, they may recur if patient is on oral contraceptives.

##### 3.2. Contact Lenses

Patients should be warned that they may develop discomfort in their eyes which could be attributable to water retention in the cornea.

##### 3.3. Vaginal Candidiasis

As in pregnancy there is an increased tendency among women on the pills to develop vaginal myciasis. The anti-oestrogenic effect of the progestogen and it may become intractable to treatment.

##### 3.4. Renal disease

Urinary tract infections should be completely treated. Caution should be exercised on patients with chronic renal disease before commencing on the pills. Medical supervision should be sought.

##### 3.5. Patients on treatment with long term drug

- These are:
- (a) Antidepressants
  - (b) Antihypertensives
  - (c) Antidiabetics
  - (d) Anticoagulants

##### 3.6. Molar pregnancy

The effect of pills on the natural history of hydatidiform moles is still not every clear. Other methods of contraception may be offered to the patient though the pills are not absolutely contra-indicated.

### APPENDIX IV

##### 1. Nulliparous clients

For nulliparous clients, information and advice regarding the possible delay in return of fertility is necessary, she must be counselled by a trained nursing staff, and those with irregular cycles should be referred to a doctor before being given the oral pills.

## 2. Age

### 2.1. Minimum age

Need not be identified if client is married and has living children.

### 2.2. 35 years and below

Up to 35 years, the client can continue on the pill. Where possible an annual check up by a doctor is desirable but not absolutely necessary unless there are signs and symptoms of complications or other problems.

### 2.3. At 35 years

A clinical assessment is made first by the nurse and then the doctor. A permanent method or other effective alternative method may be recommended if complete family size has been achieved. If the client still wants to continue she may do so if there are no contra-indications. In the presence of any relative contra-indications continual usage must be under the responsibility and observations of a doctor. If there are no contra-indications, the client may continue the pill up to age 40. An annual assessment is desirable.

### 2.4. At 40 years

Another thorough clinical assessment is made, the client is again advised an alternative effective method with adequate counselling given. If she still wants to continue, she may do so up to age 45. An annual clinical assessment is desirable.

### 2.5. At 45 years

Another review is made by the doctor. The decision to continue after 45 will be made by the doctor, where the decision will be dependent on many factors depending on the individual clients.

## 3. Duration of use

For spacing purpose a maximum of 3 years is preferred. Advise should be given to stop taking the pill after 3 years. If the client refuses, this should be entered into her card, with counselling given.

## 4. When to start the oral pill

### 4.1. Normal cycles

Fifth day of menstruation.

### 4.2. Postpartum lactating: 6 weeks

The client may be motivated on a non-hormonal method first, especially for the first three months of breastfeeding; if all other methods are not acceptable, a low dosage pill is recommended.

### 4.3. Postpartum non lactating: 4 weeks

### 4.4. Post abortion: 1 weeks

## 5. Management of problems of irregular pill taking

When a tablet is missed, she should try to take it as soon as possible.

If she is pregnant and inadvertently continues to take the oral pill, the family planning worker should order for a urine pregnancy test and if positive, advise the client to stop taking the oral pills immediately and see a doctor immediately. If the test is negative, repeat within one week, meanwhile the client is to use a second method temporarily or abstinence is advised. If again the test is negative and there is no PV bleeding yet, refer her to a doctor immediately.

## 6. Resupply

A maximum of 3 cycles can be given at a time.

## 7. Teenage pregnancy

A teenager with a pregnancy should be referred to a hospital and must be advised for effective contraception after delivery.

## APPENDIX V

### GUIDELINES ON THE USE OF DEPO MEDROXY PROGESTERONE ACETATE AND NORETHISTERONE OENANTHATE (NEW)

#### 1. Selection of clients

- Those who have completed their families
- Those who have already had 2 children, and accept the side-effects of the injectables after counselling.
- Those waiting for sterilisation or other major surgical procedures.
- Those who demand injectables and refuses to use other methods of contraception.
- Psychiatric patients.
- Mentally retarded patients
- Those with varicose veins, thyrotoxicosis, diabetes, hypertension, previous liver disease, tuberculosis who are unsuitable for oral pills and yet refuse to use other methods.
- Those who have had repeated failures with other methods.
- Those who are unable or unwilling to tolerate oestrogenic effects of conventional oral contraceptives and the pain and bleeding due to IUCD.
- Long term drugs e.g. barbiturates, anti depressants, anti tuberculous drugs, anticoagulants.

#### 2. Specific instructions on side effects to be given to clients, and to be reinforced by type slips

- Aménorrhoea

- (b) Irregular bleeding
- (c) Headache
- (d) Giddiness
- (e) Nausea and/or vomiting
- (f) Fertility may not return 4–6 months after stopping the injectables, advise to plan pregnancy one year ahead.
- (g) Abdominal pain (liver tumour)

### 3. When and how to give the injectable

- (a) To be given during menstruation. Those who come to the clinic and who are not menstruating may be given the injectable provided they are within the first seven days of their cycle and have had no sexual intercourse.
- (b) Dosage    DMPA 150 mg. every 12 weeks  
                   NCEN 200 mg. every 8 weeks for first 2 doses (i.e. 16 weeks) when 12 weekly intervals for subsequent doses

Warn clients that they are protected if they do not return within two weeks of their given appointment.

- (c) The drug is given by deep intramuscular injection.

### 4. Specific examinations to be performed prior to giving an injectable

- (a) Weight — at each visit
- (b) Blood pressure — at each visit
- (c) Pap smear — repeat once a year
- (d) Breast examination — repeat every 6 months.

### 5. Follow-up

Clients should be referred to doctor if any of these complications are encountered:

- (a) Jaundice
- (b) Unexplained polyuria (excessive passing of urine) and polydipsia (excess thirst)
- (c) Post coital bleeding
- (d) Occurrences of breast lump
- (e) Complaints of severe headache, calf and abdominal pain.

**N.B.** This guideline will be reviewed within two years.

## FAMILY PLANNING SERVICES BY TRADITIONAL BIRTH ATTENDANTS

J. Y. Peng, MD, DPH

Four countries in Southeast Asia, Indonesia, Malaysia, the Philippines and Thailand, have a sizable and identifiable group of older women attending deliveries in rural areas. Traditional Birth Attendants (TBAs), as they have come to be called, play an important role in the maintenance of maternal health.

My involvement with TBA projects dates from 1969, when I was in Malaysia working for the National Family Planning Board (NFPB). This was the year the programme began. The three-week training period included one week each of maternity care, family planning and actual experience in local health centers. A total of 1700 TBAs had been trained by 1976, and subsequently a total of more than 2000 TBAs were registered in West Malaysia.

Background information concerning Malaysian TBAs was then collected. Analysis of these data revealed that the characteristics of TBAs in Malaysia and Thailand were not too dissimilar, as shown in Tables I and II from a recent publication by the Ministry of Public Health of Thailand.

In January 1972, a special project to organize and utilize TBAs for the National Family Planning Programme was started in Malaysia. TBAs were selected from among those who had completed the three-week training course in 1969 and 1970. This short course of three days was specific to the tasks that TBAs would be expected to perform. An excellent system of operation and channels of supervision were established and continued (3, 4). Initially supported by the University of Michigan (with an AID Service Agreement Programme), the project was followed by a grant from the United Nations Fund for Population Activities (UNFPA). The programme is now a part of NFPB's regular activities, and an annual budget of \$40,000 has been allocated by the Malaysian government. A total of 280 TBAs were recruited and trained for this specific programme. As of May 1979, 157 TBAs were still active in it, each TBA serving an average of 60 to 70 families, according to Dr. Subbiah of the NFPB. This means that a little over to 10 000 families are being served by TBAs, with a maximum range of 200 families per TBA. From 1972 to the end of 1978, a total of 14 000 new acceptors had been recruited by these TBAs. These new acceptors consist of 3.1% of the total number of acceptors in the national programme during the same period.

At present the average monthly number of new acceptors recruited by each TBA is between one and two women. Nevertheless, with the number of continuing users being served by each TBA (average 60 to 70 families), one TBA is, in fact, carrying a work load equivalent to one family planning worker of the NFPB. The highest compensation for her work received by an excellent TBA is \$40 and the lowest is \$15. About 50% of the TBAs are in the latter category.

TBAs are also given a book in which they record the deliveries they attend. The record is very simple, only including such basic information as address, name of the mother, date of delivery and sex of the baby. This book is checked by the supervisors each month. It was impressive to find how meticulously the records were kept. For those TBAs who are illiterate, family members help to complete the record. Recently Mr. Tey of the NFPB reported a pretest result using NFPB-designed delivery records. A total of 32 TBAs were included in this survey and all but one were unable to read and write (84%). The 31 TBAs were assisted by family members (son, daughter, grandson, niece, etc.) in completing the record. The educational level of those who filled out the form was either the primary or lower secondary school.

The illustrated delivery record for TBAs has been under consideration. This record will include 12 items with seven illustrations. It is designed to collect information on deliveries by TBAs for approximately six to 12 months to assist health planners to evaluate their work and to develop community-based health and family planning programmes in rural areas. A survey questionnaire is also designed to collect more information about the characteristics and background of TBAs, including interaction with government midwives and information on referral of patients for difficult cases. The survey questionnaire and the delivery record are attached.

The four Asian countries previously mentioned have sizable number of TBAs and are active in training and utilizing these people. Under these circumstances, I would like to propose an agency in one of these four countries to promote the cooperation and coordination of these national efforts. The first step would be to identify key people and organizations in each country, then to meet with them to consider objectives, activities and future plans. I suggest that this topic be included in the group discussions so that action may be taken to implement this proposal.

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TABLE I  
CHARACTERISTICS OF TRADITIONAL BIRTH ATTENDANTS (TBAs) INTERVIEWED IN MALAYSIA AND THAILAND

	Mean Age	No Schooling	Practice Years	% TBAs
Malaysia (N = 292)	47 years	80%	< 10	43
			10-20	32
			20+	25
Thailand (N = 208)	50 years	20%	< 15	52
			> 15	47

Source: Chusie et al (1); Peng et al (2)

TABLE II  
SOURCE OF SKILL ACQUIRED BY TRADITIONAL BIRTH ATTENDANTS (TBAs) INTERVIEWED IN MALAYSIA AND THAILAND

Source	Malaysia <sup>a</sup> (N = 292)	Thailand <sup>b</sup> (N = 208)
Mother	24%	12%
Other relatives	41%	14%
Friends	5%	2%
Others	30%	4%
Self-taught	-	68%

a Mean number of monthly deliveries: 3

b Mean number of monthly deliveries: 2

Source: Chusie et al (1); Peng et al (2)

**TRADITIONAL BIRTH ATTENDANT INFORMATION SHEET**

1. Name: \_\_\_\_\_ Address: \_\_\_\_\_

2. TBA Identification Number: 

--	--	--	--	--	--	--	--

3. Supervising Health Center Name: \_\_\_\_\_ Code # 

--	--	--	--	--	--

4. Date of Interview: 

DAY		MONTH		YEAR	

5. Age in completed years: 

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6. Number of years practiced as a TBA: 

--	--

7. Education in completed years: (8 or more years = 8) 

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8. Ability to read:  
 0 - No   
 1 - Yes  — To question 11.

9. Ability to write:  
 0 - No   
 1 - Yes  — To question 11.

10. Do you ask your family member or someone:  
 For reading: 0 - No   
                   1 - Yes   
  
 For writing: 0 - No   
                   1 - Yes

11. Who taught you how to deliver babies:  
 1 - mother   
 2 - Grandmother   
 3 - Mother-in-law   
 4 - Other relatives   
 5 - friend   
 6 - government training course   
 7 - self-learning   
 8 - Other   
 9 - N.A.

12. Have you ever participated in a government training course?  
 0 - No  — To question 15.  
 1 - Yes  — once only  
 2 -  — two times  
 3 -  — three times and more

13. When was the last training course you attended?  
 1 - less than one year ago   
 2 - between one and two years ago   
 3 - more than two years ago

14. Has Government given you a delivery kit?  
 0 - No  — To question 15.  
 1 - Yes

15. Do you have your own delivery kit?  
 0 - No   
 1 - Yes

16. Number of deliveries you attended last month: 

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17. Estimated number of deliveries you attended last 12 months: 


18. Do you consider attending deliveries your main profession?

- 0 - No  
1 - Yes

19. Where do you usually deliver your patients?

- 1 - mother's home  
2 - your home  
3 - other

20. Does a government midwife generally attend deliveries together with you?

- 0 - No  
1 - Yes

21. Do you usually refer problem cases?

- 0 - no  
1 - Yes, to private doctor  
2 - Yes, to health center  
3 - Yes, to hospital

22. Estimated distance from your home to supervising health center (in km):

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ANTENATAL:

23. How do you find a pregnant mother in your village?

- 0 - I do not go out to find them. They come to me.  
1 - I actively try to find pregnant women and make visit to their homes.

24. On the first contact with a pregnant woman do you advise the woman for antenatal examination?

- 0 - I do not.  
1 - I do and I examine her by myself only.  
2 - I advise to go to a private doctor.  
3 - I advise to go to health center.  
4 - I advise to go to hospital.  
5 - I advise and take the women to antenatal clinic.

25. When you examine a pregnant woman which of the following items do you provide?

- 0 - No antenatal examination.  
1 - General inspection and abdominal palpation only.  
2 - Same as 1 and blood pressure measurement.  
3 - Same as 1 and urine examination.  
4 - Same as 1 and recording of weight.  
5 - Same as 1 and pelvic examination.  
6 - Combination of the above.

26. Do you perform any traditional practice to mother during antenatal period?

- 0 - None  
1 - Yes specify  
2 -  
3 -  
4 -  
5 -  
6 -

27. Do you advise pregnant woman on the following:

- 0 - None
- 1 - Nutrition
- 2 - Breast feeding
- 3 - Care of newborn baby
- 4 - Family planning
- 5 - Combination of the above.

CHILD BIRTH:

28. Do you give medicine to relieve pain during labour?

- 0 - None
- 1 - Yes

29. Do you use any method in assisting expulsion of baby?

- 0 - No
- 1 - Yes - specify
  - 2 - Abdominal pressure or massage.
  - 3 - Assisting baby with pulling.
  - 4 - Combination of the above.

30. What do you usually use to cut the umbilical cord?

- 0 - Traditional methods (sharp bamboo knife, etc.)
- 1 - Scissors
- 2 - Knife or razor blade

31. Do you sterilize your instrument for cutting the cord

- 0 - Do not sterilize.
- 1 - Boil instrument.
- 2 - Flame instrument.
- 3 - Antiseptic

32. What method do you use in managing the third stage labour?

- 0 - Do not do anything
- 1 - Abdominal massage.
- 2 - Give traditional medicine
- 3 - Give modern medicine

POSTNATAL CARE:

33. What traditional practice do you perform to mother within first hours after childbirth.

- 0 - None
- 1 - Massage
- 2 - Give traditional medicine
- 3 - Give modern medicine

34. Do you encourage mother to breast feed?

- 0 - No
- 1 - Yes

35. Do you encourage mother to practice family planning?

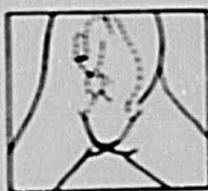
- 0 - No
- 1 - Yes I advise mother to practice family planning.
- 2 - Yes and I provide mother with contraceptives.

36. What do you advise on antenatal and postnatal sexual activity?

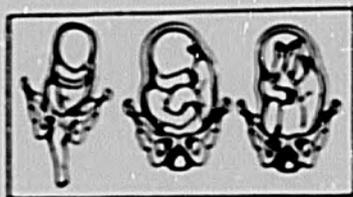
- 0 - I do not advise.
- 1 - Yes, I do.
  - 2 - Advise no sex after \_\_\_ months of pregnancy.
  - 3 - Advise no sex within \_\_\_ weeks after birth.

### TBA DELIVERY RECORD

1. Name of Mother: _____	ID#	<table border="1" style="width: 100%; height: 20px;"> <tr> <td style="width: 10%;"></td> </tr> </table>										
2. Name of TBA: _____	ID#	<table border="1" style="width: 100%; height: 20px;"> <tr> <td style="width: 10%;"></td> </tr> </table>										
3. Name of supervising Health Center: _____		<table border="1" style="width: 100%; height: 20px;"> <tr> <td style="width: 10%;"></td> </tr> </table>										
4. Delivery Date: _____		<table style="width: 100%; text-align: center;"> <tr> <td style="width: 50%;"></td> <td style="width: 50%;">month</td> <td style="width: 50%;">year</td> </tr> <tr> <td style="border: 1px solid black; width: 50%; height: 20px;"></td> <td style="border: 1px solid black; width: 50%; height: 20px;"></td> <td style="border: 1px solid black; width: 50%; height: 20px;"></td> </tr> </table>		month	year							
	month	year										
5. Age of Mother: _____		<table style="width: 100%; text-align: center;"> <tr> <td style="width: 50%; height: 20px;"></td> <td style="width: 50%; height: 20px;"></td> </tr> <tr> <td style="border: 1px solid black; width: 50%; height: 20px;"></td> <td style="border: 1px solid black; width: 50%; height: 20px;"></td> </tr> </table>										
6. Number of living Children (excluding this child):		<table style="width: 100%; text-align: center;"> <tr> <td style="width: 50%; height: 20px;"></td> <td style="width: 50%; height: 20px;"></td> </tr> <tr> <td style="border: 1px solid black; width: 50%; height: 20px;"></td> <td style="border: 1px solid black; width: 50%; height: 20px;"></td> </tr> </table>										
7. Presentation:		<table style="width: 100%; text-align: center;"> <tr> <td style="width: 50%;"></td> <td style="width: 50%;"></td> </tr> <tr> <td style="border: 1px solid black; width: 50%; height: 20px;"></td> <td style="border: 1px solid black; width: 50%; height: 20px;"></td> </tr> </table>										



1 Normal

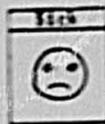


2 Abnormal

8. Outcome of Delivery for Baby:



1

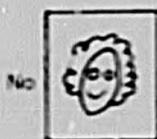


2



3

9. Abnormal Bleeding of Mother:

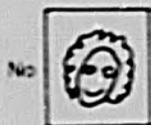


1



2

10. Fever of Mother:

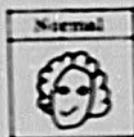


1



2

11. Outcome of Delivery for Mother:



1

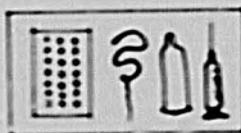


2

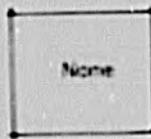


3

12. Family Planning planned or offered:



Yes 1



2

# REPORT OF THE PANEL ON THE EFFECTS OF STEROIDAL CONTRACEPTIVES ON ASIANS REGIONAL MEDICAL COMMITTEE, IPPF — ESEAOR

J. B. Catndig, M.D.

## BACKGROUND

The IPPF has been a major purchaser and distributor of various types of contraceptives. It has around a hundred affiliate members and grant receiving FPAs all over the world as its main outlets for distributing these contraceptives along with other family planning services.

Explicitly and implicitly, IPPF and its constituent bodies, have for many years recognised that in advocating the right of all persons access to full information and family planning services and free choice of methods as well, consideration had also to be given to the question of safety and acceptability.

The IPPF has been relying largely on the work and considerable experience of international and national research institutes specialising in monitoring and analysing the safety and effectiveness of contraceptives. In spite of its vast field resources, IPPF has only supported limited short-term applied research and surveys on the safety and effectiveness of contraceptives.

The incidence of side-effects associated with the more effective methods of contraception like the oral pills, injectables, IUDs, and sterilisation, are now getting better understood and well-defined. However, most of the current publications available indicate findings that are based on a relatively small number of surveys and mainly among Caucasian women in Britain and North America, and may or may not apply in other circumstances.

From the IPPF Survey of Unmet Needs in Family Planning which covered the year from 1971-1976, it was estimated that in 1976 the women at risk of pregnancy unprotected by contraception was estimated at 48.67 million while the contraceptive practice level for the same year averaged 20.9% for member countries in the East and South East Asia and Oceania Region of the IPPF. (Please refer to Tables 1 and 2 of Annex A). There is yet so much to be desired in the use-effectiveness of these contraceptives. Continuation rates for most of the reversible methods are disappointing. This problem was further aggravated by adverse publicity on various contraceptive methods notably the oral pills.

Modern contraceptive methods were developed and tested in industrialised settings and directly distributed and used in

family planning programmes of developing countries with little adaptation or critical examination of the technology involved and of its potential effects on the populations. Resources from IPPF for research activities is relatively inadequate. The need to establish surveillance of contraceptive safety problems through systematic and timely reporting was recognised and stressed at the last Central Medical Committee Meeting in April 1979.

## PANEL ON THE EFFECTS OF STEROIDAL CONTRACEPTIVES ON ASIANS

The policy-makers of IPPF in the East and South East Asia and Oceania Region, made up of volunteers from member FPAs noted with concern the rather poor use-effectiveness of the oral pills. At the same time, a series of adverse news items on steroidal contraceptives have discouraged a good number of pill users. There were significant number of drop outs and the overall continuation rate was quite unsatisfactory. The Regional Council meeting in 1977, adopted the recommendation of the Regional Medical Committee to create this Panel with a mandate to get as much information as possible from research scientists currently involved in the study of the effects of steroidal contraceptives on Asian from diverse medical and social conditions for family planning from among member countries in the Region. IPPF is concerned just as other agencies are that increasing use of western contraceptive technology in developing countries may be inappropriate or unsafe, given the health and dietary conditions of users in these countries. The millions of oral pill users need the assurance and they have the right to know if such findings from their Caucasian counterparts are similar or different from those observed in Asian women.

The initial meeting of the Panel in Hong Kong in September 1978 brought together 12 research contributors to the Panel and 11 guests research scientists and observers representing various institutions and interested agencies collaborating with IPPF. (Annex B — List of Participants.)

The workshop was conducted with the initial presentation of specific research activity related to the effects of steroidal contraceptives on Asian subjects followed by discussion. The exchange of experiences and research findings among the participants demonstrated the high standard of research activities being conducted by various centers in the Region. Annex

C shows the list of research projects and specific areas of study that were presented in this Hong Kong workshop.

There were 48 on-going projects related to the study of the effects of steroidal contraceptives in the Region identified by the Panel. It was also noted by the Panel that there are considerable data from investigations done on Asians sufficient to indicate significant findings on the effects of steroidal contraceptives on Asian women.

As many of the projects were on-going ones and the data presented were unpublished, it was decided that it would be in keeping with ethical procedure not to print the proceedings of this workshop. However, in view of the data presented and the discussion that followed the Panel felt that the following recommendations could provide useful guidelines for family planning workers promoting the use of Steroidal Contraceptives to their Asian clients.

1. a. In view of findings presented at this Workshop the Panel wishes to reaffirm the safety of depo provera (DMPA) which has the advantage of increasing milk production and when compared with the oral combined preparation of oestrogen and progestagen it causes less derangement of metabolism of carbohydrates, lipids, aminoacids, vitamins and coagulation functions.
- b. The existence of menstrual disturbance due to injections of depo provera is confirmed and it has been identified as the main cause for non-acceptance by the clients in the Region.
2. a. For users of combined oestrogen-progestagen preparations, there are changes in coagulation functions, carbohydrate, lipid, aminoacids and vitamin metabolism, but the clinical significance of these changes in Asians is still not well established. In the lactating women it was shown that combined oestrogen-progestagen preparation causes a decrease of milk volume.
- b. Ideally, combined oestrogen-progestagen preparation should be used for short-term spacing. In the latter part of the reproductive life, it should be prescribed with caution and other contraceptive methods should be considered. In CBD programmes, it is advisable that women above the age of 35 are fully assessed by a doctor before the combined O.C. is prescribed. Therefore, the Panel suggests that age 35 should be an item on the checklist for new acceptors who choose steroidal contraceptives. Clients above the age of 35 should be referred to a FPA clinic for the necessary medical clearance and/or alternative method of fertility regulation.
3. In the light of work done in our Region and other parts of the world the FPAs are advised to monitor the safety aspects of hormonal contraceptives more closely.
4. There is a need to be aware of the psychosexual effects of steroidal contraceptives.

#### INJECTABLES AND LOW-DOSE PROGESTAGENS

The compound discussed was mainly depo medroxy progesterone acetate (DMPA), and from the data presented, no additional drawbacks could be identified. It has the advantage of increasing milk volume in lactating women; there is altera-

tion of carbohydrate, lipid, aminoacid and vitamin metabolism, coagulation functions are not disturbed and after cessation of administration of DMPA, there is return of menstruation and fertility.

Irregular vaginal bleeding lowers its continuation rate, and can be treated with oestrogen or curettage. Excessive weight gain is also noted.

Of the other injectables, modification of the dosage of Norethisterone enanthate is being assessed in order to reduce the pregnancy rate (viz. 200 mg. every 2 months for the first 6 months and thereafter every 3 months). Cyclogovera appears to have less side-effects, but its oestrogen content is viewed with caution by some members of the Panel.

Low dose progestagen pills such as Lynestrenol and Norgestrel cause menstrual irregularity and has low acceptance and continuation rate.

#### ORAL COMBINED OESTROGEN AND PROGESTAGEN PREPARATIONS

For combined oestrogen-progestagen oral preparations, there is as yet no ideal compound, combination nor dosage. Preparations containing d Norgestrel, however, was shown to have no effect on serum cholesterol and triglycerides. Trials with natural estrogens such as estradiol and estrin were abandoned because of poor cycle control. The acceptability of paper pill is equivocal, and there is no major advantage over conventional pills except the theoretic advantage of absorption via the buccal mucosa, and thus may cause less liver toxicity by by-passing the liver initially. No data concerning the effect of the age of the user, and the duration of oral contraceptive usage on long term side effects was shown.

There is no epidemiological evidence to suggest an increase in mortality nor hospital admission as a result of cardiovascular disorders in female of reproductive age, when compared to the population as a whole in Hong Kong. With oral contraceptive users, a shortening in clotting time, and an increase of most clotting factors are noted with a fall in Anti-thrombin III and a possible increase of fibrinolysis, but the clinical significance of these findings is not well understood.

Similarly, a change of carbohydrate, lipid, and vitamin metabolism due to the effect of oral contraceptive is noted. If the acceptors started with border-line nutritional state, then supplements with pyridoxine may be justified. Also psychosexual effects of long term oral contraceptives usage may be associated with abnormal tryptophan metabolism. Post-pill amenorrhoea poses no great problem in Australia, the incidence is less than 1% and it responds well to induction of ovulation.

#### NEED FOR SAFETY STUDIES

The IPPF recognise the policy and programme implications of the recent developments in contraceptive technology. It has also accepted the fact that it is uniquely placed to undertake the practical research and monitoring necessary to ensure high standards of safety and acceptability. The aim should be to complement and extend existing research to provide a global perspective and a more reliable information base for education and distribution services. There are nine current projects on oral contraceptives listed among the several long term studies of contraceptive methods in the developing world according to Nordberg and Atkinson (Pact Paper Two, January 1979). Refer to Table on Annex D.

At present the IPPF is seeking grant support for a 5-year epidemiological programme comprising a major world survey, preceded by exploratory phases and feasibility study. The purpose of the main survey would be to:

1. Gather information on morbidity and mortality from contraceptive methods and compare these findings with available published estimates.
2. Search for evidence of other unsuspected side-effects.
3. Analyse clients' opinion on needs, wants and problems in relation to contraceptive use including acceptability of method and quality of services.
4. Provide a starting for secondary enquiries in selected areas of special interest.

The participation of member FPAs will be needed for the main survey. The resources needed is estimated to be about \$380,000 for the first two years and the final three years will be between \$1.2 to \$2.4 million depending on the size of the main survey. Sources of funding is still being explored by IPPF. The project proposal for this five years epidemiological survey on the safety and acceptability of contraceptives was considered at the last Central Medical Committee meeting last April 1979.

Meanwhile, members of the Regional Panel shall continue to provide the necessary feedbacks from the research activities related to steroidal contraceptives in their respective countries and this will be monitored by the corresponding secretary of the Panel who works closely with the Chairman of the Panel in Hong Kong. By correspondence, the feedback sent by researchers will be distributed to FPAs and its medical committees to consider the policy and programme implications of these research findings.

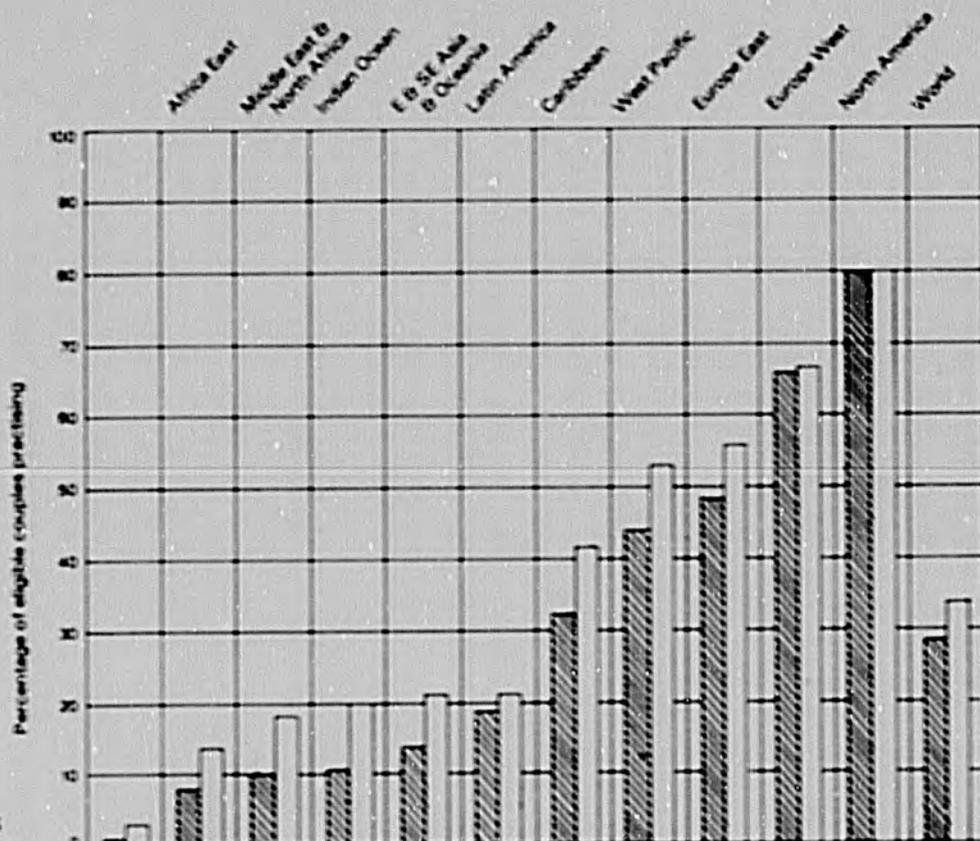
# Contraceptive practice levels

TABLE I

ANNEX A



IPPF estimates for 1976 show that while 35 per cent of couples were practicing contraception worldwide, a large part of the developing world was still at or below the 20 per cent practice level. At current rates of increase, West Africa would not reach "western" levels of practice (85 per cent) until 2156 and Latin America until 2064.



From: PEOPLE  
Special Report: UNMET NEEDS

TABLE III

## CONTRACEPTIVE PRACTICE RATES AND METHODS 1971 AND 1976

Selected regions	Year	Women at risk 000's	Practice %	Percentage of those practicing		
				Orals & IUDs	Sterilization	Other methods
Africa East	1971	16,900	8.2	48.0	1.0	51.0
	1976	19,674	13.6	61.5	7.5	31.0
Africa West	1971	19,100	1.2	72.0	1.0	28.0
	1976	23,200	2.9	87.5	0.1	12.4
Indian Ocean	1971	92,100	10.9	16.0	61.0	23.0
	1976	111,923	20.0	16.0	74.0	10.0
Middle East & North Africa	1971	24,400	10.7	73.0	1.0	26.0
	1976	21,089	18.3	82.4	1.4	16.2
E & SE Asia & Oceania	1971	41,200	13.8	57.0	3.0	40.0
	1976	49,566	20.9	75.12	8.08	16.8
Caribbean	1971	3,500	32.4	25.0	2.0	73.0
	1976	3,789	41.9	58.2	14.7	26.7
Latin America	1971	34,300	18.9	72.0	2.0	27.0
	1976	41,127	21.3	73.9	2.0	24.2
West Pacific	1971	25,200	44.1	19.0	6.0	75.0
	1976	27,250	53.1	22.5	9.1	68.4
World incl. USSR & China	1971	350,200	28.7	33.0	11.0	56.0
	1976	399,135	34.0	38.0	19.0	43.0

Iran (4.4m women at risk) is included with Middle East for 1971, and with Indian Ocean for 1976.

**PARTICIPANTS OF THE FIRST MEETING OF THE PANEL ON THE EFFECTS  
OF STEROIDAL CONTRACEPTIVES ON ASIANS  
HONG KONG 2ND - 4TH SEPTEMBER 1978**

<b>Name</b>	<b>Country</b>	<b>Category</b>	<b>Remarks</b>
1. Professor Ho-Kei Ma	Hong Kong	Panel Chairman	CMC member, Formerly CMC Chairman
2. Dr. Olga Bart	New Zealand	Panel Member	RMC Co-Chairman, CMC Member
3. Dr. T. Wagatsuma	Japan	Panel Member	
4. Dr. T. Agoestina	Indonesia	Panel Member	
5. Dr. Kyungza Ryu	Korea	Panel Member	
6. Professor John Leeton	Australia	Panel Member	
7. Dr. Suporn Koetsawang	Thailand	Panel Member	
8. Professor T.A. Sinnathuray	Malaysia	Panel Member	
9. Dr. Ruben Apelo	Philippines	Panel Member	
10. Dr. Vivian Wong	Hong Kong	Panel Member	Corresponding Secretary of Panel
11. Professor Charles Ng	Representing Singapore	Panel Member	Attending as Observer / Participant
12. Professor W.K. Ng	Singapore	Guest	New RMC Chairman
13. Dr. F.H.M. Tsaiok	Singapore	Guest	
14. Professor Elsimar Coutinho	Brazil	Guest	Member, CMC
15. Dr. Nikorn Duastin	Thailand	Guest	
16. Dr. Kosin Amatayakul	Thailand	Guest	
17. Dr. J.Y. Peng	U.S.A.	Guest	Formerly with IDRC now with IFRP
18. Professor D. Todd	Dept. of Medicine Univ. of Hong Kong	Observer	
19. Dr. T.K. Chan	-- -- --	Observer	
20. Dr. Vivian Chan	-- -- --	Observer	
21. Dr. S.C. Tso	-- -- --	Observer	
22. Dr. T.F. Tse	Dept. of Community Medicine Univ. of Hong Kong	Speaker	Speaks on behalf of Prof. Colbourne
23. Dr. Mills	Asst. Director (Medical) FPA HK	Observer	

**LIST OF RESEARCH ACTIVITIES THAT WERE PRESENTED DISCUSSED  
AT THE IPPF SPONSORED HONG KONG WORKSHOP  
3TH - 4TH SEPTEMBER 1978**

**Tina Agoestina**

- Depo-provera with weekly symptoms grid and effect as a long acting contraceptive.
- Clinical trials of various oral contraceptives.

**Suporn Koetsawang**

- Report of the Chiang Mai Workshop on injectables.
- Measurement of half-life of ethinyl oestradiol and Norethisterone.
- Clinical Study of continuous microdose progestin /mestrenol.
- Comparative trial of 2 combined oral contraceptives one with ethinyl estradiol (synthetic) and one with estradiol and estriol ("natural").
- Effect of oral contraceptives on Lactation and Acceptability of paper pills.

**Ruben Apelo**

- Comparative study of DMPA and Norethisterone Oenanthate.
- Comparative study of oral contraceptives in tablet and paper-pill form.

**Nikom Dusitsin**

- Ovulation and metabolic studies of daily  $\delta$ -Norgestrel.
- Clinical trials of various oral contraceptives.
- Effects of combined E-P contraceptives on blood clotting in Thai women.
- Combined medroxyprogesterone acetate and testosterone enanthate in Thai women.

**T.A. Sinnathuray**

- Trial on the acceptance of low dose oral contraceptives.

**Charles Ng/M. Tsaiok**

- Evaluation of the metabolic side-effects from various brands of oral contraceptives.

**J. Leeton**

- Post pill amenorrhoea.
- Psychosocial effect of long term oral contraceptives.

**M. Tsaiok**

- Effect of oral contraceptives on coagulation factors in Singapore.

**V. Wong**

- Effect of oral contraceptives on coagulation factors and venous thrombosis in Hong Kong.

**T.K. Chen/T.F. Tse**

- Thromboembolic diseases in Hong Kong and relationship with oral contraceptives.

**Kosin Amatayakul**

- Biochemical effects associated with oral contraceptives.
- Interaction of hormonal contraceptives on nutritional and other health variables.

TABLE I

LONG-TERM STUDIES OF CONTRACEPTIVE METHODS IN THE DEVELOPING WORLD:  
CURRENT PROJECTS

Contraceptive/Health Concern	Location	Project Cost	Sponsoring Agency
Intrauterine Devices			
Menstrual blood loss	Brazil, Chile, Korea	\$253,048	WHO <sup>1</sup>
Pelvic inflammatory disease & ectopic pregnancy	Bangkok (2 centers), Seoul, Manila, Delhi/Chandigarh, Santiago, Ibadan	90,000	WHO
Long-term effects on the endometrium	Korea	35,700	IDRC & local sources
Long-acting injectables			
Metabolism of injectables	Thailand	173,800	WHO
Effects on fertility after discontinuation	Thailand	12,150	WHO
Transfer of steroids to breast milk	Thailand	3,300	WHO
Sterilization			
Menstrual blood loss after tubal occlusion	multiple centers	100,000	WHO
Psychosomatic sequelae of female sterilization	multiple centers	500,000	WHO
Ovulation and menstrual disorders after tubal occlusion	Thailand	123,500	IDRC & local sources
Oral Contraceptives			
Interaction with liver fluke infestation, bilharziasis	Korea, Egypt (2 centers)	\$503,311	WHO, NIH, Ford
Interaction with antibiotics & antimalarials	Thailand	9,230	WHO
Cardiovascular disease morbidity	Egypt, Philippines, Singapore, Hong Kong, Mexico	200,000	WHO
Prevalence of vitamin deficiency with oral contraceptive use	Thailand, Mexico, India, Korea	15,000	WHO
Oral contraceptives & lactation	Costa Rica, Thailand	229,900	WHO, IDRC & local sources
Oral contraceptives & coagulation factors	Hong Kong	135,770	IDRC & local sources
Oral contraceptives & metabolism, lactation	Korea	68,500	IDRC & local sources
Thromboembolic disease	Hong Kong, Taiwan	34,325	IDRC, Ford, Rockefeller
Safety of oral contraceptives	Sri Lanka, Nigeria	1,225,000	AID
Intrauterine Devices and oral contraceptives			
Comparative effects on women with moderate anemia	Mexico	10,000	PIACT
		\$3,723,534	

<sup>1</sup> WHO multicenter trials also include developed world clinics. Costs represent the only those attributed to developing world centers.

# IPPF—ESEAOR PANEL ON THE EFFECTS OF STEROIDAL CONTRACEPTIVES ON ASIANS

Professor Ho Kei Ma

## Why was the panel formed?

In recent years, many articles on the hazards of steroidal contraceptives were published in western journals. The data or extracts from such articles were often quoted in the local newspapers or mass media of this Region. The F.P.As. programmes were adversely affected by such publicity. The F.P.A. policy-makers felt unable to interpret the data. The RMC of the Region recommended to the Regional Council in 1977 that an expert group should be convened to advise the F.P.As. on the programme implications of the recent research findings:

## Functions

- 1) To advise the Regional Council through the RMC of research findings on the effects of steroidal contraceptives on the Asians and its implications to policy-makers and F.P. programme administrators.
- 2) To provide a forum where researchers in this field can exchange experiences.
- 3) To encourage close collaboration between scientists and agencies; providing the impetus and resources for research of this field.
- 4) To facilitate the use of the vast field resources of F.P.As.
- 5) To collaborate, through the RMC, with the C.M.C.

## Memberships

Dr. Tina Agostina	Indonesia
Dr. Ruben Apelo	Philippines
Dr. Suporn Koetsawang	Thailand
Professor John Leeton	Australia
Professor G.C. Liggins	New Zealand
Professor Charles Ng	Singapore
Dr. Kyungza Ryu	Korea
Professor T.A. Sinnathurey	Malaysia
Dr. Takashi Wagatsuma	Japan
Professor H.K. Ma	Hong Kong (Chairman)
Dr. V. Wong	Hong Kong (Secretary)
Professor W.K. Ng	Chairman of RMC
Dr. Olga Bett	Co-Chairman of RMC

Dr. J.B. Catindig	Deputy Regional Director
Observers:	
Dr. I Cheng Chi	IFRP
Dr. J.Y. peng	IDRC

## Survey of On-going Projects

Oral contraceptives dosage trials (particularly oestrogen dosage)	12
Injectables clinical trials	5
Epidemiological studies on thromboembolic disorders	2
Metabolic effects of steroidal contraceptives	10
Coagulation changes in steroidal contraceptives users	4
Lactation in steroidal contraceptives users	5
Changes in reproductive function in steroidal contraceptives users	6
Pharmacodynamics of steroidal contraceptives	2
Psycho-social effects of steroidal contraceptives	1
Male steroidal contraceptives	2
	49
	Total

## The First Meeting in 3-4 September 1978

Resource persons	
Dr. Koin Amatayakul	Thailand
Dr. T.K. Chan	Hong Kong
Dr. V. Chan	Hong Kong
Professor Elmar Corrinho	Brazil
Dr. Nilom Duxinan	Thailand
Dr. F.H.M. Tsaiok	Singapore
Dr. T.F. Tee	Hong Kong

## Statement

In view of the data presented and the discussions the Panel felt that the following recommendations should guide this region F.P.As. in their use of steroidal Contraceptives for Asians:—

1. a) In view of findings presented at this Workshop the Panel wishes to reaffirm the safety of DMPA which has the advantage of increasing milk production and

when compared with the oral combined preparations of oestrogen and progestagen it causes less derangements of metabolism of carbohydrates, lipids, aminoacids, vitamins and coagulation functions.

- b) The existence of menstrual disturbance due to injections of DMPA is confirmed and it has been identified as the main cause for non-acceptance by the clients in the Region.
2. a) For users of combined oestrogen-progestagen preparations there are changes in coagulation functions, carbohydrate lipid aminoacids and vitamin metabolism, but the clinical significance of these changes in Asians is still not well established. In the lactating women it was shown that combined oestrogen-progestagen preparation causes a decrease of milk volume.
  - b) Ideally, combined oestrogen-progestagen preparation should be used for short-term spacing. In the latter part of the reproductive life, it should be prescribed with caution and other contraceptive methods should be considered. In CBD programmes, it is advisable that women above the age of 35 are fully assessed by a doctor before the combined O.C. is prescribed. Therefore, the Panel suggests that age 35 should be referred to a F.P.A. clinic.

3. In the light of work done in our Region and other parts of the World the FPAs are advised to monitor the safety aspects of hormonal contraceptives more closely.

4. There is a need to be aware of the psychosexual effects of steroidal contraceptives.

Findings other than that expressed in the statement:

1. Excessive weight gain in DMPA users
2. The oestrogen content of cycloprovera is viewed with caution
3. Low dose progestagen pills (Lynestrenol and d-Norgestrel) has low acceptance and continuation rate
4. No ideal combined oestrogen - progestagen preparation
5. No major advantage of paper pill noted
6. No epidemiological evidence to suggest an increase in mortality or an increase in hospital admission as a result of cardiovascular disorders in female of reproductive age when compared to the population as a whole in Hong Kong or when compared with the date previous to the "pill" age

# MATERNITY CARE MONITORING — WHERE NEXT?

T. Agoestine  
& Indonesian Contributors

## INTRODUCTION

The Coordinating Board of Indonesian Fertility Research was established on January 8, 1977, supported by the Indonesian Department of Health and National Family Planning Coordinating Board.

The Cooperative Maternity Record Study, sponsored by the FIGO/IFRP, was the first activity of the BKS PENFIN (The Coordinating Board of Indonesian Fertility Research) introduced in 12 teaching hospitals located throughout Indonesia, and was initiated on September 15, 1978. Data will be collected for approximately 26,000 deliveries over the 12 month period. Each collaborating investigator will record the data on consecutive deliveries. (9)

Indonesia has a wide geographical pattern, consisting of 27 provinces in about 13,000 islands, scattered over a 3,400 mile area, with a total population of 140,000,000 (140 million) people. About 80% or 112 million live in rural areas.

Approximately 80% deliveries occur at home mostly attended by traditional birth attendants, who have no training. The crude birth rate is 40%.

The accurate maternal mortality rate for Indonesia is still unknown at present, because of insufficient and inadequate reporting and recording systems. The only figures available are the maternal mortality rates from teaching hospitals or top referral hospitals in Indonesia.

Even these figures often differ in meaning due to different definition and/or different recording systems, which makes it difficult to compare the figures reported. (1)

During the period 1963—1978 the maternal mortality rate in various teaching hospitals in Indonesia was approximately 10—15 deaths per 1000 live births. (5, 6, 7)

A major goal of Maternity Care Monitoring (MCM) is to assist government to establish a standard system of data collection and analysis of maternity care services in order to enable us to concurrently evaluate such services, realize priorities for action and therapy, improve the quality of maternity care and family planning services in Indonesia. (2, 3, 8)

The coordinating body, BKS PENFIN (Coordinating Board of Indonesian Fertility Research) convened a meeting of Indonesian Contributors from 12 teaching hospitals during the IV Indonesian Congress of Obstetrics and Gynaecology in Yogyakarta on June 13, 1979, to discuss the preliminary result of the Cooperative Maternity Record Study.

During the meeting several problems came out for further step up of maternity care monitoring to support the Government in Health and Family Planning Programme.

Even though the family planning programme in Indonesia is achieving remarkable success in certain areas, the preliminary data from the first three months (September 15—December 31, 1978) of the Maternity Care Monitoring (MCM) in eleven centers in Indonesia reveals that the result and a variety of problems that require resolution on a national scale.

## Results

The following tables show the figures of the preliminary Maternity Care Monitoring in Indonesia (September 15—December 31, 1978).

Women in the 35—39 age group have previously had 5—7 deliveries, and women of the 40-year age group 6—9 previous deliveries.

In all centers, the percentage of age group over 35 years is 14.9% and the less than 20 years, 11.4%, and 14.9% with a parity of more than 5.

It shows that all centers still has a high percentage of high risk group women.

All efforts for better Health Care and Family Planning services are urgently needed to decrease or eliminate the high risk group. (Refer Table I).

The percentage of Anemia increases with the higher parity, the average percentage of anemia:

parity 1	:	34.7%
parity 2—4	:	35.3%
parity 5 +	:	48.6%

(Refer Table II)

**TABLE I**  
**MEAN PARITY\* BY MATERNAL AGE.**

Center in:	20-24	25-29	30-34	35-39	40 +
Medan	1.8	3.1	4.6	6.9	8.3
Padang	2.0	3.1	5.2	7.5	8.4
Palembang	1.9	3.4	5.6	7.3	9.0
Jakarta	1.9	3.1	5.2	7.4	9.5
Bandung	1.6	3.1	5.1	7.4	9.4
Semarang	1.8	3.0	4.8	5.9	7.2
Yogyakarta	1.8	2.6	3.4	5.2	6.9
Surabaya	1.9	3.2	4.4	6.1	7.6
Malang	1.6	3.1	4.8	5.5	6.3
Ujung Pandang	2.3	3.6	5.3	6.5	9.5
Manado	1.5	2.4	3.4	5.2	6.3

\*including this delivery.

**TABLE II**  
**ANEMIA (Hb/ 10 gr/100ml) PARITY, PERCENT WOMEN.**

Center in:	1	Parity 2-4	5 +
Medan	52.5	63.2	59.7
Padang	25.6	42.5	46.7
Palembang	32.1	25.8	36.0
Jakarta	22.6	24.0	36.8
Bandung	11.5	11.8	35.3
Semarang	31.5	36.5	49.8
Yogyakarta	50.0	42.0	80.0
Surabaya	51.9	62.5	64.4
Malang	45.5	35.6	45.3
Ujung Pandang	50.0	37.5	52.9
Manado	8.4	6.7	28.0

There is a positive relationship between the parity and anemia. It is important to reduce the high parity rate in order to lower the incidence of Anemia.

**TABLE III**  
**PRIMARY COMPLICATIONS OF LABOR/DELIVERY, PERCENT WOMEN.**

Center in:	Prolonged Obstructed Labor	Plecenta Previa	Plecenta Abruptio	Hypotonic Uter. Contr.	Hypertonic Uter. Contr.	Haemorrhage	Retained Products	Other
Medan	7.67	1.33	1.00	4.00	0.10	0.33	1.00	3.33
Padang	11.56	3.00	0.54	3.69	0.15	1.28	0.69	3.79
Palembang	10.05	0.77	0.26	3.61	0.26	0.52	0.26	0.26
Jakarta	8.31	3.33	1.05	6.51	0	1.57	0.30	7.15
Bandung	13.48	6.58	1.25	7.37	0.16	1.41	0.63	0.31
Semarang	6.89	2.69	0.39	5.38	0.07	0.79	0.92	0.85
Yogyakarta	3.06	2.04	1.02	9.69	0	0	0.51	2.04
Surabaya	28.28	3.96	0.57	1.02	0	3.39	0	0.45
Malang	12.89	4.30	0	14.06	0	0.39	1.56	0.78
Ujung Pandang	12.70	0	0.79	0.79	0	0	0	0
Manado	4.91	1.89	0	13.58	0	0.38	3.02	6.42

Prolonged labor has the highest percentage compared to other complications.

By maintaining records such as in this table, all centers could evaluate and further improve maternity care services and management of those complications.

**TABLE IV**  
**TYPE OF DELIVERY, PERCENT WOMEN.**

Center in:	Spontaneous	Forceps	Operative types of delivery		
			Vacuum Extractor	Caesarean Section	Other
Medan	83.3	0.2	5.9	8.9	1.7
Padang	81.7	6.0	2.7	6.7	3.0
Palembang	91.1	0.0	5.5	1.6	1.8
Jakarta	72.9	5.6	3.8	11.8	5.9
Bandung	76.6	5.7	2.1	10.5	5.1
Semarang	83.7	0.3	4.8	7.4	3.8
Yogyakarta	87.7	2.0	4.1	4.6	1.6
Surabaya	77.3	6.2	2.5	9.0	5.0
Malang	74.9	3.1	4.7	12.9	4.4
Ujung Pandang	94.2	0.0	0.8	4.1	0.9
Manado	82.6	0.8	6.8	4.9	4.9

This table shows that spontaneous delivery has the highest percentage, ranging between 72.9 - 94.2%. Operative types of delivery differ in the centers. For example in the first 3 month results of maternity care monitoring, there were no forceps extractions in Palembang and Ujung Pandang. More

than 10% of the births in Malang, Jakarta and Bandung were by Caesarean Section.

Hospital facilities, personnel and patient's conditions are factors which determine the performance of each hospital.

**TABLE V**  
**ANTENATAL VISITS, PERCENT WOMEN.**

Center in:	Number of Antenatal Visits			
	None	1-3	4-7	8+
Medan	42.8	21.6	26.3	9.3
Padang	45.7	0.3	27.3	26.7
Palembang	72.0	8.4	10.5	9.2
Jakarta	58.4	10.4	14.4	16.8
Bandung	57.4	5.2	13.6	23.8
Semarang	51.6	23.0	19.3	6.1
Yogyakarta	54.6	0	0	45.4
Surabaya	51.1	25.5	17.1	6.2
Malang	65.1	16.1	13.7	5.1
Ujung Pandang	9.1	11.6	50.4	28.9
Manado	31.4	23.0	29.1	16.5

Seven centers show more than 50% of the cases did not make antenatal visits.

It is essential that information and education about the important and benefit of the antenatal visit to reach all people.

liberate and liberate in all communities, urban and rural.

Only through such efforts can better outcomes of pregnancy be achieved.

**TABLE VI**  
**BIRTH WEIGHT AND PERINATAL MORTALITY.**

Center in:	Low Birth Weight (< 2500 g)			Normal Birth Weight (2500 + g)			Low Birth Weight of All Births
	Total	N	%	Total	N	%	%
Medan	177	58	32.8	1831	69	3.8	8.8
Padang	36	8	22.2	267	7	2.6	11.9
Palembang	52	8	15.4	343	6	1.7	13.2
Jakarta	486	150	30.9	2242	86	3.8	17.8
Bandung	122	46	37.7	536	31	5.8	18.5
Semarang	200	47	23.5	1335	56	4.1	13.0
Yogyakarta	23	6	26.1	174	7	4.0	11.7
Surabaya	177	48	27.1	724	42	5.8	19.6
Malang	30	15	50.0	227	17	7.5	11.7
Ujung Pandang	8	2	25.0	118	1	0.9	6.4
Manado	31	5	16.1	240	9	3.8	11.4

The perinatal mortality in the Low Birth Weight group ranging between 15.4% - 50.0%. The Low Birth Weight is the main cause of the perinatal mortality.

This condition could be improved by providing better intra uterine monitoring facilities, hospital care of the neonatus, improvement of the Department of Obstetrics and Gynaecology.

**TABLE VII**  
**CONTRACEPTIVE METHOD PLANNED OR PROVIDED POSTPARTUM, PERCENT WOMEN.**

Center in:	None	IUD	Systemic	Female Sterilization	Other
Medan	48.7	11.0	14.7	21.8	3.8
Padang	21.9	40.1	15.2	22.6	0.2
Palembang	48.8	3.2	33.8	11.8	2.4
Jakarta	10.5	50.3	12.6	23.2	3.4
Bandung	1.2	9.6	74.6	14.1	0.5
Semarang	31.5	7.9	39.0	17.0	4.6
Yogyakarta	34.6	19.2	22.9	13.3	10.0
Surabaya	20.9	13.3	52.1	11.6	2.1
Malang	61.5	8.0	8.0	19.7	2.8
Ujung Pandang	41.7	7.5	15.0	14.2	21.6
Manado	5.1	11.0	75.6	6.7	1.6

**TABLE VIII**  
**FEMALE STERILIZATION AMONG WOMEN WANTING NO MORE CHILDREN**

Center in:	Women Wanting No More Children			Women Sterilized	
	N	N	%	N	%
Jakarta	904	595	65.8	422	70.9
Bandung	253	86	34.0	80	93.0
Palembang	88	41	46.6	37	90.2
Manado	79	17	21.5	15	88.2
Yogyakarta	65	25	38.5	13	52.0
Surabaya	329	96	29.2	75	78.1
Malang	72	48	66.7	46	95.8
Semarang	588	254	43.2	233	91.7
Medan	518	394	76.1	328	83.3
TOTAL	2936	1556	53.7	1249	80.3

MATERNITY CENTER POSTPARTUM CONTRACEPTIVE PROFILE BY METHOD AND LIVING CHILDREN  
 UNIVERSITY OF JAKARTA  
 JAKARTA, INDONESIA

IFRP - FIGO 1979

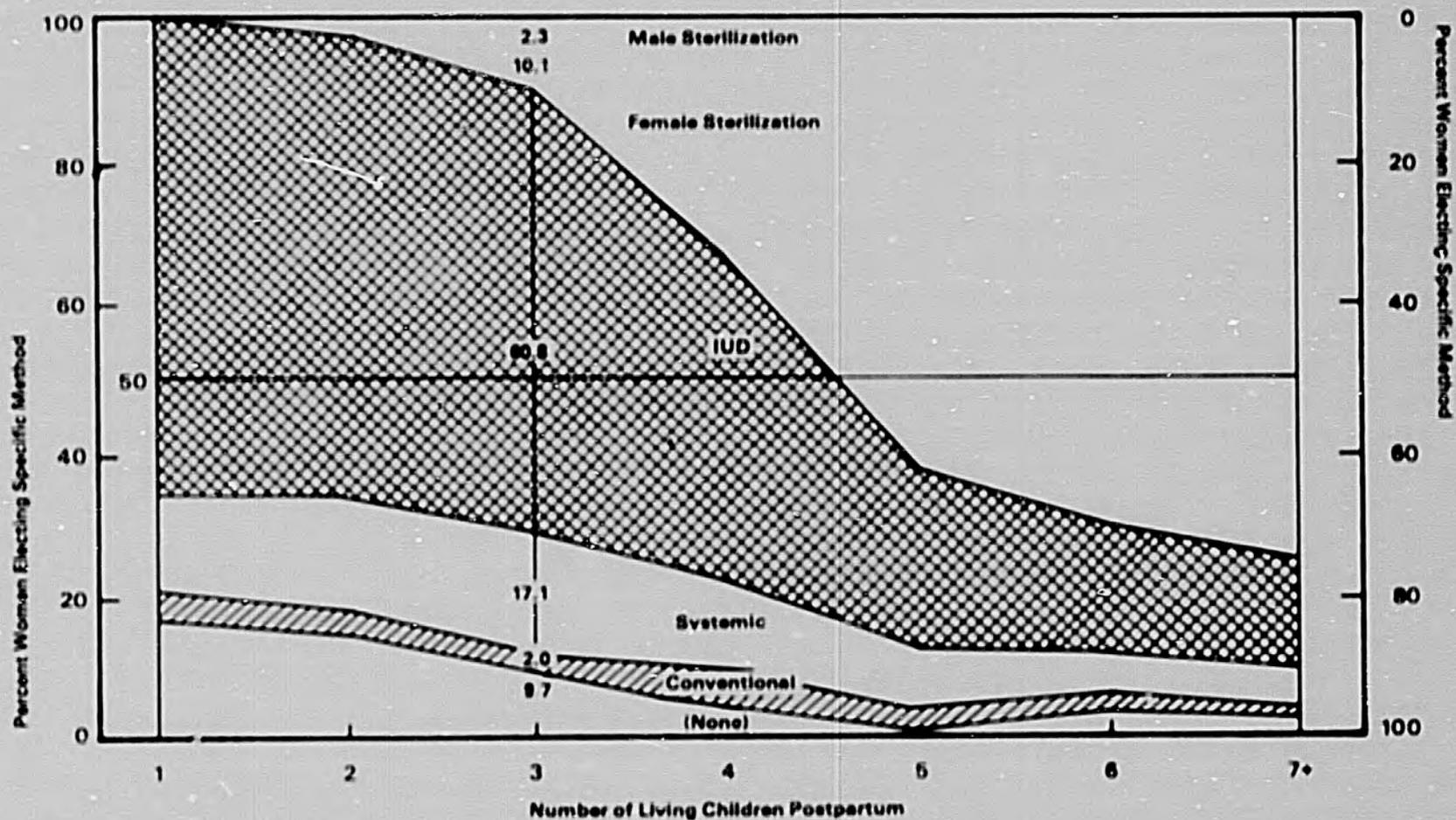


Figure 1 - Present Women Electing Specific Contraceptive Method Postpartum by Number of Living Children Postpartum, N = 2672.

MATERNITY CENTER POSTPARTUM CONTRACEPTIVE PROFILE BY METHOD AND LIVING CHILDREN  
 PROVINCIAL REFERRAL HOSPITAL  
 MEDAN, INDONESIA  
 IFRP - FIGO 1978

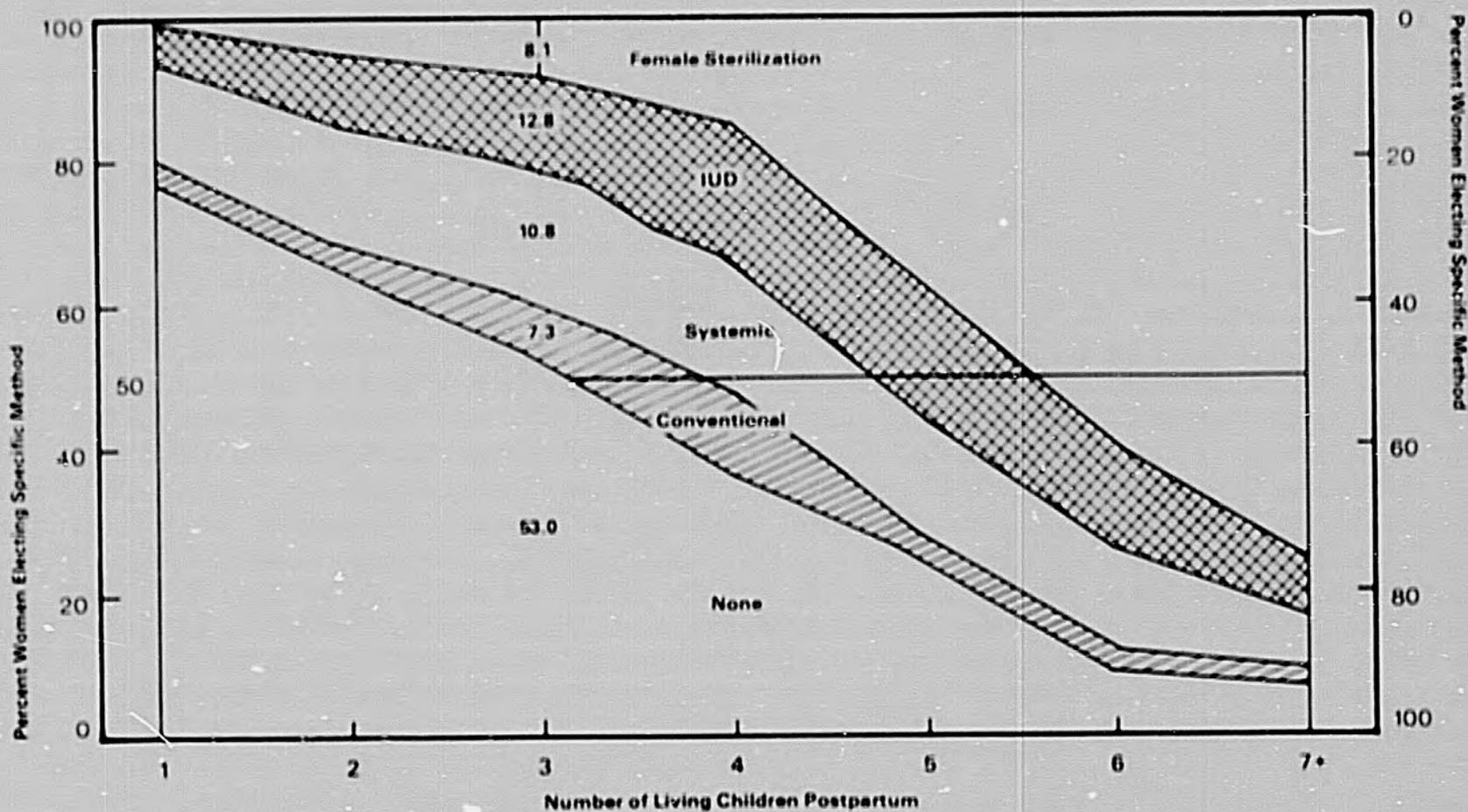


Figure 2 - Percent Women Electing Specific Contraceptive Method Postpartum by Number of Living Children Postpartum, N = 2034.

MATERNITY CENTER POSTPARTUM CONTRACEPTIVE PROFILE BY METHOD AND LIVING CHILDREN  
 HASAN SADIKIN HOSPITAL  
 BANDUNG, INDONESIA

IFRP - FIGO 1979

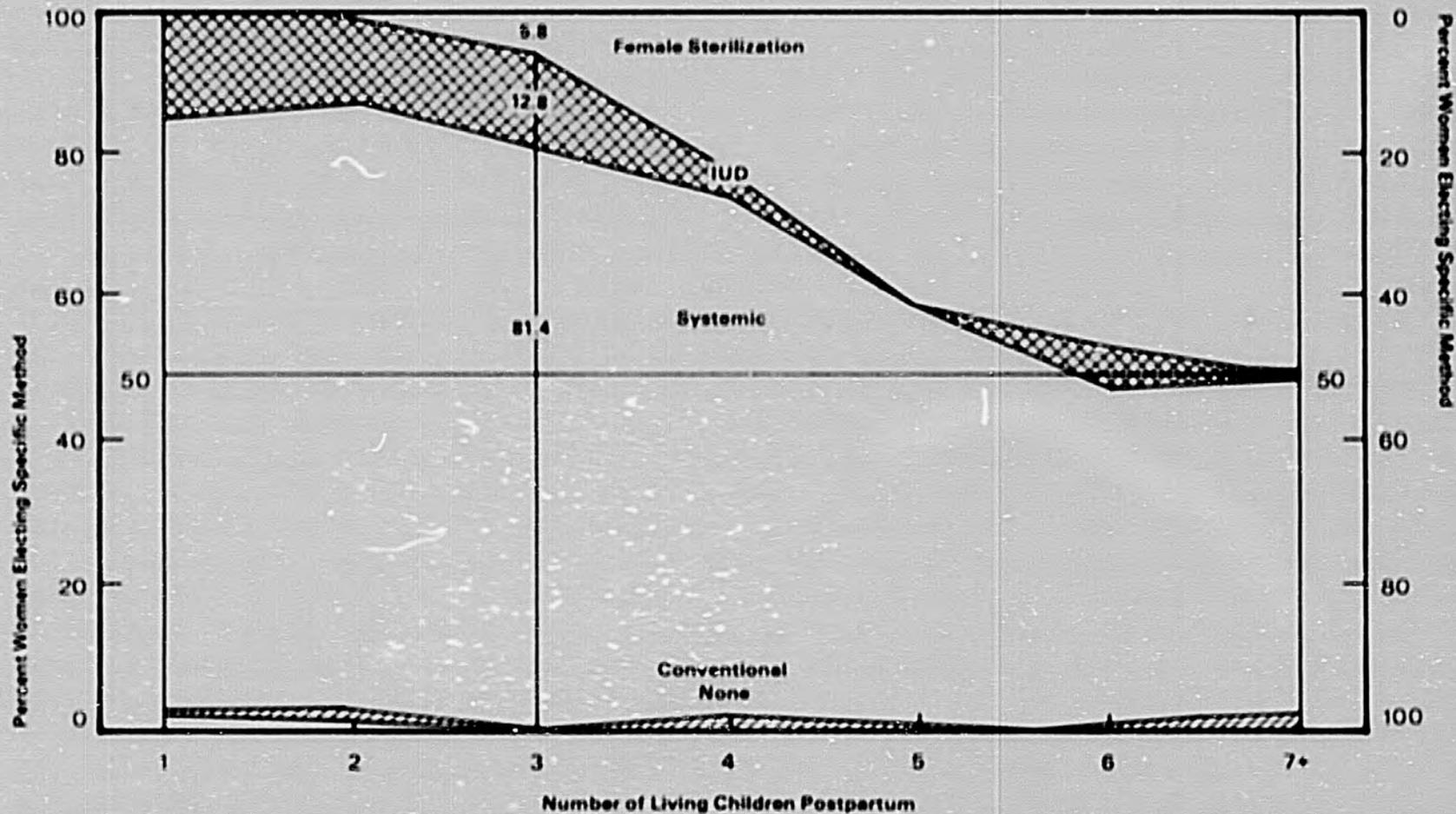


Figure 3 - Percent Women Electing Specific Contraceptive Method Postpartum by Number of Living Children Postpartum, N = 638.

## Postpartum Contraceptive Profiles

The Maternity Record collects information on the contraceptive method planned or provided postpartum. Figures 1-3 give the specific methods planned or provided by the number of living children that the women have postpartum for three selected centers.

The profile indicate several major difference among the centers. Both The University of Jakarta Medical College (Fig. 1) and the Provincial Referral Hospital in Medan (Fig. 2) show similar patterns of female sterilization as the contraceptive preference. Like wise systemic and conventional contraception follow similar pattern in these two centers. It appears that the only major difference between these centers is in the non-acceptance of contraception and in the acceptance of IUDs. For example, 60.8% of the women with three living children choose IUDs in the center in Jakarta versus 12.8% in Medan choose not to contracept at three living children.

The profile for the Hasan Sadikin Hospital in Bandung (Fig. 3) shows a pattern of postpartum contraception which is markedly different from the other two centers. Fewer women at all numbers of living children choose female sterilization. Systemic contraception is chosen far more than any other method. Also, the proportion of women choosing no contraceptive method postpartum is very small.

The large gap between the non-acceptance of contraception in the Centers in Medan and Bandung may reflect in part varying institutional practices in the provision of advice concerning postpartum contraception. The domination of specific methods in specific centers, for example, IUDs in Jakarta (Fig. 1) is an interesting phenomenon which merits further investigation.

## Female Sterilization

The Maternity Record elicits information on the number of additional children each woman wants following this delivery. In many of the Indonesian centers, women who want no more children specify female sterilization as their postpartum method. Table 8 gives these rates by center. The percentages desiring female sterilization among women wanting no more additional children ranges from a low of 21.5% in the center in Manado to a high of 76.1% in the center in Medan. Among these women desiring female sterilization, between 52.0% (Center in Yogyakarta) and 95.8% (Center in Malang), actually get sterilized during this admission to the hospital for delivery.

The high percentages of actual sterilization among women desiring female sterilization in most of the centers indicate that these hospitals are responding to the expressed desires of the women they are serving.

## SUMMARY

The crude birth rate for Indonesia is 40%. The deliveries are conducted at hospitals, peripheral health centers and mostly at home attended by the traditional birth attendants who have had no training.

A variety of problems came out from the preliminary result of the Maternity Record Study in Indonesia that require re-

solution on a national scale.

According to the above factors, it is urgent that Maternity Care Monitoring (MCM) for Indonesia be expanded to include representative samples.

It is also essential that a study design reflect the actual conditions that prevail in the country. For example most maternal deaths cannot be recorded on available forms. Also, differences in hospital facilities, policies of the management of delivery and cultural attitudes need to be considered to obtain reliable data.

The following objectives should be implemented:

1. a) The Government of Indonesia through the Ministry of Health and the Family Planning Coordinating Board should be actively involved in Maternity Care Monitoring.  
b) A continuous period of time (at least 5 years) for data collection is necessary in order to enable us to compare and evaluate the progress of different levels of maternity services from year to year.
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4. Proceedings of the 1st Indonesian Congress of Ob. & Gyn.: Maternal Mortality in Medan Top Referral Hospital, Maternal Mortality in Soetomo Hospital (Surabaya); Jakarta, 1970.
5. Proceedings of the 2nd Indonesian Congress of Ob. & Gyn.: Maternal Mortality in Hasan Sadikin Hospital (Bandung); Surabaya, July 1973.
6. Proceedings of the 3rd Indonesian Congress of Ob. & Gyn.: Maternal Mortality in Medan Top Referral Hospital, Maternal Mortality in Denpasar General Hospital (Bali), Maternal Mortality in The Gadjah Mada University Hospital (Yogyakarta); Medan, June 1976.
7. Proceedings of the 4th Indonesian Congress of Ob. & Gyn.: Maternal Mortality in Cipto Mangunkusumo Hospital (Jakarta), Maternal Mortality in Hasan Sadikin Hospital (Bandung), Maternal Mortality in Kariadi Hospital (Semarang), Maternal Mortality in Sanglah Hospital (Bali); Yogyakarta, June 1979.
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10. Tajuluddin T.: Maternal Mortality in Cipto Mangunkusumo Hospital (Jakarta); 1969 - Indonesia.

# MATERNITY CARE MONITORING (MCM) — WHERE NEXT?

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## ABSTRACT

The history of use of a standard maternity record, which was developed cooperatively by the International Fertility Research Program (IFRP) and the International Federation of Gynecology and Obstetrics (FIGO), is summarized. In order to examine its monitoring capability, selected variables are observed over time in experimental analyses. Then, a geographic gradient of perinatal mortality is established to serve as an experimental work tool (abacus) for (1) peer review of pregnancy outcome and management variables among hospitals, and (2) indications of relationships of variables pertaining to various disciplines (health, behaviour, management, etc.) which need further in-depth study. Unexpected variations within a country would thus identify the need for local study of less known patterns that may lead to new knowledge. Data on deliveries in 24 Asian maternity centers are the focus of this analysis.

The findings of maternity record studies in diverse maternity centers in both developing and developed countries indicate important gaps in service delivery and the need to develop standards of maternity care that are country-specific. The concept of Maternity Care Monitoring (MCM) is presented as a continuous process of improving maternity services through involvement of providers of services in the collection and evaluation of locally useful information. While this experience is most easily demonstrated in teaching centers, it is obvious that the greatest need is in peripheral centers where deliveries are conducted by trained midwives and even more so for the services rendered by traditional birth attendants (TBA). A pyramid structure to conceptualize the need is presented. Strategies for implementation of MCM using computerized record systems at institutions are discussed. Finally, recommendations for the next steps in generalizing Maternity Care Monitoring for the evaluation of Maternal and Child Health (MCH) components are made.

## 1. INTRODUCTION

Maternity Care Monitoring (MCM) is a "field-born" service research activity as opposed to a "desk-born" agency study design. The experience of the Contributors to the International Fertility Research Program (IFRP) in recording information during studies of abortions and trials of various contraceptives was the catalyst in the creation of MCM. Contributors became aware of an uneven effort in clinical research of human reproduction. While clinical testing of

newer developments in fertility control technology and abortion reporting were being emphasized, many Contributors began to identify an unmet need: the accounting of maternity care. Stillbirths and neonatal and maternal deaths — always the undesirable events in the maternity ward — did not get the attention necessary for improvement of pregnancy outcome. The lack of a system to achieve this became apparent to increasing numbers of physicians.

In Khartoum, Sudan, a cooperative three-hospital study of spontaneous abortion led to the realization that the rich information gained from a single-sheet hospital abortion record completed for more than 3000 cases would be even more valuable if information could be routinely collected from women giving birth at the institution (1, 2). A continuous "maternity survey" was needed to identify and then monitor problem areas where specific intervention was necessary for improvement. In Manipal, India, a contraceptive study in one institution led to similar reasoning: the recorded patient characteristics yielded consistent information on the patients' reproductive histories that should be available from all women giving birth at that institution and in some satellite centers (3). In Singapore, the testing of contraceptive technology (4) and the recording of information on first spontaneous and then induced abortions (5) made the request for studying the delivery itself a logical extension of the clinical studies.

The study of "spontaneous" abortions in both the Sudan and Indonesia raised the question of contraceptive practice after abortion (6). In both places, the extension of this question to women having hospital deliveries was only one small step.

The IFRP assisted several Contributors in the development of a local maternity record. Initially, this was "on the spot" conceptualization, with the Contributors taking the initiative. The experiences in Khartoum and Manipal are noteworthy in that their feedback to the IFRP headquarters in the USA prompted the development of a universally applicable "maternity record" during a trial-and-error period of more than two years.

By early 1976, the requests from dozens of IFRP Contributors led to preparations for an international pretest of a maternity record form. In April of that year, the International Federation of Gynecology and Obstetrics (FIGO) joined the IFRP in cosponsoring a pretest in approximately 30 maternity

centers around the world. Six months later, the preliminary results were presented to the Executive Board of FIGO at the VIII World Congress of Gynaecology and Obstetrics in Mexico (7, 8). This led to a formal working relationship between FIGO and the IFRP and a recommendation to expand the pre-test to 700 maternity centers and 700 000 deliveries (9).

The term "maternity care monitoring" was coined (as opposed to maternity care studies) to stress the need and potential of routinely completing a record that would lead to systematic feedback. This procedure would become a work tool to systematically identify unmet needs of management in the maternity ward before, during and after the delivery (10).

As part of the clinical record, physicians and midwives routinely collect data that is returned to them in the form of preprogrammed computer tables organized around four major themes:

- (a) family formation and reproductive experience,
- (b) family health and lactation,
- (c) clinical management and outcome of the current delivery including antenatal care, and
- (d) desired family size and contraceptive intentions/practice.

The systematic analysis of this information led to the recognition of a new data source of an inter-disciplinary nature that could be provided rapidly and cost effectively. The strength of this system of service statistics lies in its motivation and guidance of health and reproductive care professionals to take effective action based on their own findings (11).

The Division of Family Health of the World Health Organization reviewed the preliminary analyses and data collection instruments in the winter of 1977. Helpful suggestions were made including the use of antenatal conditions as defined by the 9th revision of the International Classification of Diseases (ICD-9). WHO encouraged both FIGO and IFRP to broaden the testing for two years at the institutional level, but also urged a move toward peripheral centers where the need is greatest (12).

At the 1978 meeting of the Executive Board of FIGO, the Board formally recommended the Maternity Record to all national societies of obstetrics and gynaecology (13), and asked that a report be given at the IX World Congress of Gynaecology and Obstetrics in Tokyo in October 1979.

Meanwhile, the first national experience with the Maternity Record, a stratified random sample of 40 urban hospitals in Colombia, was in progress (14). This first national profile of management of maternity care was used by the Ministry of Health to identify areas needing improvement in the Colombian maternity care system.

The monitoring of the reproductive histories of women who deliver fostered the initiation of the systematic identification and quantification of high-risk pregnancies and of risk factors (eg. smoking) in a specific center (15) and in various maternity centers around the world (16, 17). Thus, the health theme became linked with MCM.

The systematic analysis of postpartum contraceptive

intentions/behaviour in light of family size expectations in all MCM studies conducted in Asia revealed the need for more realistic contraceptive services in urban maternity centers and identified and quantified high-risk groups for (a) future short birth intervals and (b) unwanted pregnancies (18). (See Table I and Fig. 11-2).

The purpose of this paper is to build upon the past experience, to further inquire into the feasibility and possibilities of monitoring by studying trends and patterns of selected variables pertaining to health and reproductive and contraceptive intentions in various maternity centers, and to conceptualize "where next" MCM could make its earliest and most signal contribution to improve maternity care and pregnancy outcome.

## II. MATERIALS & METHODS

Approximately one quarter million deliveries in over 100 maternity centers in developing and developed countries have been reported to date on the Maternity Record. After three years of carrying out Maternity Record studies, it is now possible for heads of departments of obstetrics and gynaecology to finally know where they stand compared with other maternity centers in their own country and in other countries. Actually, certain findings are so "impressive" with regard to their consistency that one is tempted to make generalizations about the community where the maternity center is located without awaiting the necessary validation from community surveys in the respective catchment area of a given maternity center. Hence, it should be stressed that results are based on data on women from particular clinic settings and are not meant to be interpreted as representative of more than the patient population of the clinic for this maternity service for the reported period.

This report restricts itself to analysis of data from 24 maternity centers in Asia, each with completed records on 700 or more consecutive deliveries. The analysis was further restricted to four Asian centers for trend studies (study of changes over time within a given maternity center) since a minimum time span of recording of one year was needed. To promote interest in important study areas not addressed in the present analysis, some results from previous analyses are shown.

## III. MATERNITY RECORD STUDY RESULTS: PATTERN & TREND STUDIES

The idea of a "standard record" has gained acceptance in the minds of leading obstetricians and gynaecologists. By contrast, administrators of health and family planning programs have still to discover the potential of this record system.

To prove the practical usefulness of this feedback beyond the writing of study reports, the information must be used for decision-making on how to change the management of delivery to improve pregnancy outcome. Various institutions assert that the filling out of the Maternity Record and subsequent feedback has changed "many things for the better." Still to come, however, is the point when and where a specific change in management of delivery can be documented to have improved pregnancy outcome. For the time being, we may speak of empirical recording that generates a general awareness of various unmet needs.

In a previous analysis (19), stillbirths of the current delivery were found to be inversely associated with the number of antenatal visits (Fig. 3). Whether this readily available information is being fed back to the administrators of maternal and child health (MCH) programs has not been ascertained as yet. In an

analysis on stillbirths and birthweight (9). stillbirth rates of the current delivery were found to follow the reversed J-shaped pattern across increasing birthweight (16), as shown in Fig. 2. In addition, it was noted that the risk of stillbirth for low-weight babies is quite similar in centers in Africa and Asia, but for infants weighing between 2500 and 4000 gm, there was a ten-fold difference in this risk between the two centers (Fig. 2). Such comparisons among centers across countries indicate a

consistency of findings in terms of the pattern of the relationship while showing the differences in magnitude of such relationships. This supports the notion of the feasibility of technical comparability of MCM across geographic and cultural boundaries. However, the real value of future analyses lies in intracountry comparisons and further inquiries into the different risks of stillbirth, etc., by place.

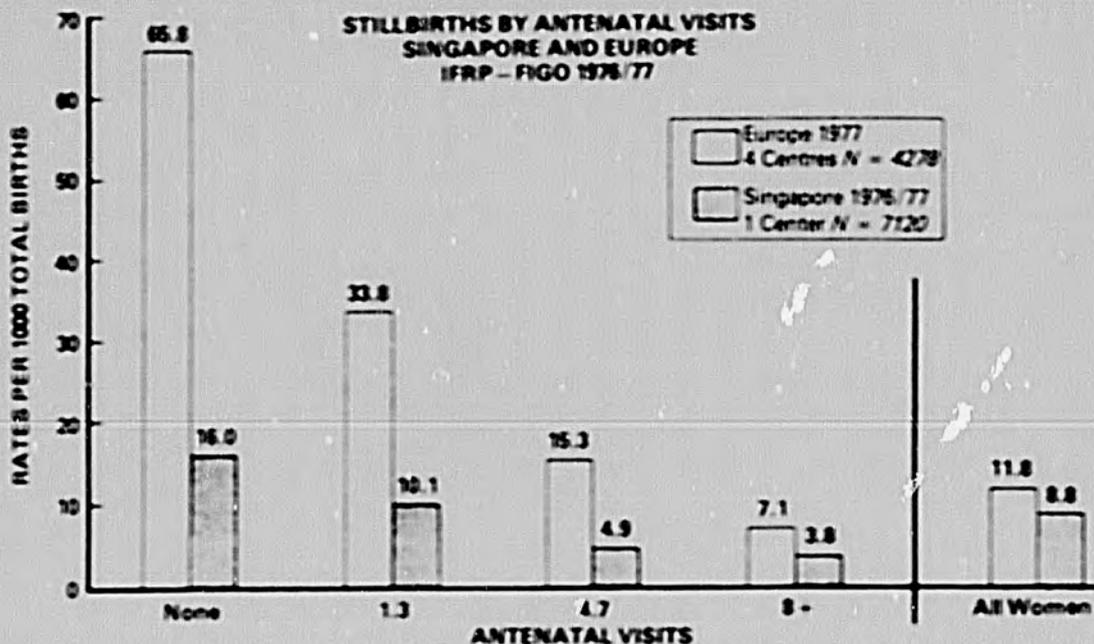


Figure 1 - Stillbirth by Antenatal Visits for Four Combined Centers in Europe and One Center in Singapore. Source: Expanded Maternity Record Project, N = 33,000 Deliveries.

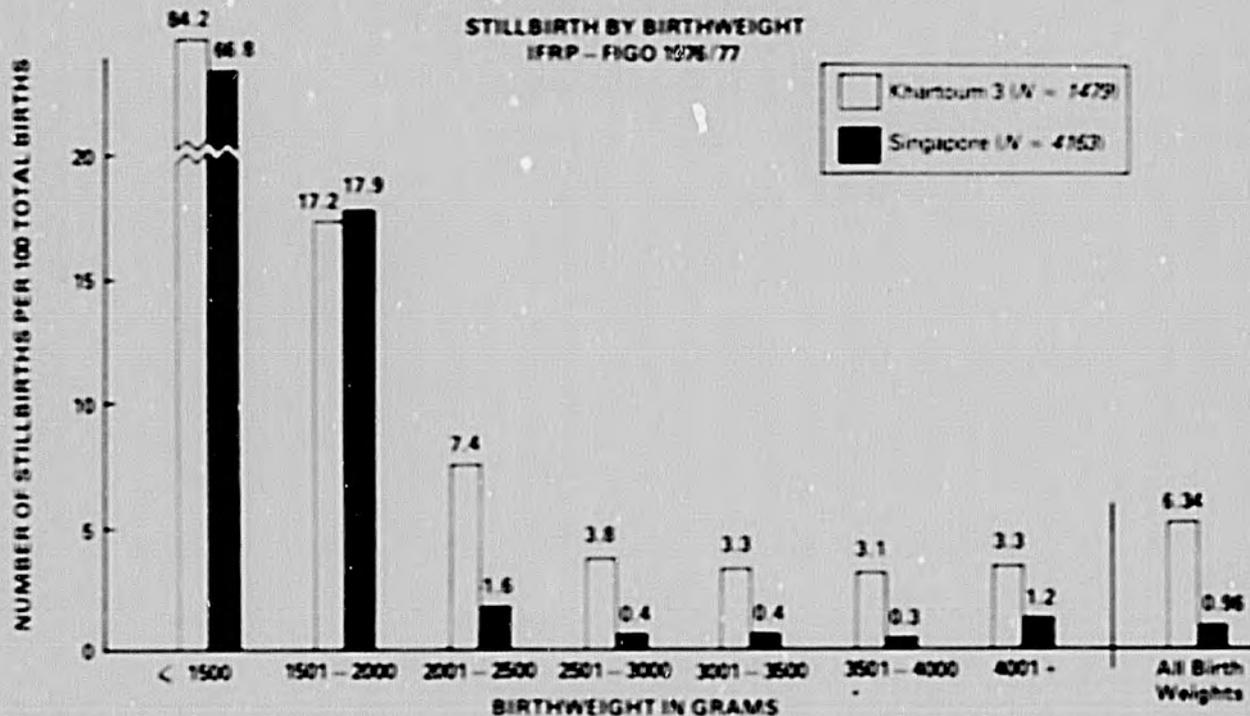


Figure 2 - Stillbirth by Birthweight for Two Contrasting Data Sets. Khartoum - 3: 6.34 versus Singapore - 76: 0.86 Stillbirths per 100 Total Births. Source: Expanded Maternity Record Project, N = 33,000 Deliveries.

Yet another basic question awaits an overdue answer. Is the Maternity Record able to monitor over time? In this sense, monitoring implies consistent measurement over time. Hence it is only through trend studies that the feasibility of monitoring of maternity care can be examined. Given that, for lack of opportunity, MCM has not yet reached a stage when it measures improvements in pregnancy outcome as a consequence of specific management interventions, the overdue inquiry into the feasibility of monitoring was restricted to studying contrasting pairs of variables that should exhibit characteristics specific to a given center (which exist because of different community profiles and different admission policies of a given maternity center), but that would have a different evolution over a relatively short time.

- (1) The relationship between two variables, hemoglobin, which is an indicator of the mother's nutritional health status, and birthweight (of the current delivery) is expected to undergo no significant change, both in their frequency distributions and relationship. In other words, this health theme is expected to show basic inertia over time at a given maternity center. The expectation is that two different cohorts of women should be similar with respect

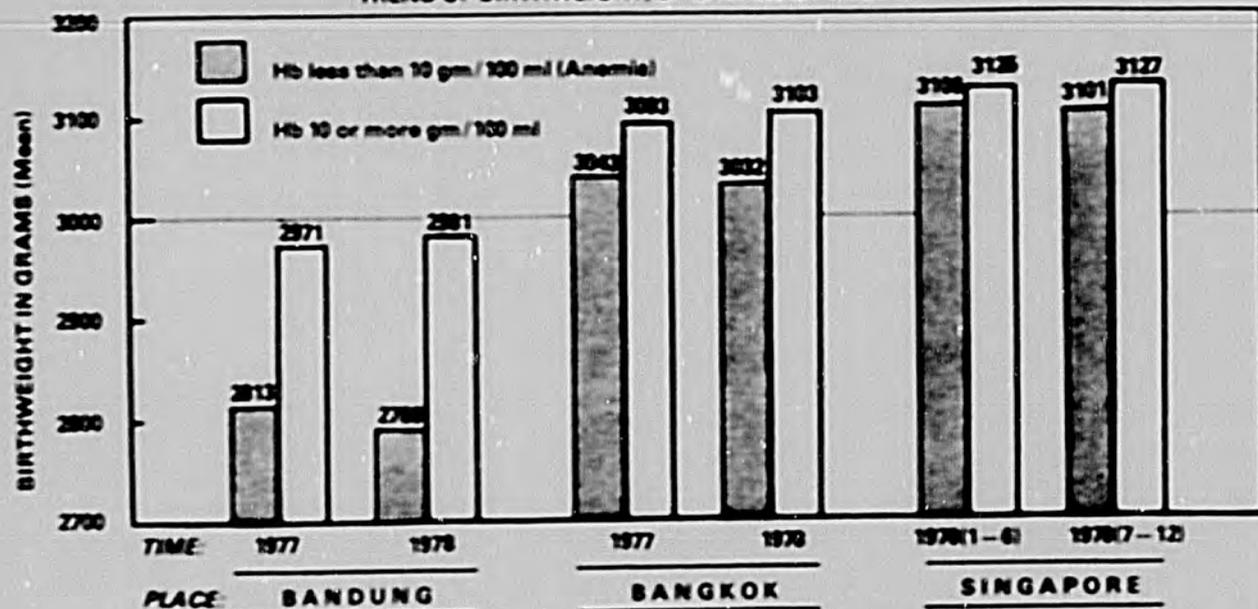
to these two variables for a given maternity center. If this could be demonstrated for various centers, the notion of the monitoring capability is strengthened.

- (2) In contrast to these health variables, the second pair of variables may be labelled "behaviour" variables (the mother's fertility intentions and reproductive attainment). The expectation is that if the system is indeed monitoring over time, it should pick up expected downward shifts of reproductive attainment and desired family size. In other words, this behavioral trait is expected to show a measurable decrease over time in a given maternity center.<sup>1</sup>

In essence, we have reached into the spheres of health and behaviour to examine the capability of monitoring maternity care by the MCM system. Notwithstanding a satisfactory outcome of the findings, the decisive test of maternity care monitoring will have to address an experimental design whereby in the absence and presence of an intervention in the management of pregnant women, a significant improvement of various pregnancy outcome events can be documented.

<sup>1</sup> For a third inquiry, see page 13.

### TREND OF BIRTHWEIGHT, BY STATUS OF ANEMIA



Place	Time	Number of Women	% Women with less than 10 gr Hb/100 ml	MEAN BIRTHWEIGHT (in grams)		
				less than 10 gr Hb/100 ml	10 or more gr Hb/100 ml	Total
Bandung	1977	1414	13.4	2812.7	2971.3	2950.0
	1978	1539	16.9	2788.8	2980.6	2948.2
Bangkok	1977	1937	2.7	3043.3	3082.5	3091.2
	1978	3288	2.6	3031.8	3102.8	3100.9
Singapore	1977/1-6	1106	5.4	3106.3	3124.5	3123.5
	1977/7-12	1582	5.9	3100.6	3127.0	3125.5

Figure 3 Trend of Birthweight by Status of Anemia in three maternity centers in Asia. Singleton deliveries only.

Source: 1979 MCM Trend Analysis.

Meanwhile, the available data permit preliminary inquiries into expected relationships of selected variables over time<sup>2</sup>.

#### Trend of Birthweight by Status of Anemia (Fig. 3)

As expected, the mean birthweights of current singleton deliveries for two cohorts of women within a given center were similar. Among the selected maternity centers in Asia, the mean birthweight for the two cohorts were found to be highest in the center in Singapore (3124 and 3126 gm), barely lower in the Bangkok center (3091 and 3101 gm), and considerably lower in the center in Bandung (2950 and 2948 gm). Furthermore, in all the centers there was conspicuous absence of variation over time of the mean birthweight for the two cohorts of women when controlling for the status of anemia (Fig. 3). There were, however, similar differences in mean birthweights between the anemic and non-anemic women in each cohort within a maternity center. Specifically, the difference in mean birthweights for anemic and non-anemic women was smallest in the maternity center in Singapore (19 gm for the first cohort, 26 gm for the second cohort), greater in the Bangkok center (50 gm; 71 gm) and greatest in the center in Bandung (158 gm; 192 gm). Also, the proportions of women who are anemic (Hb less than 10 g/100 ml) were similar for the two successive cohorts: in Bandung 13.4% and 16.9%; in Bangkok 2.7% and 2.6%; and in Singapore 5.4% and 5.9%. In sum, the community health theme at the maternity care centers was similar for the two time periods considered.

#### Trend of Fertility Attainment & Desired Fertility by Attainment (Figs. 4-5)

Fig. 4 shows age-specific reproductive attainment for the two cohorts of women studied in Singapore, Bangkok and Bandung. A marked downward trend at higher ages is found in the centers in Singapore and Bangkok<sup>1</sup>. By contrast, in the center in Bandung the fertility attainment at higher ages increased.

Such variations over time of reproductive attainment lead to specific hypotheses that may be verified in loco. The downward trends noted at higher ages in the centers in Singapore and Bangkok seem to indicate a *decline in fertility*. In the Bandung center, could the upward trend be reflective of a slowly improving referral system where high-risk pregnancies from rural areas are more frequently referred to this center? An increasing proportion of mothers with no prenatal care over the same time period in this center supports this explanation. Also, a greater proportion of women were anemic (Fig. 3). These hypotheses need to be tested further.

The bivariate patient characteristics reported on a continuous basis to the maternity ward that were particularly attractive for the examination of "trend consistency" are:

- (a) reproductive attainment and
- (b) number of additional children wanted.

A standardized way of presenting the findings of this

<sup>1</sup> This is consistent with findings from the World Fertility Survey (32; Fig. 1).

<sup>2</sup> Minimum time period for picking up a genuine change over time in a maternity center through comparison has not been determined. In this experimental analysis, a period of six months was used for one center and a period of one year was used in the other centers.

solicited information is to give the proportion of women wanting additional children according to the number of living children postpartum. To date, four maternity centers in Asia have been submitted to a trend analysis of desired fertility. In all four centers, a consistent shift of the curves to lower desired fertility is noted, as shown in Fig. 5. The grey areas represent the downward shift to the left, to lower desired fertility. Some experimental indices to follow changes in desired family size and contraceptive acceptance in patient populations are described in the List of Indicators (page vi).

The consistent downward shift in desired fertility in these centers most likely reflects a trend which gives an *early indication* of changes in fertility intentions in the patient population. Routine production of this timely information may assist local decision-makers, if brought to their attention, in policy and planning activities.

#### Trends & Patterns of Family Planning Intentions Postpartum (Figs. 6-9)

(3) As noted in Fig. 5, there was a measurable *decline* in desired fertility in the center of Singapore, as well as a measurable *decline* in attained fertility (Fig. 4). The third expectation was that if family planning information and services were fully available then at least postpartum contraceptive intentions should undergo a measurable *increase* over the same time period.

Earlier published findings showed for these same two cohorts in Singapore an increase in the election of surgical contraception (defined as sterilization and IUDs), and a decrease in the election of no contraceptive method (19) as shown in Figs. 6 and 7. For example, among women with three living children, the proportion who elected no contraceptive method postpartum decreased from 10.1% to 0.9% and the proportion who elected surgical methods increased from 45.1% to 47.6%. In sum, intentions of *fertility* and intentions of *contraception* shifted inversely for the period considered<sup>1</sup>.

One necessary conclusion is that MCM applied in both urban and rural maternity centers may provide the very *raison d'être* of family planning information and services in the respective communities. Hence, MCM can make an important contribution to any Ministry of Health's system for evaluating maternity care. Any family planning programme will benefit from this continuous evaluation tool that provides, among others, information on *fertility and contraceptive intentions*.

Ministries of Health can also obtain *patterns by place* that convey important differential information. A recent analysis of Asian studies showed that in Indonesian centers, there were very large differences in *fertility intentions* (18). The women in the center in Medan showed much higher fertility intentions than those in Jakarta. A similar difference was observed in an analysis of *contraceptive intentions* (20) as shown in Figs. 8-9. While in Jakarta only 9.7% elected no contraception among women with three living children, the corresponding proportion in Medan amounted to 53.0%. The two contraceptive profiles also convey the impression that the surgical contraceptive services are an important component of institutional maternity care. In the Jakarta center, 71.2% of the women with three living children elected surgical methods while in Medan only 20.9% elected surgical methods (sterilization/IUDs).

<sup>1</sup> This empirical relationship is supported by the prospective experience in Taiwan where intentions strongly predict fertility (33, 34).

MEAN PARITY (Including this Delivery). BY AGE

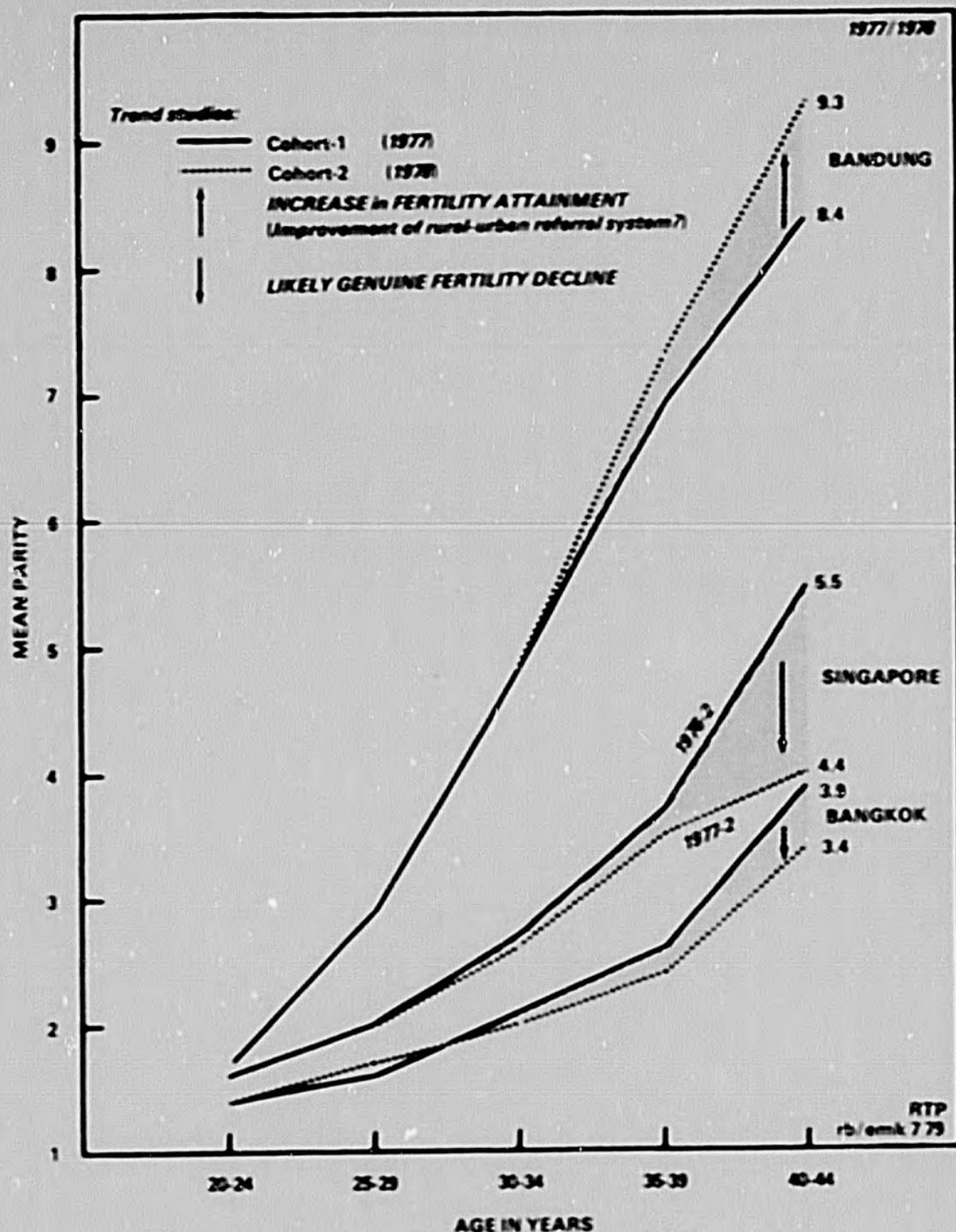


Figure 4 — Trend of Fertility Attainment in three Maternity Centers in Asia. Place-specificity and change over time of a demographic theme.

Source: MCM-Trend analysis, July 1979.

DESIRED FERTILITY BY LIVING CHILDREN POSTPARTUM ASIA:  
4 trend studies  
4 Selected Centers; 22 681 Women

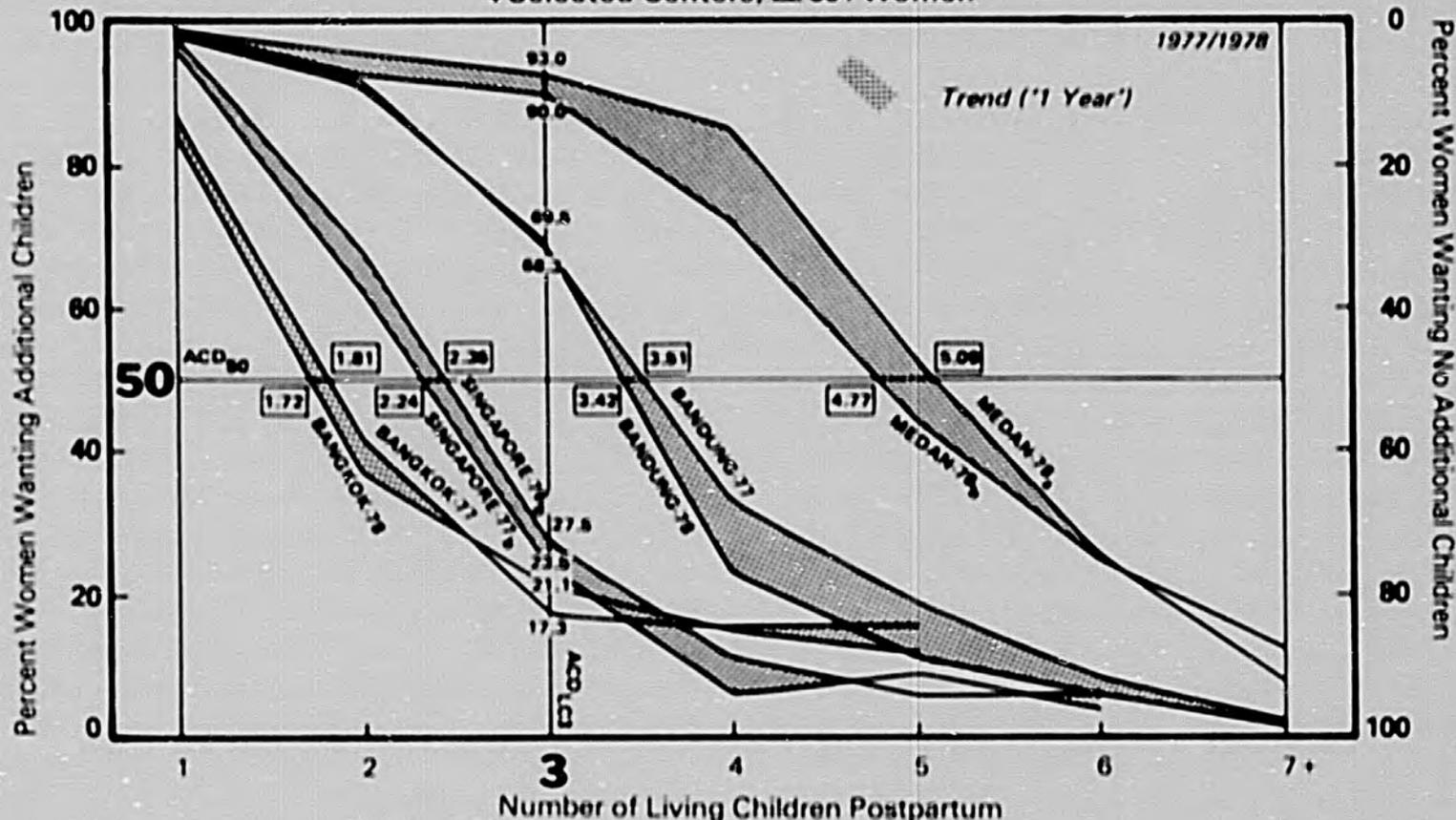


Figure 6 — Percent Women Wanting Additional Children Postpartum by Number of Living Children Postpartum. Additional Children Desired-Fifty (ACD<sub>50</sub>), the interpolated number of living children at which 50% of the women went and 50% do not want additional children, ranges from 5.09 (Medan-78a) down to 1.72 (Bangkok-78). The percent women with three living children wanting additional children ranges from 93.0% (Medan-78a) down to 17.3% (Bangkok-77).

The four pairs of curves stand for 2 cohorts of women delivering at a specific maternity center of the indicated city. All desired fertility profiles show a cross-sectional shift that is greatest for the profile with highest desire fertility (Medan, ACD<sub>50</sub>: 5.09-4.77). Note that the two pairs of curves to the right stand for maternity centers in distant regions of Indonesia; yet the majority of women with 3 living children postpartum want additional children (ACD<sub>L</sub>: 93.0% - 68.3%). By contrast, in the centers of Singapore and Bangkok the minority of women with 3 living children want additional children (ACD<sub>L</sub>: 27.5% - 17.3%).

Center-specificity and unidirectional variation over time would indicate the MCM system to be sensitive to patterns and trends of fertility intentions in the community as recorded at the maternity ward.

MATERNITY CENTER POSTPARTUM CONTRACEPTIVE PROFILE BY METHOD AND LIVING CHILDREN  
Singapore, 1976

IFRP - FIGO 1976/77

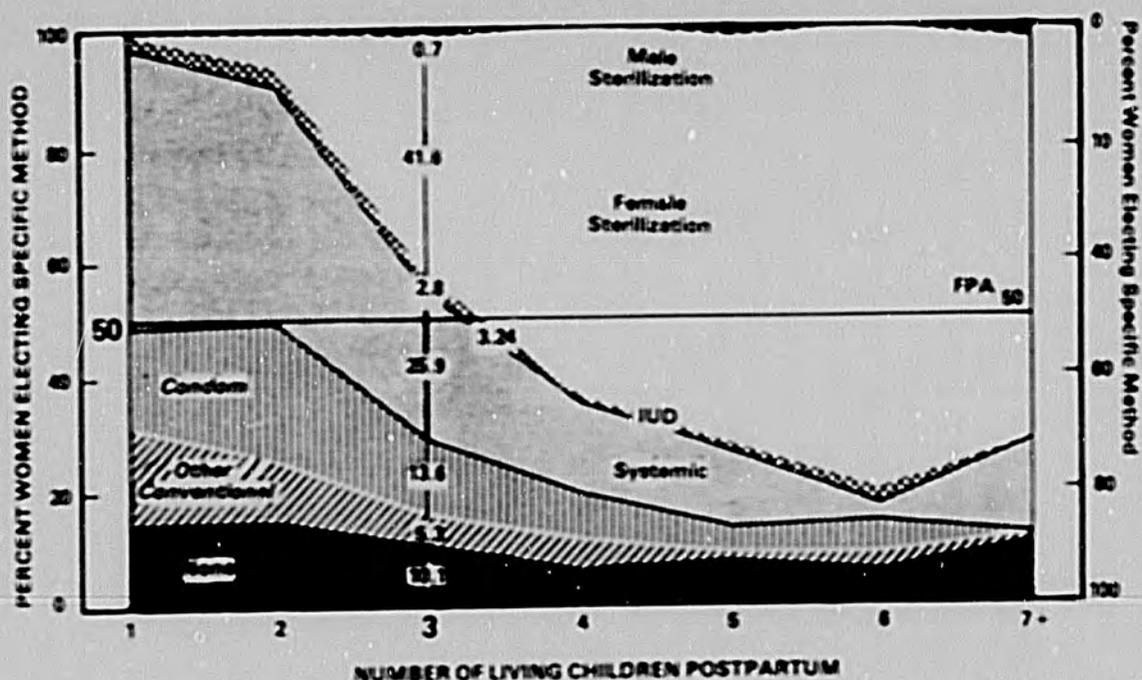


Figure 6 - Percent Women Electing Specific Contraceptive Method Postpartum by Number of Living Children Postpartum. Family Planning Acceptance-Fifty for Surgical Methods (FPA<sub>50</sub> SM): 3.24 Living Children. One Center in Singapore, 7-12/1976, N = 4358.

MATERNITY CENTER POSTPARTUM CONTRACEPTIVE PROFILE BY METHOD AND LIVING CHILDREN  
Singapore, 1977

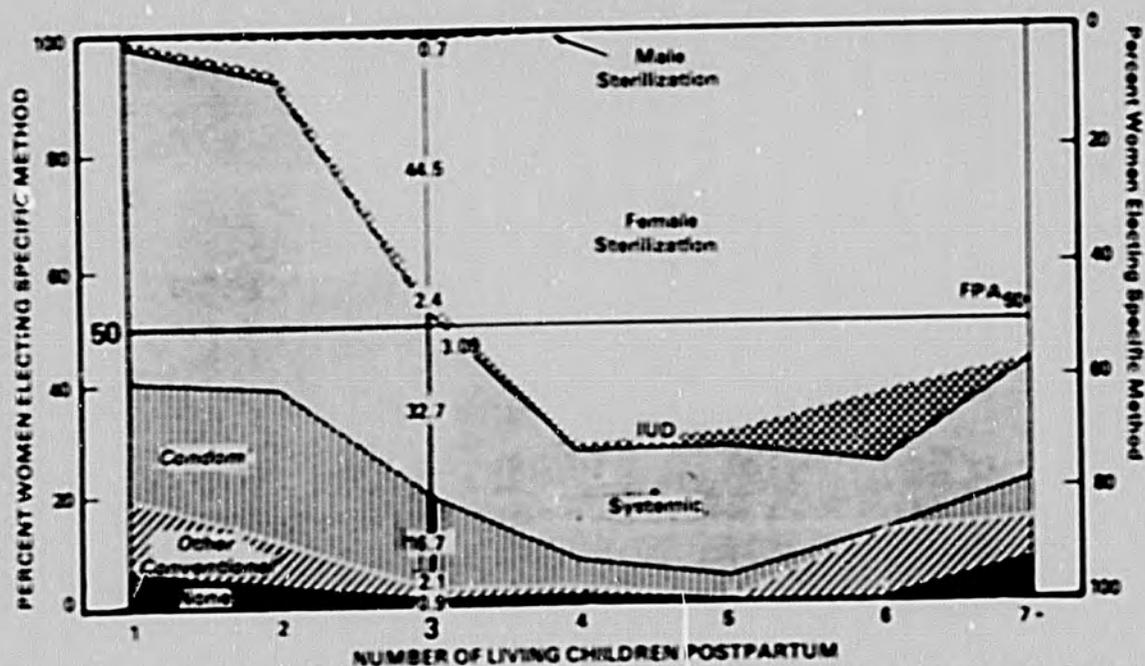


Figure 7 - Percent Women Electing Specific Contraceptive Method Postpartum by Number of Living Children Postpartum. Family Planning Acceptance-Fifty for Surgical Methods (FPA<sub>50</sub> SM): 3.09 Living Children. One center in Singapore, 1-6/1977, N = 2762. Source: Expanded Maternity Record Pretest, N = 33,000 Deliveries.

MATERNITY CENTER POSTPARTUM CONTRACEPTIVE PROFILE BY METHOD AND LIVING CHILDREN  
 University of Jakarta  
 Jakarta, Indonesia  
 IFRP - FIGO 1978

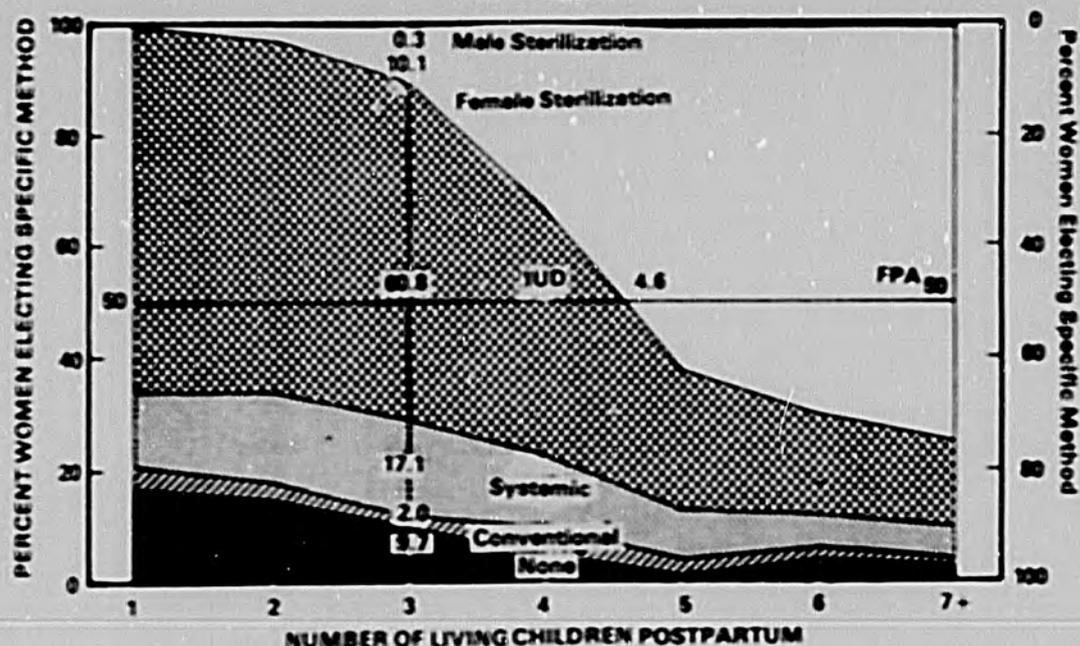


Figure 8 — Percent Women Electing Specific Contraceptive Method Postpartum by Number of Living Children Postpartum,  $N = 2672$   
 Family Planning Acceptance Fifty (FPA<sub>50</sub>S): 4.6 Living Children

MATERNITY CENTER POSTPARTUM CONTRACEPTIVE PROFILE BY METHOD AND LIVING CHILDREN  
 Provincial Referral Hospital  
 Medan, Indonesia  
 IFRP - FIGO 1978

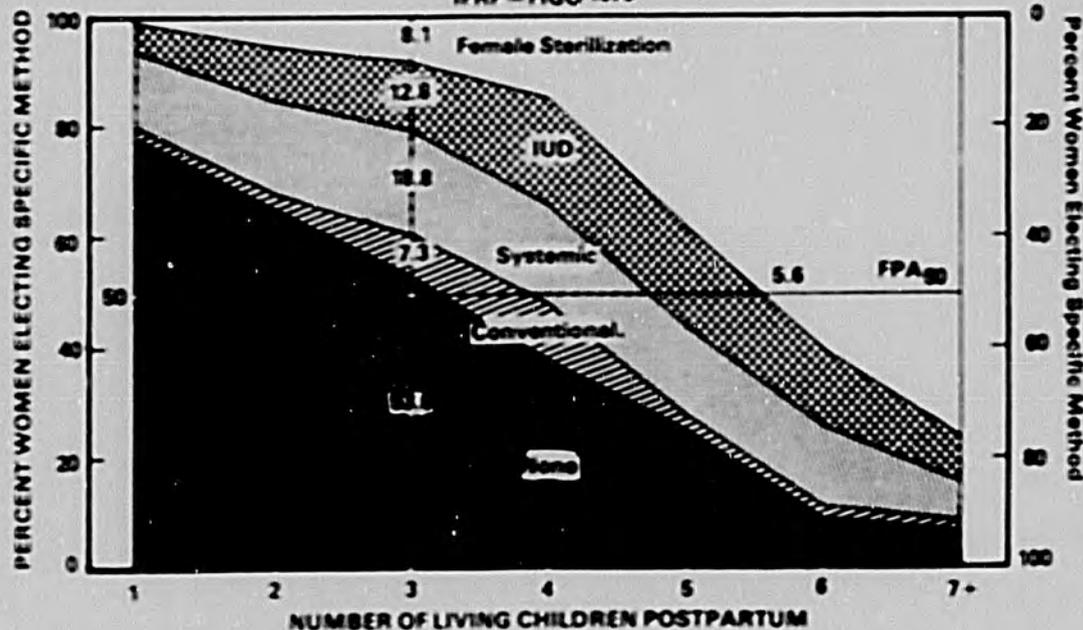


Figure 9 — Percent Women Electing Specific Contraceptive Method Postpartum by Number of Living Children Postpartum,  $N = 2034$   
 Family Planning Acceptance Fifty (FPA<sub>50</sub>S): 5.6 Living Children

#### IV. THE NEED FOR LOCAL STANDARDS OF MATERNITY CARE

Standards of maternity care are based on known facts, clinical intuition or administrative dictum. While it is generally desirable to base standards on facts, known facts are frequently largely irrelevant, especially in developing countries. We are all familiar with the transmission of misinformation from one edition of a standard book to the next in developed countries. When developing countries must base standards and teaching on the literature of developed countries, the problem is understandably much compounded. The risk-benefit ratio of various procedures in clinical practice may differ markedly, both between countries and within countries. The dictum "once a caesarean section, always a caesarean section" may hold for the West, but is probably poor practice, even in teaching hospitals of Pakistan (21).

The problem of obtaining relevant facts regarding maternity care within developing countries, where variations in standards of care are extreme, is even more difficult. Teaching hospitals, where the most accurate data are collected, are referral hospitals that serve a strongly biased patient population, who are treated with skills and equipment not generally available to most of the country. While data from teaching hospitals are certainly useful and necessary, they are not a substitute for data from maternity services typical of the rest of the country where perhaps 80% of the deliveries occur (22).

The annual reports of government and private maternity services could be a valuable resource, but they are generally of poor quality, not easily accessible and seldom utilized for comparative purposes in a manner that involves the personnel who provide the service.

If the data are to be used to establish standards and the standards are to be used to improve maternity services, then there are certain prerequisites to accomplish this task:

- (a) Uniform data must be collected that vary in detail by the level of training of personnel providing services.
- (b) A system of feedback of information to the service units collecting the data must assure speed and interest, i.e. the feedback must be digested into useful facts for service providers.
- (c) The data collection and analysis review should be utilized for training to upgrade skills.
- (d) Key indices from similar maternity services should be accessible in a ranked format for peer review.

In this way, standards are based on data locally developed, with maximum involvement of those who can improve services by knowledge of how their institution fares in comparison to others.

The authors believe that the Ministries of Health in various nations could initiate a professional spirit among the medical

and paramedical personnel to reduce unfavorable pregnancy outcome across the entire nation at an accelerated rate. The point of entry of such a drive is the maternity wards in both urban and rural areas followed by "sanitization".

Perinatal Mortality along a Geographic Gradient: Abacus (Fig. 10)

The Ministry of Health would wish to have access to the perinatal mortality rates of the maternity centers of the entire country at regular intervals. Regular peer review could help to improve the rates as it would identify training and staffing needs. In a given country, the centers with the extreme high and low values of perinatal mortality could be compared regarding management of delivery, personnel, equipment, patient characteristics, etc.

In the absence of complete institutional maternity record data from a given country, and for the purpose of demonstrating the potential national application of an experimental review method, the 24 Asian institutions presently recording data are used. It should be stressed that the potential of this review method lies in its national and not international application, and the charts presented in this section are to be interpreted as suggestive of the types of useful information which could be derived if MCM were applied on a national scale.

The perinatal mortality rates of 24 Asian institutions are presented across a geographic gradient of increasing median values of the centers' rates (Fig. 10-1). The centers fall into the following six levels of perinatal deaths: centers in

- (a) Tokyo, Singapore and Bangkok.
- (b) Sri Lanka.
- (c) India.
- (d) Indonesia.
- (e) Bangladesh and
- (f) Pakistan.

This geographic gradient of increasing perinatal mortality in respective institutions is then adhered to for plotting other variables with the expectation that the geographic order may persist, and if not, the observations might lead to inquiries for new knowledge.

The same geographic order of median rates was found to persist for stillbirths (Fig. 10-2) and, interestingly, for the absence of antenatal visits for the current delivery (Fig. 10-3).

Systematic study of some variables among the maternity centers in a given nation can provide a rationale for decisions to improve maternity care services across a nation. Furthermore, evaluation of any decision to improve services can be accomplished by continuing this same systematic study over time (= monitoring).

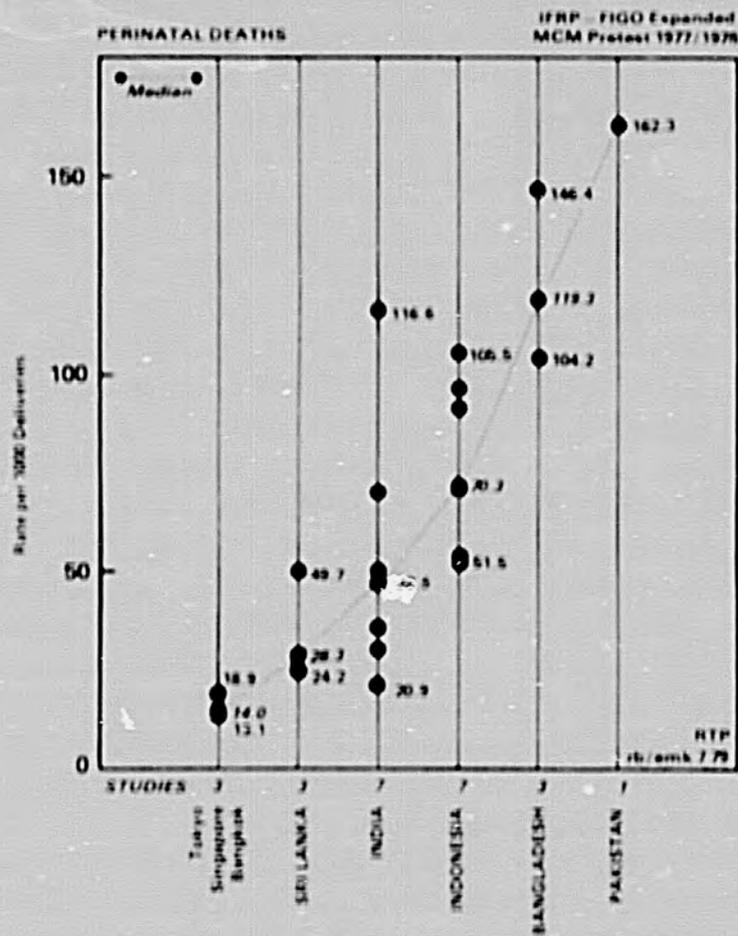


Figure 10-1 Rates of Perinatal Deaths recorded in 24 Asian maternity centers, arranged by country. Great variation within countries and a strong geographic correlation across countries is apparent. The highest rates are in the centers of Bangladesh and Pakistan, and the lowest rates are in the three maternity centers of Japan, Singapore and Thailand.

Source: 1978 MCM analysis, 24 Asian centers, 50,965 deliveries.

Definition: In the MCM scheme, the perinatal death rate is the sum of stillbirths weighing at least 1000 grams and neonatal deaths before discharge from the maternity center, per 1000 total births.

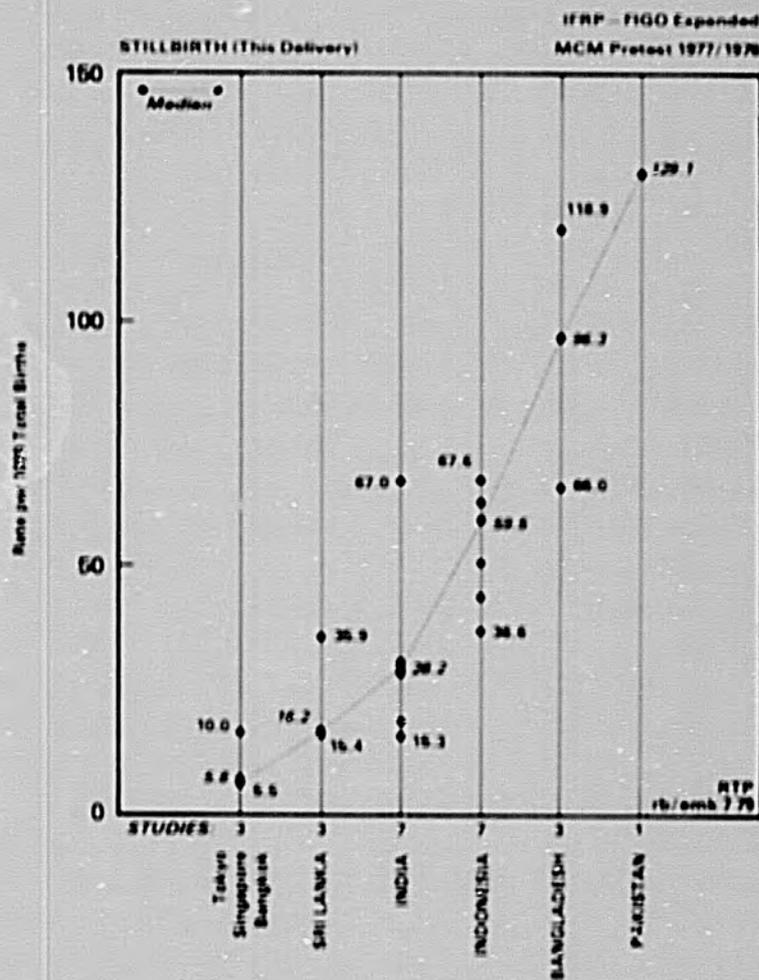


Figure 10-2 Rates of Stillbirths recorded in 24 Asian maternity centers, arranged by country. Great variation within countries and strong geographic correlation across countries is apparent. The highest rates are in the centers of Bangladesh and Pakistan, and the lowest rates are in the three maternity centers of Japan, Singapore and Thailand.

Source: 1978 MCM analysis, 24 Asian Centers, 50,965 deliveries.

PERCENT WOMEN WITHOUT ANTENATAL CARE FOR CURRENT DELIVERY

IFRP - FIGO Expanded  
MCM Pretest 1977/1978

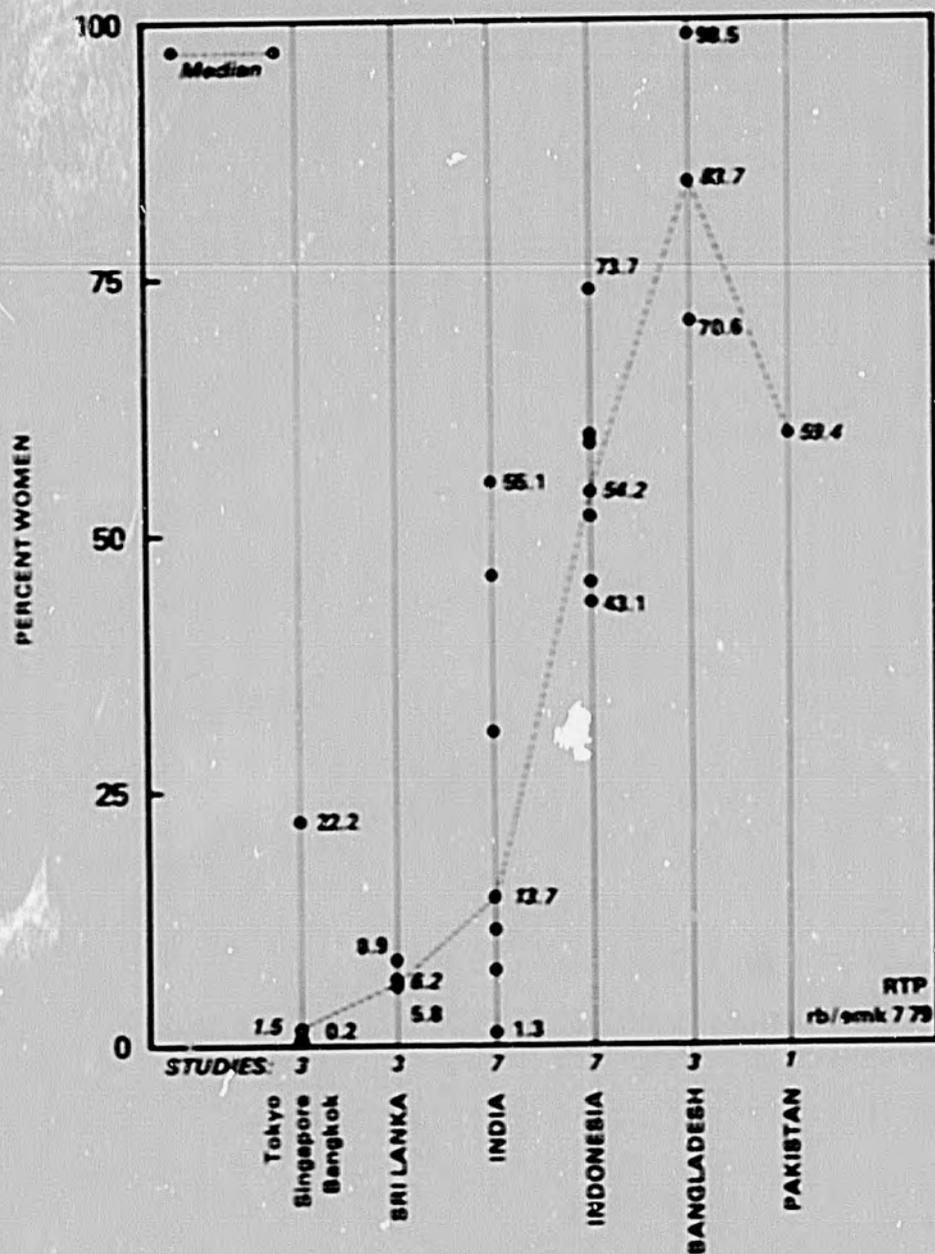


Figure 10-3. Percent women with no antenatal care for the current delivery in 24 Asian maternity centers, arranged by country. Great variation within countries and a strong geographic correlation across countries is apparent. The highest rates are in the centers in Bangladesh and the lowest rates are in the centers in Japan and Bangkok.

Source: 1979 MCM analysis; 24 Asian centers; 50,985 deliveries.

Additional Children Desired and Contraceptive Intentions  
(Fig. 11; Tables I, III)

Given the geographic correlations of two categories of mortality, the established geographic order may be used for displaying other categories of variables within a nation. We chose a pair of behavioral variables:

- (a) additional children desired postpartum; and
- (b) contraceptive intentions postpartum.

Desired fertility was found to correlate with the geographic gradient (Fig. 11), with one notable exception. All centers in Bangladesh showed a much lower desired fertility than the "position" assumed in the geographic gradient of mortality.

It follows that, according to this provisional geographic

ranking system used to classify the 24 Asian studies, desired fertility and perinatal mortality may not interrelate according to a simple function. Could it be that very high perinatal mortality (Fig. 10-1) has a limited effect on a relatively low level of desired fertility in a very poor country (23)? Definitely, this preliminary observation needs further investigation<sup>1</sup>. This is a demonstration of a method for identification of study needs.

Contraceptive intentions postpartum may also be displayed for various categories of women. We see at least four groups of women who should be carefully monitored regarding their intentions. The first two are:

- (a) Women intending no contraceptive protection postpartum and who want additional children. These women are at high risk of a future short birth interval.

<sup>1</sup> Further investigation would involve studying desired fertility by the woman's mortality experience and economic status.

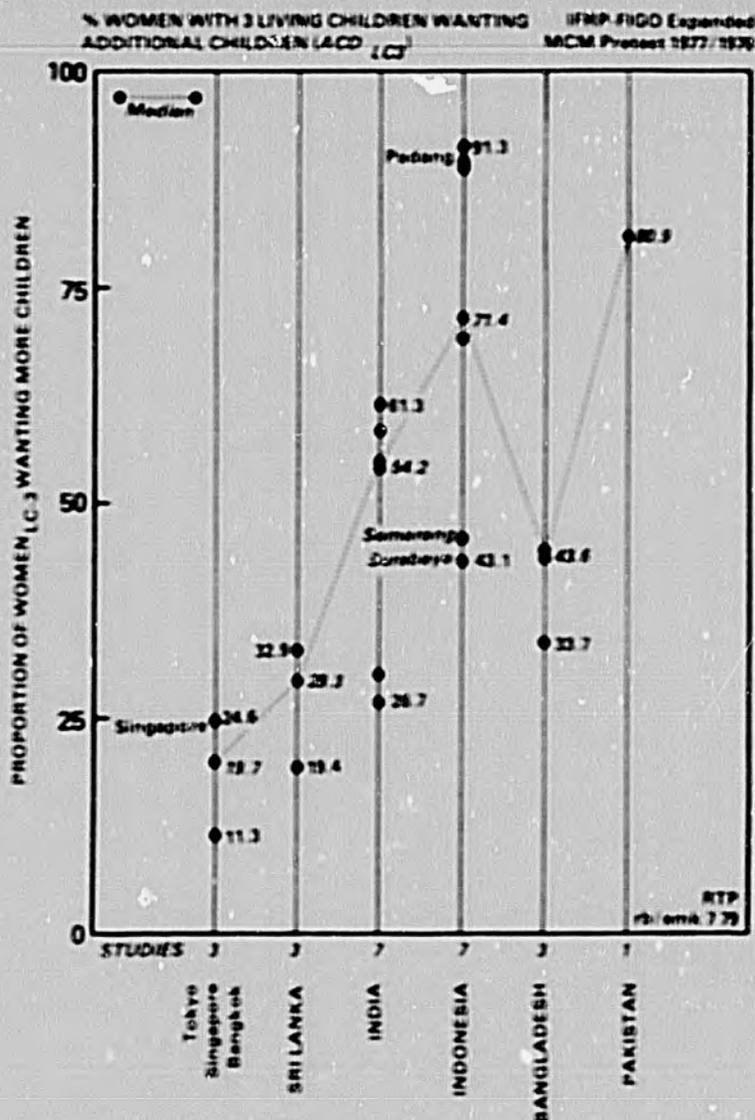


Figure 11-1. Percent Women with 3 Living Children Postpartum Wanting Additional Children (ACD) in Asian Maternity Centers, arranged by country. Great variation within countries and "Lower Clustering" in various countries is apparent. Lowest median rate in the group of clinics in Tokyo, Singapore and Bangkok. In Indonesia, three distinct levels are apparent (highest: Medan, Padang, Palembang; intermediate: Jakarta and Bandung; and lowest: Semarang and Surabaya). In Bangladesh, surprisingly low values were found.

Source: 1973 MCM analysis, 24 Asian Centers, 50,965 deliveries.

(b) Women intending no contraceptive protection postpartum and who do not want additional children. These women are at high risk of an unwanted pregnancy and subsequently at high risk of an induced abortion.

These two groups of women greatly increase the health risk to themselves and to their children, and both groups should be identified and quantified on a routine basis. Table I and Fig. 11-2 give the findings for the 24 Asian studies. The high risk group for unwanted pregnancy/induced abortion is impressively small in the centers in Indonesia, Bangladesh, Singapore and Bangkok, but very high in centers in Sri Lanka. Clearly, in Sri Lanka the maternity centers should try to decrease this high rate of non-protection among women who do not want additional children by offering information and services of family planning postpartum.

The high risk groups for a short birth interval exhibit an alarming variation among centers within a country. In the seven centers in Indonesia, the range was 14.1% - 67.7%, in India 20.8% - 75.9%, in Sri Lanka 36.4% - 88.3%, in Bangladesh 22.5% - 37.6% and in Karachi 81.2%. The lowest rate

was recorded in Singapore (5.1%), where vigorous family planning programmes are a matter of record. Overall, availability of information on spacing is at too great variance.

Figure 11-2 then is an exhibit of the 24 Asian maternity centers' unmet needs regarding the provision of information and services of family planning for spacing and stopping. The centers are responsible for the very existence of these high risk groups. Their intervention is needed.

The other two groups of women who should be carefully monitored are:

(c) women who do not want additional children and who reported that they want a tubal ligation.

(d) women who do not want additional children and who reported that they want a vas ligation for their partner.

These two groups of women generate the rate of "intended either partner ligation." Table II and Fig. 11-3 give the

TABLE I<sup>3</sup>

PERCENT WOMEN WHO INTEND NO POSTPARTUM CONTRACEPTION,  
BY STATUS OF ADDITIONAL CHILDREN DESIRED

Two High-Risk groups to the Health of Mother/Child  
24 Asian Centers: IFRP - FIGO MCM Expanded Protocol, 1977/1978

INDONESIA			INDIA		
Bandung	14.1 <sup>1)</sup>	3.2 <sup>2)</sup>	Bombay-3	20.8	2.8
Jakarta	16.8	3.6	Baroda	36.7	12.9
Surabaya	28.7	12.9	Bombay-4	44.1	14.9
Padang	33.7	1.0	Delhi	56.3	0.0
Semarang	53.1	5.0	Bombay-1	59.9	15.5
Medan	67.4	1.3	Manipal	71.4	26.8
Palembang	67.6	3.3	Bombay-2	75.9	11.9
BANGLADESH			SRI LANKA		
Dacca-2	22.5	2.1	Colombo-2	36.4	23.9
Dacca-3	33.1	3.1	Colombo-1	50.3	19.0
Dacca-1	37.6	5.5	Kandy	88.3	25.1
PAKISTAN			SINGAPORE		
Karachi	81.2	9.9	Singapore	5.1	2.9
THAILAND			JAPAN		
Bangkok	22.0	2.7	Tokyo	36.0	17.8

<sup>1</sup> Percent Women intending no contraceptive protection postpartum among women who reported to want additional children. This is the HIGH-RISK GROUP for a short birth interval pregnancy. Ranked.

<sup>2</sup> Percent Women intending no contraceptive protection postpartum among women who reported not to want additional children.

This is the HIGH-RISK GROUP for an induced abortion.

The two groups present a high risk to the health of mother and child.

<sup>3</sup> The graphic presentation of the information of this table on the next page makes it more accessible to the staff-paramedical and medical- of service delivery who are in greatest need of such feedback.

WOMEN WITH NO INTENTION OF POSTPARTUM CONTRACEPTION  
TWO HIGH RISK GROUPS BY STATUS OF ADDITIONAL CHILDREN DESIRED

IFRP - FIGO Expanded MCM Pretest 1977/1978

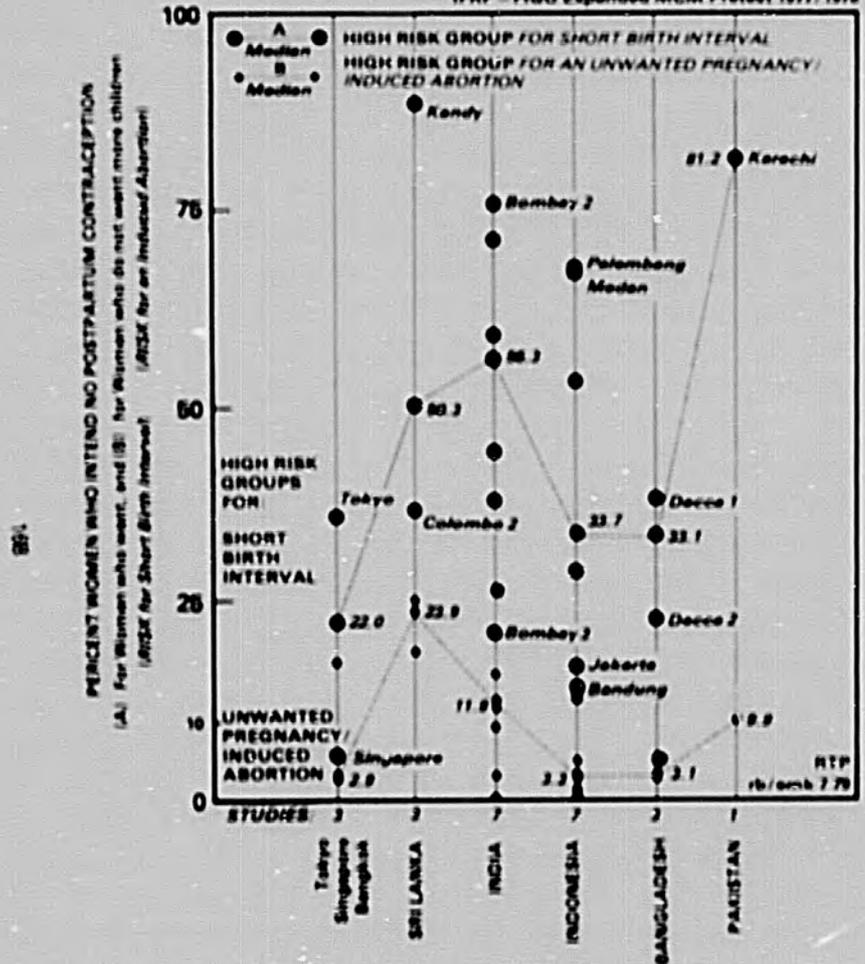


Figure 11-2. Percent Women Intending No Postpartum Contraception for Women who (A) want, or (B) do not want more children, for 24 Asian maternity centers

(A) High risk group for short birth interval. Great variation among centers within countries. Extremes are identified by center for Peer Review.

(B) High risk group for unwanted pregnancy/induced abortion. Great variation among centers within countries and geographic gradient is apparent.

Source: MCM analysis, 24 Centers, 50,985 deliveries.

WOMEN WANTING NO ADDITIONAL CHILDREN INTENDING

IFRP - FIGO Expanded MCM Pretest 1977/1978

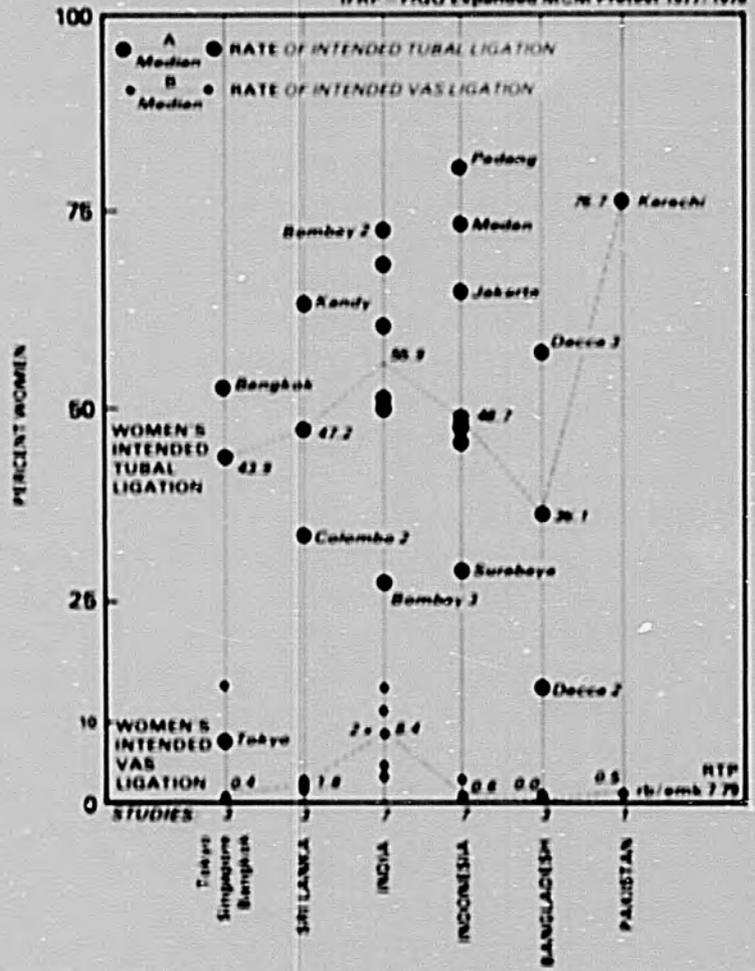


Figure 11-3. Among Women Wanting No Additional Children, Percent Intending (A) Tubal Ligation, or (B) Vas Ligation of Partner, for 24 Asian maternity centers

(A) Rate of Intended Tubal Ligation. Very great variation among centers within countries. Extremes are identified by center for Peer Review.

(B) Rate of Intended Vas Ligation. Less variation in some countries. Geographic gradient (tubal) is apparent.

Source: 1979 MCM analysis, 24 Asian Centers, 50,985 deliveries.

findings for the 24 Asian studies. Again, there is great variation among centers within a country, particularly for intended female sterilization. In Indonesia the range is 80.8% - 29.4%, in India 72.9% - 27.7%, in Bangladesh 57.0% - 14.4% and in Sri Lanka 63.7% - 33.6%. Intended male sterilization rates were very low, except for India with a median rate of 8.4%. It would appear that peer review of these rates would assist in shaping a national policy for providing information and services of tubal and vas ligation.

One conclusion of the present findings is that a systematic display on a national abacus of these and other variables of management collected by MCM and other sources will develop a sense of urgency for programme decisions and early implementation. Ideally, the Ministry of Health would wish to establish this abacus by geographic area according to a gradient of general development. This experimental method would identify the extremes of ranges within a country, by region, and peer review among professionals would lead to recommendations for action to improve services from within.

Prolonged-obstructed Labor: Caesarian Section  
(Fig. 12; Table III)

Obstetricians could also benefit from such an abacus peer review. As an example, the rates of prolonged/obstructed labor were displayed on the present provisional abacus of Asian institutions (Fig. 12-1). A v-shaped association emerges across the geographic gradient of perinatal mortality. The centers in India show the lowest median rate of prolonged/obstructed labor (5.8%) with a dense cluster of values. Indonesia shows a much higher median rate (9.3%), again with a remarkable cluster. One center, however, stands out with 28.5% of the labors being prolonged/obstructed.

One may then compare the abacus of prolonged/obstructed labor with the corresponding abacus of caesarian sections (Fig. 12-2). The v-shaped association persists, indicating that there might be a positive association between prolonged/obstructed labor and caesarian sections for the institutions in this very broad geographic overview. However, reversed patterns emerge for the two rates when both variables are studied within a country. For instance in Indonesia, the center in Surabaya showed a rate of prolonged/obstructed labor of 28.5% and a section rate of 8.9%. In contrast, the center in Jakarta had a rate of prolonged/obstructed labor of

TABLE II<sup>4</sup>

PERCENT WOMEN WANTING NO ADDITIONAL CHILDREN WHO REPORTED TO WANT A TUBAL LIGATION OR A LIGATION OF THE VAS OF THEIR PARTNER  
24 Asian Centers: IFRP - FIGO MCM Expanded Pretest, 1977/1978

INDONESIA			INDIA		
Padang	80.8 <sup>1)</sup>	0.0 <sup>2)</sup>	Delhi	100.0 <sup>3)</sup>	0.0
Medan	73.4	0.0	Bombay-2	72.9	4.8
Jakarta	65.0	0.6	Bombay-1	68.1	3.3
Semarang	48.7	0.3	Banoda	60.5	11.6
Bandung	47.7	1.4	Manipal	51.2	8.4
Palembang	45.6	3.3	Bombay-4	49.8	14.5
Surabaya	29.4	1.2	Bombay-3	27.7	8.4
BANGLADESH			SRI LANKA		
Dacca-3	57.0	1.4	Kandy	63.7	1.7
Dacca-1	36.1	0.0	Colombo-1	47.2	1.8
Dacca-2	14.4	0.0	Colombo-2	33.6	2.4
PAKISTAN			SINGAPORE		
Karachi	76.7	0.5	Singapore	43.9	0.3
THAILAND			JAPAN		
Bangkok	52.7	14.3	Tokyo	7.6	0.4

<sup>1</sup> Percent Women reporting to want a tubal ligation among women who reported not to want additional children.

<sup>2</sup> Percent Women reporting to want a vas ligation for their partner among women who reported not to want additional children.

<sup>3</sup> Small number

<sup>4</sup> The graphic presentation of the information of this table on the previous page makes it more accessible to the staff - medical and paramedical - of service delivery who are in greatest need of such information.

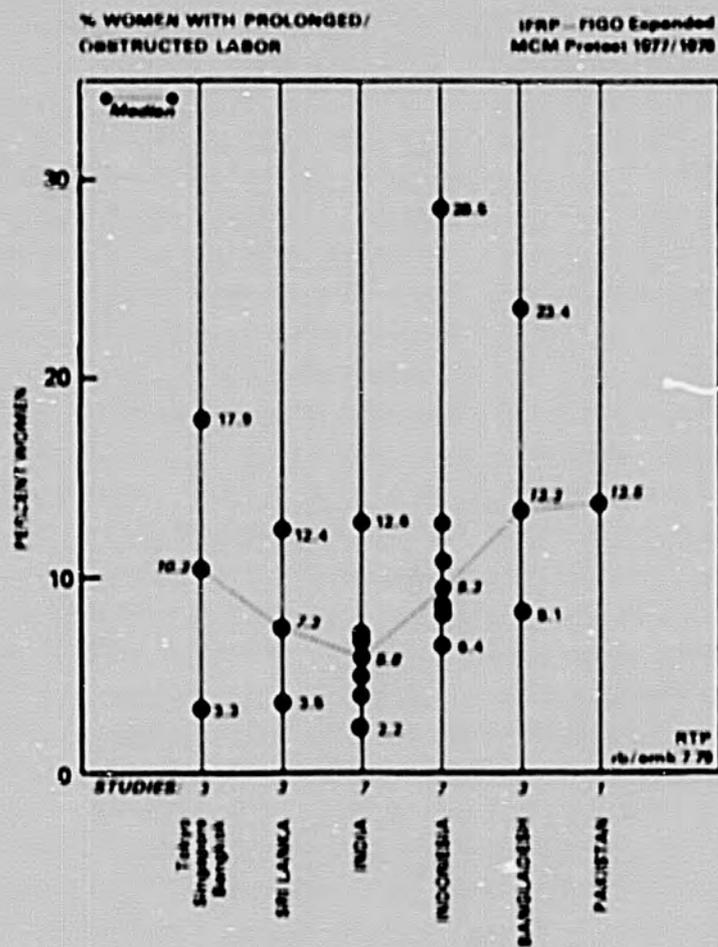


Figure 12-1. Percent Women with Prolonged/Obstructed Labor of the current delivery in 24 Asian maternity centers, arranged by country. Great variation within countries and a V-shaped geographic correlation across the selected country sequence is apparent. Lowest median rate is in India, and the highest median rates are in Bangladesh and Pakistan. Clusters in Indonesia and India.

Source: 1979 MCM analysis, 24 Asian Centers, 50,985 deliveries.

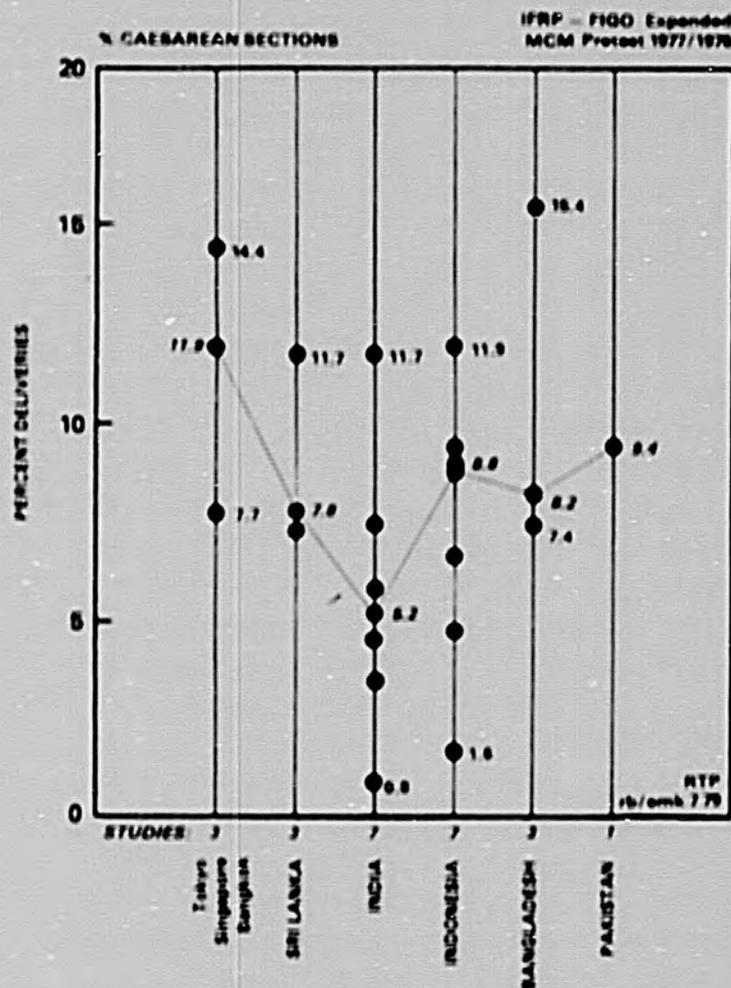


Figure 12-2. Percent Women Delivered by Caesarean Section in 24 Asian Maternity Centers, arranged by country. Great variation within countries and a V-shaped geographic correlation across the selected country sequence is apparent. Lowest median rate is in the centers of India, and the highest median rates are in the centers of Bangkok and Karachi. Clustering or partial clustering in some countries.

Source: 1979 MCM analysis, 24 Asian Centers, 50,985 deliveries.

only 8.0% but reached a section rate of 11.9%. Comparisons of the abacuses displaying values of a given variable will naturally lead to more in-depth inquiry into the factors underlying the difference. In the case of caesarean sections, peer review among the colleagues of a nation could certainly help to identify criteria for performing caesarean sections.

Finally, one can compare the range of caesarean section rates of the 24 Asian centers with the ranges obtained by this monitoring system in other regions of the world (Table III). This mini-review around the world is informative insofar as the ranges increase as one moves westward. The highest values move from 15.4% in Asia to 18.2% in Mid-East/Africa to 21.7% in Europe to 42.8% in Latin America<sup>1</sup>. Of course, peer review should occur first provincially, then nationally and then internationally. At the national level, the Ministry of Health can play a key role to organize peer review at regular intervals. At

the international level, the World Health Organization can organize international workshops for a given topic of maternity care.

It would appear that the development of a "national abacus" (with lines representing geographic areas of the country) will demonstrate in each nation the urgent need for local standards and peer review of maternity care. By extension, each regional health department and regional referral hospital should develop together their "regional abacus" (with lines representing a second-order geographic subdivision with more peripheral centers of maternity care). This would become the basis for peer review in the more peripheral institutions. The paramedical personnel would easily understand the meaning of a rank position of a given center within a regional abacus. It is the regional and national abacuses that should become the guiding work tool to improve regional ("peripheral") and national maternity care.

<sup>1</sup> Two centers in Brazil had the highest rates.

TABLE III  
RATES OF CAESAREAN SECTIONS 1977/1978  
IFRP - FIGO

A) 24 Asian Centers

INDONESIA		INDIA	
Palembang	1.6	Delhi	0.8
Padang	4.7	Bombay-2	3.4
Bandung	6.6	Bombay-1	4.5
Semarang	8.8	Manipal	5.2
Surabaya	8.9	Banoda	5.8
Medan	9.4	Bombay-4	7.4
Jakarta	11.9	Bombay-3	11.7
BANGLADESH		SRI LANKA	
Dacca-2	7.4	Colombo-2	7.3
Dacca-3	8.2	Kandy	7.8
Dacca-1	15.4	Colombo-1	11.7
PAKISTAN		SINGAPORE	
Karachi	9.4	Singapore	7.7
THAILAND		JAPAN	
Bangkok	14.4	Tokyo	11.9

CAESAREAN SECTIONS - Rate per 1000 Deliveries  
63 studies - 213,584 women

B) WORLD VIEW

World Region	Number of Studies	Section Rates	
		Range	Median
Asia	24	0.8-15.4	7.8
Mid-East/Africa	6	3.9-18.2	10.4
Europe	15	1.1-21.7	10.4
Latin America	18	0.8-42.8	11.8
All Regions	63	0.8-42.8	10.4

## V. FROM MATERNITY RECORD STUDIES TO MATERNITY CARE MONITORING

Studies of maternity care using a standard maternity record with preprogrammed computer feedback have been found useful as judged by the enthusiastic reception and participation of many maternity centers in studies cosponsored by the International Federation of Gynaecology and Obstetrics and the International Fertility Research Program and several member organizations of the International Federation for Family Health. The value of a single, isolated study is, however, limited. It would generally give rise to few hypotheses for the improvement of care. A series of single studies among similar institutions in the same country will be productive of *increased interest and ideas* for improving services. The ranking of the performance of different maternity centers by commonly defined indices immediately raises the question as to why one center ranks much higher than another. The power of peer review among professionals comes to bear on a problem. But, the evaluation of any action taken to improve maternity care following a single study is frequently difficult. Also, the one time exposure to peer review does not have the force of regular review for stimulating interest and responsibility.

The concept of continuous monitoring of a network of similar maternity services utilizing a standard record system has evolved as a most promising approach to both *training and improved services*. If the record can be incorporated into the record system of the service, its completion becomes part of the routine. Some advantages of this approach are:

- (a) An *instruction manual* for completion of the record that uses uniform definitions consistent with those of WHO can become an important aspect of training of professional personnel, both medical and paramedical.
- (b) *Regular staff conferences* that examine periodic feedback from the system and evaluate the center's performance with that of similar centers is a potent force in questioning current practices and eliciting suggestions for improved services from the service providers.
- (c) *Evaluation of interventions* is accomplished in a few months time through routine completion of a clinically appropriate basic record and standard feedback. In this way, the center personnel become interested in the record system and become involved in their own professional challenge to improve services, while in full view of peers within their center and a network of similar centers.
- (d) *Supervision* becomes easier as central and local levels of administration have precise information routinely available and the general sense of being monitored by an impartial system creates greater awareness of responsibility and accountability among the staff. Promotion may be linked to performance.

This has been the experience of the few centers that have moved from Maternity Record studies to Maternity Care Monitoring (24).

The previous sections have inquired into the monitoring capability of Maternity Care Monitoring (section III) and the need for national and/or regional standards for improving maternity care (section IV). In this section, the rationale for moving from maternity record studies to maternity care monitoring was summarized. In the next section, an attempt is

made to describe the integration of horizontal and vertical maternity care monitoring.

## VI. MULTI-TIER MATERNITY CARE MONITORING

Examination of the maternity care systems in a series of countries in 1978 and 1979 (25, 26) revealed the virtual absence of any monitoring activity of maternity care, both among similar-level institutions (horizontal) and among various tiers of maternity care (vertical).

In the rare exceptions where the government collects maternity care information, the institutions receive *no meaningful feedback*. There is no mechanism to return information for peer review. Furthermore, much of the sparse data that is collected is deficient and unreliable for many centers. Filling out monthly service statistics is perceived as a chore that really has nothing to do with improving maternity care *from within*.

A new challenge to the need for setting up monitoring systems of maternity care was provided by the *Declaration of Alma Ata on Primary Health Care (PHC)* in September 1978 (27). The Declaration calls for a system of health care at the peripheral level. Given that maternal and child health care should benefit perhaps half the population in a direct manner (women aged 15-49 and children under five), the *monitoring of progress* in maternity care should become the single most important evaluation system needed to support the goal of universal primary care by the year 2000.

One of the greatest opportunities for improve maternity care lies in *timely and appropriate referrals*. If MCM is to make a contribution to this process, it infers an information linkage and feedback mechanism between the different levels of maternity care. The present lack of communication between peripheral and referral services breeds misunderstanding, hostility and competition, which lead to *delayed referrals*. These communications are most difficult to establish with traditional birth attendants (TBAs), who generally practice outside of the formal health service structure and therefore are the brunt of greatest hostility while attending, often the majority of births.

The referral center, whether a large teaching institution or a peripheral center, must accept the *responsibility for feedback* of information on the outcome of the referred patient to the referral source. Only in this way is there any opportunity to learn from experience, focus on specific problem areas and *initiate relevant training and improve supervision*. The exact mechanism of feedback will have to vary in each country because of varying stages of training of paramedical personnel and TBAs as well as supervisory personnel along the health care ladder.

A *referral chain* may be seen schematically in Fig. 13 (28). The "institutional" health care pyramid, which includes university teaching hospitals and referral institutions, is linked to the "peripheral" primary health care pyramid by the primary health center which serves as the *central pivotal hub*. Around this health center hub revolves *vertical referral of cases upward and supervision and training downward*. Such general schematic diagram may assist in the conceptualization of the health care structure and thus the monitoring components necessary to integrate and improve services. The first step, however, will most likely be the demonstration of the usefulness of monitoring at the institutional (regional) level to and by the Ministry of Health.

# THE TWO-IN-ONE REFERRAL PYRAMIDS WITH THEIR CENTRAL PIVOTAL HUB

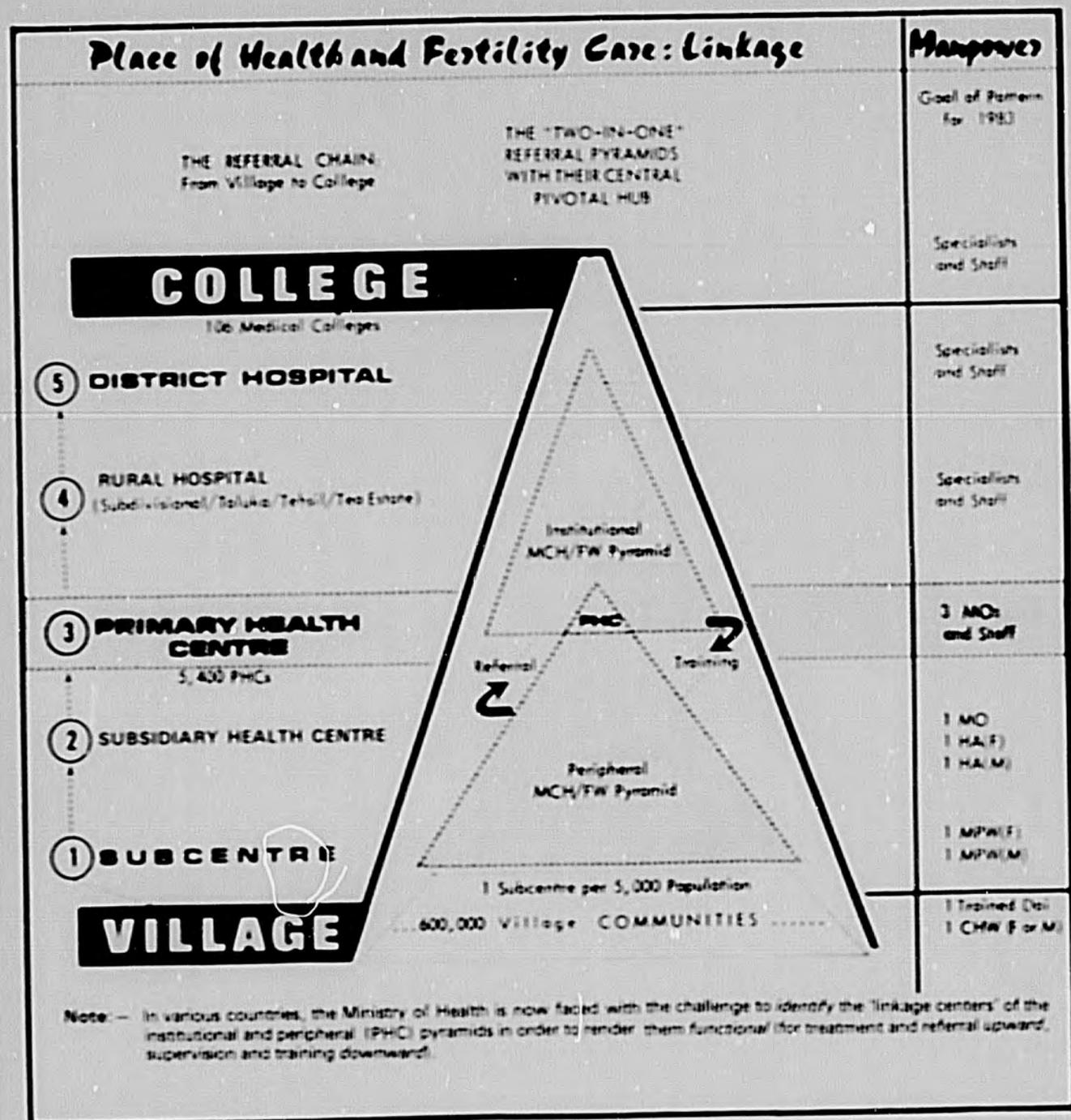


Figure 13— Centrality of the Primary Health Centre in the Indian Health and Fertility Care System. It links the two pyramids of health service administration and management. Monitoring has to be developed downward from the two apices, that is to be initiated at the college and district hospital levels on the one side and at the Primary Health Centre on the other (28).

## VII. STRATEGIES FOR IMPLEMENTATION OF MCM

Strategies for implementation of MCM must vary from country to country because of the diverse patterns of organization of maternity services. Some generalizations can be delineated, however.

A differentiation should first be made between

- (a) the services of obstetricians and midwives who are formally trained and use uniform definitions related to obstetric care and
- (b) the services of traditional birth attendants (TBAs). Basic services of trained personnel are remarkably standardized in spite of considerable variation in sophistication of specialized services from place to place. This standardization lends itself to uniform records with potential for computerization with rich and rapid feedback to the service.

As to whether use of a computerized record system is "appropriate technology" depends on how it is used and the computer facilities that are available. Some factors favoring this approach are:

- (a) Computer services are declining in cost and are becoming increasingly available in developing countries. The eighties will show a significant rise of available computer services.
- (b) MCM has great potential for cost-effectiveness. The social cost of use of excess capacity of computer facilities is frequently low. The accounting cost might also be low in some government-owned facilities.
- (c) *Timely computer feedback* will greatly assist supervision of large government services. Computerized editing of records identifies training needs and gives everyone in the system a sense of responsibility and commitment for improvement of services.
- (d) A *sampling scheme*, both for deliveries within an institution and among institutions to represent variations in social and economic development of a country, can reduce costs with little loss of information.
- (e) *Key or card-to-tape equipment and a printer* are already widely available and these are the primary needs of a computerized record system. One large computer in a country or region can be used to process a loaded tape so that it will print preprogrammed standard tables as the primary feedback of the system. In this way only duplicate tapes are transported over long distances, while records and feedback are controlled locally.
- (f) The *cost-benefit ratio* of computerized versus manual procedures is rising. The time required for maintaining special registers to manually produce an annual report of a maternity service will frequently be similar to or greater than costs of a computerized record that has the advantage of rapid and useful feedback.

In any event, it is best to implement a computerized

record system in the more advanced maternity services where the task is easier and personnel are exposed to the system in training. An abbreviated system may then be more easily implemented in peripheral centers where deliveries by trained personnel are likely to take place.

Record systems of supervised TBAs should generally be simple and manual, and progressively installed with the burden of any sophistication placed on trained supervisors and referral centers. The variety of TBA settings makes almost impossible a uniform monitoring system. One must think in terms of basics and a number of modules that can be added to a basic system. For example, a module for identification of low weight for gestation has been developed (29).

The monitoring of TBA services must be integrated with their progressive training to emphasize appropriate referral to a center with trained personnel. Recognizing the important services of TBAs and their potential for an expanded role in an integrated system of primary health care is a prerequisite to developing a positive attitude toward TBAs and to supporting a general desire to bring them into the professional health team.

## VIII. CONCLUSIONS AND RECOMMENDATIONS

The cost of poor maternity care is large and incalculable. The more obvious costs of maternal and neonatal death, while tragic enough, are by no means the total loss. Maternal and infant morbidity, resulting in the impairment to the health of mothers and even the intellectual performance of their offspring (30, 31), might be even greater liabilities in terms of socio-economic development of a society. A birth is so central to family health that it offers a remarkable opportunity for the improvement of family health. The opportunity extends beyond the practice of obstetrics, which must be guided by a consideration of local risks and benefits, to the broader field of social obstetrics and community health. The mother brings with her to her birth attendant critical knowledge of herself and her family, which in aggregate becomes reflective of the community. This knowledge and experience is associated with a mother and her delivery is presently largely wasted. This waste is a missed opportunity for obstetricians to make an important contribution to family health and development.

MCM describes a tool, as yet incompletely fashioned, which can maximize knowledge for improved maternity care and family health. In its application it should improve in quality and cost-effectiveness. Maternity Record studies are now completed in many cities and the challenge of Maternity Care Monitoring lies ahead. By the very nature of *MCM accounting*, the system must be implemented broadly for Ministries of Health to realize its full potential for *MCH improvement*.

The International Federation for Family Health, with support from the United Nations Fund for Population Activities and the International Fertility Research Program, can now offer consultation to Ministries of Health to design Country Projects for MCM which may be eligible for UNFPA and other financial support.

This must become *Where Next in Maternity Care Monitoring*.

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Stillbirths by birthweight	Rate per 100 total births	3
Birthweight by anemia status	Mean birthweight for 2 Hb levels	4
Perinatal deaths	Rate per 1000 total births	11
Stillbirths	Rate per 1000 total births	11
No antenatal care for current delivery	Rate per 100 women	12
Prolonged/obstructed labor	Rate per 100 women	17
Caesarean section	Rate per 100 women	17

### B) FERTILITY AND CONTRACEPTION

Fertility Attainment	Mean parity by age	6
Reproductive Intentions	$ACD_{LC3} / ACD_{50}$	7
$ACD_{LC3}$	Percent women with three living children wanting additional children (Additional Children Desired at 3 Living Children)	
$ACD_{50}$	Interpolated number of living children at which 50% of the women want and 50% do not want additional children (Additional Children Desired-Fifty)	
Contraceptive Intentions	$FPA_{LC3} / FPA_{50S}$	9
$FPA_{LC3}$	Contraceptive mix for women with three living children postpartum (Family Planning Acceptance at 3 Living Children)	
$FPA_{50S}$	Interpolated number of living children at which 50% of the women accepted the surgical method of family planning (Family Planning Acceptance-Fifty for Surgical Methods)	
No Protection by Fertility Intentions	$ACD_{1-} / FPA_0$ ; $ACD_0 / FPA_0$	13, 15
$ACD_{1-} / FPA_0$	Percent women wanting additional children and not intending postpartum contraception (High risk group for future short birth interval)	
$ACD_0 / FPA_0$	Percent women wanting no additional children and not intending postpartum contraception (High risk group for unwanted pregnancy and subsequently of an induced abortion)	
Surgical Contraception by Sex	$ACD_0 / FPA_{TL}$ ; $ACD_0 / FPA_{VL}$	14, 15, 16
$ACD_0 / FPA_{TL}$	Percent women wanting no additional children and intending tubal ligation (Rate of intended tubal ligation)	
$ACD_0 / FPA_{VL}$	Percent women wanting no additional children and wanting a vas ligation for partner (Rate of intended vas ligation)	

# IS WHAT WE ARE OFFERING ACCEPTABLE? THE CASE OF FAMILY PLANNING ACCEPTANCE IN INDONESIA

*Haryono Suyono, Ph. D.*

## 1. The Political Commitments

The family planning activities which began in 1957 operated through several clinics owned by the government and through private medical doctors. Spreading public information about family planning was limited to very restricted audiences and was done mainly through word of mouth or interpersonal communication channels.

Since family planning activities became public in 1966, numerous articles have appeared in the newspapers and magazines and the subject has been discussed on radio and television. These articles and discussions encouraged the government to take action on the population problem by becoming involved with family planning activities.

The words "keluarga berencana" a translation of "family planning", were often changed to the words "keluarga sejahtera" or "keluarga bahagia", meaning "happy family", and spread from the doctor to the midwife, from her to the patients in the clinic, and then to others such as the relatives, friends, and neighbours of the patients.

In 1968 there was a study called the Survey of Knowledge, Attitudes and Practice of Family Planning in Jakarta. The Study concluded that the level of knowledge was very low. Of 2215 respondents who answered the question, we find that less than one — fourth of the respondents knew at least one method of contraception, a level which is relatively low.

The most significant finding of the study is that very few respondents disapproved of the idea of family planning. If there is less approval of the idea than consequently might be expected, the reason is not because of disapproval, but because many stated that their attitudes were neutral since they did not understand the idea of family planning.

The disapproval caused by the objection of religious beliefs is less than 10 per cent. Muslims comprise the highest percentage of those who disapprove, but we found that more than one-fourth of them gave a non-religious reason for disapproval.

At the other end, in 1967 President Suharto joined the 29 other world leaders in signing the U.N. Declaration on Popula-

tion. In February of the following year, an Ad Hoc Committee recommended establishment of a National Family Planning Programme whose first priority would be contraceptive distribution in Java and Bali. A Semigovernment National Family Planning Institute was then established which gradually assumed full responsibility for the provision of contraceptive services on these two most populous islands. By mid — 1970 a Presidential Decree transformed the Institute into a fully Government Agency — the BKKBN or National Family Planning Coordination Board — which is responsible directly to the President and is fully responsible for all family planning activities.

The BKKBN has its own budget, up from US\$4.6 million in 1970 (of which about 10% was foreign donor supplied) to US\$38.8 million in 1977 (of which 46% originated from foreign donors), and staff at the provincial and regency level.

With these "people and government commitments" to the programmes, we have then been launching our family planning programme in Indonesia.

## 2. The Operational Commitments

The Operational Commitments for the programme are then managed by the BKKBN. The main function of the BKKBN are formally defined as coordination, planning, supervision and evaluation of all aspects of family planning activities, both public and private. Its authority for overseeing these activities stems largely from its budgetary control over all family planning matters. The BKKBN itself does not directly provide contraceptive services to the public. Instead, it coordinates the work of various "implementing units" who manage the day-to-day activities of the family planning programme, such as conducting information and motivational campaigns and the actual provision of contraceptive services. These implementing units consist of Government Ministries, such as the Ministries of Health, Information, Education and Culture, Social Affairs, Religion, etc., and other Government bodies, such as the Armed Forces Family Planning Institute, and private associations, including the Indonesian Planned Parenthood Association, including the Indonesian Planned Parenthood Association, the Muslim Association and the Indonesian Council of Churches. Complementing these units are the BKKBN's staff of fieldworkers which in 1979 numbered

are directly responsible for face-to-face motivational work, for recruiting new acceptors, for supervision of various acceptors group activities, and for providing a major logistical link for contraceptive resupply between the clinic and pill and condom users.

The Government's initial involvement in family planning activities was focused on the islands of Java and Bali where population pressure was greatest. In order to make widespread family planning services available as quickly as possible, the Ministry of Health's existing health services infrastructure was utilized. Simultaneously, new clinics were constructed, vehicles were procured and dispatched to the field, motivational campaigns were launched and health personnel throughout Java and Bali were trained in the provision of information, motivation and contraceptive services. Like many other early programs elsewhere in the region, the family planning effort developed initially as a clinic oriented programme in which potential acceptors were required to come to fixed clinic to obtain services.

Although the clinic based programme was successful in increasing the annual number of new acceptors from a little over 50,000 in 1969-70 to almost 1.5 million in 1974-75, the ability of the programme to consistently achieve such results was beginning to be called into question. First, it was becoming apparent that, if a new tact were not taken, new acceptances would likely "plateau out" similar to what had occurred in other large programmes. The reserve of already highly or marginally receptive couples was being rapidly depleted, leaving in its wake a more resistant hard-core group which was less willing to overcome the frictions of distance, cost, and relative indifference to obtain contraceptive services from distant clinics. Second, new acceptors were increasingly selecting the pill and condom (from 54% pill and 3% condom in 1971-72 to 89% pill and 11% condom in 1974-75).

This suggested that resupply of large numbers of existing users scattered over a wide area was to become increasingly difficult and could not be easily surmounted by the fixed clinic approach. Third, given the magnitude of eligible couples to be reached (estimated to be about 14 million for Java and Bali in 1974) and the number of villages to be served (approximately 22,000), it would not be possible to provide an official programme presence sufficient to reach and recruit more resistant couples nor to resupply and reinforce the motivation to continue contracepting of those already recruited into the programme. Fourth, as additional provinces were added to the BKKBN's responsibility (10 in 1974 and the remaining 11 in 1979) and as it became evident that the programme's administrative structure that emerged for Java and Bali could not be replicated in 21 additional provinces without severely taxing the programme's financial resources, a new service delivery system would have to be devised. Finally, the programme had set for itself the ambitious goal of reducing national fertility 50% by the year 1990. This implied that not only excessive fertility had to be curbed, but also that a small family norm had to be universally adopted. Given the low levels of socio-economic development characteristic of the country, it was unlikely that the perceived and actual value of children, to the individual could be substantially lessened without simultaneously attacking those environmental conditions which encourage higher than replacement fertility.

### 3. Village level operational commitments

As the programme passed through its early infancy, two major programme objectives emerged. First, primary emphasis was to be placed on making family planning a village rather

than clinic oriented activity. Furthermore, primary responsibility for managing and implementing a programme of fertility limitation, including motivation, recruiting and maintaining family planning acceptors, was to be transferred from the Government to the people and their communities.

The second objective was to gradually broaden the scope of family planning from its more narrow birth prevention realm to more positive objectives of promoting overall family welfare by linking family planning with the general development programme of the Government.

The strategy for achieving these objectives is twofold. On the one hand, the family planning programme is endeavoring to build an institutional capability at the community level for assuming those programme functions and responsibilities which heretofore have resided primarily in the clinic and with formal programme personnel. On the other hand, the family planning programme is striving to work more closely with various government ministries to systematically overcome existing environmental constraints to permanent practice of fertility limitation and acceptance of a small family norm. In addition, the BKKBN has begun to explore possibilities for directly linking an increased allocation of development funds and activities to community achievements in gaining some measure of control over its own fertility and in achieving this through the creation and strengthening of a community supported family planning institution.

Java-Bali: The village family planning approach basically assumes two forms—one for Java and Bali and one for the Outer Islands.

The Java-Bali approach takes as its basic model the highly successful *banjar* system of Bali. The *banjar* is essentially a kinrelated hamlet closely knitted by common economic, social, religious and ceremonial interests. During monthly meetings of the male heads of household, community related issues such as irrigation, taxes, disputes and religious and temple festivals, are discussed and resolved through group consensus. Recently family planning issues have been successfully introduced as topics for community deliberation and increasing responsibility has been placed on the hamlet administrative structure for managing its own family planning effort. For example, each head of household is required to report publicly the family planning and pregnancy status of every married woman of reproductive age in his household. *Banjar* registers are compiled listing all eligible couples, their location in the hamlet, their use of contraception and information on their receipt of pill and condom resupplies. The actual provision of resupplies has become largely a *Banjar* responsibility and constitutes an additional activity of the monthly meetings. Maps of the *banjar* are drawn which identify every household according to its eligibility for and use of contraception by method, and these are prominently displayed in the hamlet meeting hall.

In short, the Family Planning Programme on Bali has succeeded to a large extent in making the individual practice of family planning a community issues for which the community assumes increasing responsibility.

For a variety of reasons, however, it is unlikely that the Bali experience can be completely replicated on Java. For one, Bali is predominantly Hindu where as Java is Muslim. The roles and responsibilities of the individual and the community are quite different under each. Stemming in part from this is the fact that the Javanese hamlet is such less closely knitted either in terms of kinship or other interests. Monthly commu-

nity meetings such as those occurring on Bali rarely occur in Javanese hamlets. In addition, Bali is geographically more compact and culturally more homogeneous than Java. As a consequence innovations on the order of the *banjar* system are more difficult to introduce into the Javanese social system.

Despite these obvious differences, though, the BKKBN has embarked on a large scale programme to develop a similar sense of community involvement in and commitment to family planning on Java as is found on Bali. The first step in achieving this is through the programme's provision of contraceptive resupplies to those already using the pill and the condom. Village contraceptive distribution centers (VCCDC) have been created in most of the villages on Java. The *Pos KB*, or family planning post, is usually manned by a village volunteer, such as a member of the headman's staff, his wife or by another acceptor, and pill and condom resupplies are made directly available from village sources rather than solely from the more remote clinics. Each month fieldworkers bring supplies from the clinics to the VCCDCs. They also assist the family planning volunteer in maintaining the list of current users who obtain resupplies from the post, noting down the names of acceptors who have not returned so that a follow-up visit can be made by the midwife or fieldworker, and fill out monthly reporting forms for the BKKBN National Headquarters. The village volunteer may distribute supplies directly to users in the village, often by means of a monthly meeting of all acceptors. During such meetings motivation by clinic staff is provided, and special courses, such as nutrition or sewing, or other social activities such as the ubiquitous lottery, are held. In some cases the Post serves simply as a resupply link to hamlet level acceptor groups. These groups have sprung up in order to make resupplies even more convenient by eliminating the need for regular trips to the supply depot.

The *Pos KB* and hamlet acceptor groups have become the basic building blocks upon which the BKKBN expects to create a community awareness of the importance and benefits of fertility limitation while at the same time developing a capability for managing its own family planning activities. However, the Post represents only the first step. At the moment its influence is confined primarily to other family planning acceptors, and its functions, although beginning to broaden out into more "beyond family planning" activities, are still limited primarily to contraceptive resupply and logistics reporting. In only a few areas do members of the acceptor group actively work to motivate and recruit others in the community. Furthermore, the range of non-family planning activities undertaken, such as various economic cooperatives, rice and money saving programmes, and handicraft industries, is limited and is restricted primarily to members of the group itself. In short, the acceptor groups are just beginning to be community supported institutions which are widely recognized as a tangible community asset contributing to an improvement in the quality of life for everyone.

Outer Islands. Whereas on Java and Bali the BKKBN has been able to maintain a strong official programme presence at the village and hamlet levels through the fieldworkers and has been able to directly guide the development of community participation in family planning activities, a similar presence is not possible on the Outer Islands where fieldworkers are not employed. The programme has, therefore, had to find alternative approaches for reaching the village and for directly transferring programme responsibility to non-programme personnel.

The approach settled upon involves vesting full programme responsibility by the Government as its coordinator of all developmental programmes in his jurisdiction. The *Camat*

thus becomes the focal point for ensuring that communities themselves become involved in and ultimately take over complete management of family planning activities. In order to ensure that the *Camat* is capable of executing his family planning duties effectively and competently, the BKKBN has begun a massive step-by-step training programme in each of the 10 Outer Islands provinces. Training has now been provided by the BKKBN Central Headquarters to a provincial level team composed of representatives of each of its implementing units as well as members of the Governor's staff. This team in turn conducted training for a similar group at the *Kabupaten* or regency level which trained the *Camat's* staff. In his capacity as a Government representative, the *Camat* is expected to supervise the training of village and hamlet officials and formal and informal leaders and is expected to involve the various community institutions in undertaking family planning activities. In short, the BKKBN expects to use its training programme not only as an educational tool but also as a mechanism for securing the commitment of the entire provincial administrative structure in the implementation and management of community family planning programmes. Thus, compared with Java and Bali where family planning programme implementation has been primarily the responsibility of the various implementing units under the overall direction of the BKKBN, in the Outer Islands this responsibility will in large extent rest more squarely in the formal provincial administrative structure and on the communities themselves.

#### 4. Broader commitments for the acceptance of small family norms

The ultimate success of family planning in Indonesia depends on the development of an individual and community commitment to the practice of fertility limitation and acceptance of a small family norm. The development of such a commitment must be grounded in more than simply Government fiat. If it is to be permanent, commitment must stem from a recognition that fertility limitation and smaller families are, in fact, in the best interests of the individual and community.

In order to broaden the appeal of fertility limitation while at the same time assisting the Government's developmental effort to improve the quality of life of the people, the BKKBN in cooperation with other Ministries of the Government, will soon begin to employ its programme personnel and its community level infrastructure to address what it considers to be five basic needs of all Indonesians. These include health, education, employment, income generation and status of women.

The health needs of the country, especially in terms of infant and childhood morbidity and mortality, maternal and child nutrition and primary health care, are particularly pressing and greatly influence the level of family planning acceptability. A new project entitled the Small, Healthy and Happy Family Project, which has already received substantial funding from one international donor agency and which is promised additional funding from other donors, including AID, will utilize the family planning fieldworkers and community acceptor groups to institute a graduated programme of child weighing, nutrition intervention and primary health care. The implementation of the projects will be by the mothers themselves participating in acceptor groups and under the supervision of the fieldworkers and the Ministry of Health personnel. This project operating in more than 3000 villages this year.

Periodic weighing of infants and children under the age of five and simplified recording procedures will help the mothers identify those children whose weight gain is faltering, long

before the permanent effects of malnutrition have taken hold. A community and health clinic programme of supplementary feedings will ensure that normal weight gain is restored or, in the case of other disorders, such as TB and intestinal parasites, that referral is made to appropriate health personnel for prompt treatment. The monthly weighing sessions which will bring together all young children in the community will enable health personnel to more easily conduct immunization drives.

As community participation in these preliminary health and family planning activities increases and as better coverage of all classes of people is achieved, a community health volunteer will be trained to provide primary health care, especially oral rehydration in cases of severe diarrhoea, a major killer of young children in Indonesia, and to identify more severe diseases to be referred to the health center.

Other health projects will be undertaken as the community gains experience with these more basic interventions. A primary objective is the transformation of the health system from a passive one to an active one. Included is a community health insurance scheme, already in operation in some portions of Central Java, in which each member of the community contributes according to his means to a plan which provides free or subsidized medicines, transportation to health facilities and at least partial hospitalization coverage.

As improvements are registered in the provision of health

care and in the acceptance of responsibility for managing the community's own programme of family planning, the BKKBN will support a variety of other developmental inputs which address other basic needs. Included are the construction of additional classroom facilities, partial support of tuition and other school fees for the children of poor families, encouragement of handicraft industries and other productive activities, such as cooperatives and credit unions, and especially activities which increase the utilization of female labor.

The task ahead looms large, and the family planning programme is beginning to navigate largely uncharted waters beyond family planning. But there exists a strong national determination to meet the basic needs of the people and to do so in such a way that the resolve of the people to limit their fertility, for their own good as well as that of the nation as a whole, is strengthened; and that the people and their communities gradually assume greater responsibility for directing the future course of their lives, including their own programme of family limitation.

With all these offerings and problems faced in the implementation we have a long way yet to go and a great deal more needs to be accomplished before we can permanently remove the spectres of famine, malnutrition, ignorance and poverty. Let us strengthen our cooperation to contribute to the stability of the world order and to the productivity and well being of all mankind.

# ACCEPTABILITY OF FAMILY PLANNING IN MALAYSIA

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The scope of this paper is to discuss the acceptability of family planning as a programme as well as a contraceptive method for the individual. Globally Family Planning has become equated with contraceptive and fertility control rather than family health and development at the micro level and population planning at the macro level. Today Malaysia, like other countries, has realised the need to look beyond the contraceptive approach and has been able to adjust its programme accordingly.

## 1. Family planning concept

The rationale for setting up a national family planning programme in 1965 was basically presented in macro-economic terms.

Slower population growth will increase the per capita income and reduce pressures on economic and social development.

However as in most countries, the approach was contraceptive and clinic based in order to reach a demographic goal of lowering the population growth rate from 3% to 2% between 1965 and 1985. The approach was acceptable at the initial stages. Families facing economic pressures and those benefiting from the results of development realised the importance of spacing and/or limitation at the family level. They readily accepted the family planning programme as can be seen in the acceptor trend in the early years.

TABLE I

### ACCEPTOR TREND - 1967 - 1978

1967	-	20726	1972	-	56417
1968	-	7435	1973	-	57313
1969	-	70575	1974	-	61580
1970	-	55981	1975	-	69348
1971	-	54769	1976	-	75210
			1977	-	80376
			1978	-	80162

As programme implementors, we were satisfied by this increase in practice as well as in knowledge of family planning.

In the initial years, family planning personnel offered contraceptives at clinics in an entity by itself in health centres and hospitals.

As the service expanded into the rural areas, service delivery was found to be more effective if it was to be integrated into the Maternal and Child Health service delivery system of the Ministry of Health. If the family planning service delivery was to be undertaken by the NFPB, it meant that NFPB has to recruit a large number of personnel to provide services in the rural areas. As the service was clinic orientated this could have caused a significant drain of trained staff from the Ministry of Health which would mean further weakening the MCH services. Besides this problem, there was the problem of "space" as well as the administrative support which was necessary to ensure an effective programme. It was therefore felt that integration of family planning in the rural areas would be more acceptable if provided as part and parcel of MCH. In 1971 the integration of family planning services into the rural health services was started thereby offering a total maternal and child care package including family planning to pre and post-natal mothers. The message was health orientated and was acceptable as mothers who came for the maternal child health services saw family planning as a means of improving the health status of themselves and their children. Furthermore the time and transport constraint of repeated visits for separate services was reduced as a comprehensive package health service was made available at one time. In addition as the existing health services had raised the general health status of the people, women have readily accepted family planning especially since infant mortality had drastically declined and there was a guarantee of survivorship for their children.

The new concept of family planning service playing one role in the government's multi-sectoral approach towards making available to every family unit the opportunity to reach its full potential is relevant and realistic and acceptable. The Preliminary Report on Evaluation of the Intensive Input Demonstration Area Project 1975 - 1976 in which family planning service is part of the overall integrated health package shows a favourable acceptor rate in the areas with integrated service as compared to those where family planning is provided as a separate entity by itself. This contraceptive and clinic based approaches utilising a family planning clinic only or integrated into Maternal and Child Health programmes can be

considered to have been successful and contributed to fertility decline. However it cannot be denied that this was not only cause of the decline. Rapid economic and social development results inevitably in contraceptive service demand. The 1974 Bucharest Conference spear-headed world acceptance on the positive effect of economic and social development on population control rather than family planning being the sole factor in population control.

About 40% of the Malaysian population is categorised as below the poverty line and the majority of them are in the rural areas. It can be seen that provision of family planning services even in a health context will not be sufficient to break the chain of the vicious cycle of poverty, lack of education, unemployment, high fertility, high mortality and morbidity.

A multi-sectoral approach of integration of the various related programmes which will contribute to improving the quality of family unit and community is of vital importance. In other words there needs to be an integrated approach to development whereby the various facets of physical, agricultural, economic and social development are integrated into a comprehensive package.

The pre-requisite for any programme to benefit the people must have within it a strong motivating factor to make it attractive and acceptable and with visible benefits. We have tried this by integration with Maternal and Child Health services, applied nutrition programme and parasite control.

Another important content in a programme is that people must see that some sort of economic gain can be possible in the near future. The raising of income is one step only in improving the quality of life for this will lead to better and adequate food and other necessities for the family. If the people see this, all other efforts to change and improve their lives will be made simpler. Therefore in the family planning context we are integrating our efforts with other family development agencies as well as implementing and encouraging projects to include women in income activities.

Another component to make a programme more acceptable is to make people see that they are part of the programme, by actively involving them in it. This will inculcate the concept of self-help within the community.

It is with these basic philosophies of integrated development, economic incentives and community participation that the family planning programme is venturing into new approaches so that the concept of family planning can be presented as part and parcel of the developments efforts to improve the quality of life of the people by the people. Only then will family planning become a natural way of life to the people.

## 2. Knowledge level of family planning

Within the contraceptive arena and limitation of family size in relation to family resources, the Malaysian programme claims over 90% knowledge and 35% practice. (Refer Table III)

Like most countries, we are facing a dilemma of closing the gap between knowledge and practice, or the KAP GAP. However when going into details of knowledge level, a recent communication study of families in land resettlement schemes showed that actual knowledge level was very low. A Family Planning Knowledge Index was developed giving certain points for "correct" answers on family planning and methods. The mean score for male respondents was 6.98 and for females, 8.15 both over a maximum of 27 points. Comparing those who never used and currently ever used, the scores were as follows:—

TABLE III  
MEAN FAMILY PLANNING KNOWLEDGE INDEX

	MALE	FEMALE
Never Used —	5.01	6.28
Currently / Ever Used —	8.27	9.23

This showed in the case of the land resettlement schemes, that although according to the standard knowledge questions, 98% of respondent knew about family planning, indepth analysis of the knowledge indicated that the decision to adopt family planning was based on little knowledge. It will not be surprising to find that the adopters were just followers who get involved without full understanding of the programme benefits and purposes. This will not have a long term effect as they may drop out, or may not provide positive influence to promote the programme.

Although this study was confined to a small sector of the population, implementors of the programme should not become complacent as actual knowledge level is probably low. It is hoped that with the multi-pronged and multi-disciplinary approach, people who become participants in development at the micro and macro level will understand the concepts of development as applicable to them and make responsible decisions and accept the programme based on their own realisation and needs.

## 3. Background of contraceptive methods

No formal large scale research has been done on the history of contraception in Malaysia, probably due to the

TABLE II  
PRACTICE AND KNOWLEDGE OF FAMILY PLANNING

	West Malaysia Family Survey 1966/1970	KAP 1970	Malaysian Family & Fertility Survey 1974
Knowledge	44%	84.5%	92%
Currently using	8.8%	16.1%	35.2%
Ever used	14.3%	26.9%	53.2%
Never Used	85.7%	73.1%	46.8%

abundant difficulty of getting the cooperation of the users themselves.

However, it is an accepted fact that women of Malaysia have been practising some methods of contraception throughout history, long before the introduction of any formalised family planning programmes.

Most of the methods are whispered from women to women over generations and are practiced in silence by the individual, or are sought from more knowledgeable elders in the community.

By and large these traditional methods are oral in nature by the injection of a mixture of herbs or drinking the water of boiled herbs or by the consumption of substances deemed to have abortifacient effects like raw papaya and pineapple. Some women resort to more drastic substances like large doses of aspirin and even alum at regular intervals.

The other methods are mechanical in nature and involves pre- and post coital exercises and "urut" or massage of the lower abdomen by the "mak urut" or traditional birth attendants. The effect of the massage is probably to cause retraction of the uterus.

The other mechanical method which is really not a preventive measure but the termination of a pregnancy is the induction of abortion by the various types of irritants into the cervix or uterus of the pregnant women.

Medical personnel who have worked in hospitals can testify to the fact that miscarriages of dubious casual origin take up a fair number of the beds in the gynaecological wards. These are just some of the methods of contraception practiced by women in Malaysia.

#### 4. Present/modern methods of contraception

These can be divided into two—

- i) those offered by the National Family Planning programme and non programme sources like general practitioners.
- ii) those practiced by the individuals and which have remained basically unchanged over the years.

##### Programme Methods Efficient Contraception

Pill  
IUCD  
Condom  
Sterilization  
Diaphragm  
Foaming Tablets  
Jelly

##### Non Efficient Methods

Rhythm  
Withdrawal  
Abstinence

##### i) Folk Methods

"Jampi" — This is commonly practised by the Malays not only for preventing conception but also for curing the sick and driving away evil spirits. It involves recitation of verses from the Koran over

some food, betel leaves, or other concoctions, which is then eaten after incantation (jampi).

##### Tilting the womb, "Urut"

This method involves the massaging of the abdomen. It is generally done after child birth, and in the hands of an experienced bidan (mid-wife) it is supposed to be an effective means of spacing child-birth.

##### Exercise

This is a fairly popular method and is done immediately after intercourse to flow out before impregnation. The exercise is done in various ways — by the woman sitting on the floor with legs stretched out and then touching her toes or by adopting a yoga sitting position and pressing the abdomen downwards and so on. There are other variations of this exercise.

##### Herbs, Akar Kayu

These are various forms of roots, spices and herbs which are taken orally either by boiling them and drinking the water or by powdering them and taking the powder, or by eating them in the form of paste. (Malaysian Fertility and Family Survey — 1974, p. 130).

#### 5. Acceptability of contraceptives

As mentioned earlier, even before contraceptives were made available, women have made the knowledge is not the practice of one or more methods of delaying pregnancy an integral part of married life, and have been spurred to startling creative contraceptive alternatives through desperation. It was therefore initially not so much a question of acceptability as of desperate necessity in the early days.

Because of the very intimate and personal nature of the subject, and also because of the religious implications of contraception especially amongst women of the Islamic faith, voicing open acceptability of contraception becomes difficult. The reticence can be attributed to the very personal nature of the subject of contraception viewed by the people. The acceptability of "birth-control" has always depended on a morality that separates sex from reproduction. Wide spread public willingness to discuss and accept contraception will only be realised after major reorientation of sexual values have been established.

It is an undeniable fact however that in general the Malaysian women and men accept and enjoy children and practice contraception only for specific socio-economic or overt health reasons. Acceptability rises in direct proportion with better education for women and job opportunities arising from increased industrialization.

In most studies carried out in Malaysia, the most important reason for not accepting family planning was that respondents wanted more children i.e. had not completed their family size. This clearly shows that the concept of family planning to them is understood as being something final in their fertility cycle.

Open acceptability towards contraceptive alternatives is (was) more apparent especially with increasing flow of information and information between providers and users, and especially with official support and approval of religious

leaders to some methods of contraception with the definite exception of abortions.

The acceptability of the various alternatives offered by the programme, however related directly to certain factors such as:—

- availability
- economic
- socio-cultural
- religious
- educational
- age

To a certain extent, the various alternatives made available to the users are predetermined by the providers, who in turn have to take the above factors into consideration before deciding what method will be most available, acceptable and economical to the target group under the existing constraints mentioned above.

By and large, however, the socio-economic, religious, cultural and educational factors affect the choice of the users, overshadowing the question of availability in many cases.

#### 6. Alternative methods and degree of acceptability

As shown in the 1974 Malaysian Fertility Study in Table 4 pill was the most acceptable method of contraception over the years amongst the cross section of eligible\* women in Malaysia.

However the table shows that the overall percentage of pill acceptors has fallen with corresponding increased acceptance of other methods. This can be explained by the fact that the study included non-programme acceptors who by and large come from the more educated and socio-economically advantaged group and having more access to information regarding the attendant side effects of the pill, have resorted to other methods of contraceptions like the I.U.D.s, condoms and even sterilization.

The over publicity by the mass media, picked up and highlighted by certain irresponsible sections of the community is only one aspect of the shift in choice from the pill to other methods. Another reason is the clients' individual wish to switch from the pill which is conceptualized, according to the

Interim Report (1969) on the West Malaysia Family Planning Acceptor Follow-Up Survey as a 'spacing' alternative to other methods 'with' limiting functions like the IUDs. Another reason can be due to the providers who sometimes dissuade clients who are on the pill for more than 3—4 years to change to alternative methods for health reasons. Amongst the programme acceptors, nevertheless, the pill still remains the most used method, compounding the theory that to an extent the choice of contraceptive method is somewhat predetermined by availability and accessibility as well as by the level of education of the acceptors.

The National Family Planning Programme acceptors figure for 1978 shows that 82.3% of the acceptors are on pills, 1.9% on IUCD, 8.8% on condom and 6.0% chose sterilisation. (Refer Table IV).

#### 7. Reasons for acceptability/rejection of various methods

Studies have been carried out to follow-up family planning users to find out if they are still continuing. It had been found out that wanting another child constituted 30% of those who had discontinued, side effects 24% followed by no need for protection (divorced, separated, menopause) 14%. The surveys do not include the gathering of information on preference/rejection of the individual methods.

Although there is a dearth of literature or studies regarding reasons for acceptability/rejection of the various methods of contraception, there are abundant reports (not substantiated by a formal study) from health personnel on this subject.

The following list attempts to include some of the reasons given by acceptors and potential acceptors to health personnel:—

##### Pill

##### Acceptable

- because of the simplicity in methodology of usage with the innovation of the 28 pill cycle.
- does not overtly interfere with the sexual act.
- no mechanical interference.

TABLE IV

#### PERCENTAGE OF CURRENTLY MARRIED FEMALE USING VARIOUS METHODS

	1966/67	1970	1974
Pill	46.4	75.3	50.7
IUCD	2.3		2.2
Condom	9.0		9.1
Other Female methods	1.9		0.4
Sterilization			10.6
Rhythm			10.8
Withdrawal			5.7
Abstinence		40.4	4.3
Other Folks methods			6.2

**Not Acceptable**

- real or apparent weight gain;
- increased vaginal discharge;
- fear of side effects;
- husband's opposition.

**IUD****Acceptable**

- no need for frequent revisits;
- less fear of side effects.

**Not Acceptable**

- lack of proper information;
- not readily available;
- excessive bleeding in first time users;
- husband discouraging users for fear that it will interfere with sexual act.
- Religious: - fear amongst women of the Islamic faith of dying with IUD in utero with no one knowledgeable enough to remove it; tendency to spot amongst some users causing disruption of prayer schedule;
- lack of definite understanding of the actual mechanism of the IUD in utero in preventing conceptions (whether it disrupts development of fertilised ovum or whether it prevents implantation).

**Acceptable**

- a husband's cooperation and concern of known possible side effects of pills and IUDs.
- no medical check-ups required.

**Not Acceptable**

- by husband as a continuing method of contraception due to perceived decreased in sexual enjoyment.
- embarrassment for wives to buy them for their husbands.
- disposal difficulty.
- lack of privacy.
- lack of washing facilities.

**Sterilization****Acceptable**

- as a once and for all method to couples satisfied with present family size.

**Not Acceptable**

- due to rumoured side effects of flatulence and decreased libido.
- due to irreversibility of decision.
- fear of surgery.

- husband's opposition.
- religious reasons.

**Injection****Acceptable**

- belief that all injections have rapid positive results.
- simplicity in methodology.
- time saving.
- little knowledge required.

**Not Acceptable**

- not available;
- lack of information;
- side effects.

**Diaphragm/ Cream/ Foam****Acceptable**

- no side effects.

**Not Acceptable**

- lack of privacy;
- not available;
- lack of information;
- inconvenience of the mechanism of usage.

Some of the reasons given above seem trivial but cannot be underestimated in the context of their impact on the programme.

In all the reasons given for non acceptability a common factor persists - i.e. the husband's lack of active involvement in the whole process. In 1967, Datin Sri Dr. Sri Hasmah, in her paper on 'Problems of Family Planning Among Rural Communities' (Jan. 1967, I.P.P. Seminar, Singapore) stated that "husbands feel that any method advised should be one that causes them the least inconvenience i.e. they prefer to be excluded from using any form of contraceptive". Twelve years later the situation has not changed much. Attempts to get men to actively cooperate in contraceptive have not been very successful. A lot of work has to be done in information dissemination, to all levels of the population, male and female about the concept of contraception and reproductive in the overall development process of the country.

It is important to any family planning activity or related activity therefore to study not only the most acceptable contraceptive alternatives but also the type of information and method of their delivery to target groups in the context of socio-economic, cultural and religious situation.

Last but not least, the mass provision of a contraceptive method is no longer sufficient. Increasing knowledge of the recipients and the rapid advancement of technological know-how in the field of contraception, makes it necessary for family planning programmes to provide built-in quality medical back-up support and research capabilities.

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# INCIDENCE AND FOLLOW-UP OF TROPHOBLASTIC DISEASES

Associate Professor Mark C. E. Cheng

## INTRODUCTION

### I Incidence of trophoblastic diseases

#### A. Benign trophoblastic disease (moles)

- a) Mole incidence
- b) Age distribution
- c) Race
- d) Topographic distribution
- e) Time trend

#### B. Malignant trophoblastic tumours (choriocarcinoma)

- a) Incidence
- b) Age
- c) Parity

- d) Race
- e) Preceding gestation
- f) Malignant sequelae of moles
- g) Interval between mole occurrence and recognition of malignancy and mortality rate

### II Follow-up of moles

- A. Follow-up Visit Schedules
- B. Follow-up Visit Procedures
- C. Contraceptive Practice

## CONCLUSION

TABLE I  
MOLE INCIDENCE

Moles/births	Country	Author and year
1 in 2052	USA	Hertig & Sheldon, 1947
1 in 1150	N Ireland	Stevenson et al, 1959
1 in 820	Australia	Cropleston, 1958
1 in 689	Singapore	Tow, 1964
1 in 823	Singapore	Tech et al, 1971

**TABLE II**  
**AGE DISTRIBUTION OF MOLES AND BIRTHS FROM 1963-65**

Age	15 - 19 yrs	20 - 24 yrs	25 - 29 yrs	30 - 34 yrs	35 - 39 yrs	40 - 44 yrs	45 and above
Moles	33	57	52	31	17	11	12
No of births	10,257	45,102	53,464	37,776	20,967	6,842	863
Incidence of moles/live birth	1:311	1:791	1:1028	1:1218	1:1233	1:622	1:72

from Teoh et al, 1971

**TABLE III**  
**RACIAL DISTRIBUTION OF MOLES AND POPULATION 1963-65**

	Moles	Population	Births	Incidence
Chinese	151 (70.89%)	1,427,000 (74.59%)	122,491	1 in 811 viable pregnancies
Malay	39 (18.33%)	276,000 (14.43%)	34,285	1 in 879 viable pregnancies
Indian	20 ( 8.47%)	156,800 ( 8.87%)	13,581	1 in 680 viable pregnancies
Others (Eurasians)	3 (1.41%)	53,800 ( 2.81%)	929	1 in 310 viable pregnancies
Total No	213	1,913,500	181,296	1:823

from Teoh et al, 1971

**TABLE IV**  
**AGE DISTRIBUTION OF CHORIOCARCINOMA AND LIVE BIRTHS IN SINGAPORE**

	Age (yr)							All ages
	Below 20	20-24	25-29	30-34	35-39	40-45	45	
Choriocarcinoma (1960-1970)	7	21	30	19	14	14	17	122 (16)*
Live births (1960-1970)	39,334	161,333	187,314	117,403	65,947	22,658	3,142	597,131
Incidence of choriocarcinoma (per live birth)	1:5550	1:7680	1:6240	1:6180	1:4710	1:1620	1:185	1:4895 (1:4238)†

\* Government unit cases

† Overall incidence

from Teoh et al, 1972

**TABLE V**  
**INCIDENCE OF CHORIOCARCINOMA IN DIFFERENT PARITY**

	Parity			
	0	1-2	3-4	5 or more
Average births per year (1968-70)	11,872	16,545	8,526	10,510
Choriocarcinoma (1960-70)	17	27	27	51
Average no of choriocarcinoma per year	1.54	2.45	2.45	4.6
Incidence of choriocarcinoma per live birth	1:7710	1:6750	1:3480	1:2285

from Teoh et al, 1972

**TABLE VI**  
**PRECEDING GESTATION IN CHORIOCARCINOMA**

Preceding gestation	Patients		Dead	
	No	%	No	%
Mole	101	82.8	23	22.8
Abortion	11	9.0	8	72.7
Normal pregnancy	7	5.8	4	57.1
Ectopic pregnancy	2	1.6	0	
Non gestational	1	0.8	1	100
<b>TOTAL</b>	<b>122</b>		<b>36</b>	<b>29.5*</b>

\* Mortality rate

from Teoh et al, 1972

**TABLE VII**  
**MALIGNANT SEQUELAE OF MOLES**

	Cases	Malignancy	Percent	Deaths
Age 40 and over	30	11	36.6	2
Age 39 and under				
(a) Para 3 or more	91	13	14.3	5
(b) Para 2 or less	79	3	3.8	3
	<b>200</b>	<b>27</b>	<b>13.5</b>	<b>10</b>

from Tow, 1966

**TABLE VIII**  
**MOLE/RECOGNITION OF MALIGNANCY INTERVAL AND MORTALITY RATE**

Mole/malignancy interval	No	%	No. of Deaths	%
Within 1 month	50	47.0	3	6.0
1 - 2 months	25	23.6	3	12.3
3 - 5 months	11	10.4	3	27.3
6 - 11 months	7	6.6	3	42.8
12 and + months	13	12.3	5	38.5
Total	106	100	17	16.0

from Ratnam & Chew, 1975

## INTRODUCTION

There is no universal agreement on the classification of trophoblastic disease. It is, therefore, necessary to state in the beginning the classification I will be using in this presentation. This is the classification first adopted by Tow in 1966.

### Classification of Trophoblastic Disease

- I. Hydatidiform mole
- II. Villous choriocarcinoma (choriocarcinoma destruens, invasive mole)
- III. Anvillous choriocarcinoma
- IV. Clinical choriocarcinoma (X-ray pulmonary shadow with persistently raised HCG level without histological confirmation)

### I. Incidence of Trophoblastic Disease

#### A. Benign Trophoblastic Disease (Moles)

##### a) Mole incidence

Many incidences reported in the literature are based on hospital admissions and are poor estimates of the true incidence of the disease. The incidence of mole should be based on the number of new cases of moles detected for a defined population for a given period of time. Reported incidence varies from country to country (Table 1). The incidence of moles for Mexico, Philippines, Japan, Taiwan and India is probably higher varying from 1:120 to 1:240 hospital deliveries. These incidences are poor estimates as they are based on hospital admissions.

##### b) Age distribution (Table 2)

In an epidemiological study of moles in Singapore by Tech et al. (1971), it was found that the incidence of moles was least common between 25 and 39 years occurring once in

1,160 viable pregnancies. In teenagers, the incidence was 2 1/2 times the average incidence (1 in 311). After 45 years, the incidence was increased twelve fold to 1:72 viable pregnancies. These findings suggest that some age related factor predisposes the condition. Parks suggests a primary defect in the trophoblast as a cause of the mole. Tech suggests defective implantation as a possible causative factor.

##### c) Race (Table 3)

The incidence of mole was 1:811 viable Chinese pregnancies and 1:879 Malay pregnancies. It was slightly higher for Indians, 1:680 viable pregnancies. There is probably no real racial predisposition to the disease because it is equally common in many races, eg. Arabs, Japanese, Nigerians and Mexicans.

##### d) Topographic distribution

Topographic distribution confirms the findings at international level that women of poor community living in densely populated areas have a much higher incidence of moles.

##### e) Time trend

Although the annual incidence remains fairly constant, the monthly incidence of moles showed random peaks which confirmed our clinical impression that moles appear in crops. This is suggestive of an infective etiology. In the calculation of monthly incidence, Tech used the date of LMP of the mole cases rather than the date of diagnosis, as the point of entry of each case. In my opinion, it is logical as the date of LMP is probably closer to the onset of the disease than the date of diagnosis which is more subject to variation from case to case.

### B. Malignant Trophoblastic Tumours (Choriocarcinoma)

#### a) Incidence

The incidence of choriocarcinoma in Singapore is 1 in 4298 deliveries (Tech et al., 1972). In the Philippines and Hong

Kong, the incidence is approximately 1 in 1300 hospital deliveries.

b) **Age** (Table 4)

The mean age is 30.6 years with a range of 15 to 53 years. There is a four-fold increase between 41 and 44 and a 24-fold increase after 45 years. It is also slightly more common among teenagers. This is in agreement with observations by other workers.

c) **Parity** (Table 5)

The incidence of chorionic malignancy rose from 1 in 7680 deliveries in para 0 to 1 in 2285 deliveries in para 5 and above.

d) **Race**

The Malays have a higher incidence of choriocarcinoma compared with the Chinese. This difference was found to be statistically significant ( $p < 0.02$ ).

e) **Preceding gestation**

See Table 6

f) **Malignant sequelae of moles** (Table 7)

Tow 1966 showed that the incidence of malignancy among moles was 13.5%. However, for those aged 40 and above and those aged 39 and under but para 3 and above, the risk of malignancy is much higher.

Malignant changes in molar pregnancy are more common in blood group A women (Scott 1962, Llewellyn-Jones 1965, Dawood et al 1971).

g) **Mole/recognition of malignancy interval and mortality rate**

See Table 8

## II. Follow-up of Moles

From our results, it is quite obvious that the mortality rate of choriocarcinoma increases significantly with increase in interval between the occurrence of mole and detection of choriocarcinoma. It has also been shown that 82% of choriocarcinoma are preceded by a molar pregnancy. Therefore, it is only logical that great emphasis is placed on close follow-up of mole patient.

### A. Follow-up Visits Schedules

The follow-up visit schedules adopted in Singapore are as follows:

- weekly for 8 weeks, then
- monthly for 10 months, then
- three monthly for 2 years, then
- six monthly for life

### B. Follow-up Visit Procedures

At each visit, a history is taken to elicit irregular vaginal bleeding, central nervous system disturbances and hemoptysis

and breathlessness. A pelvic examination is performed to exclude vaginal secondaries, subinvolution of uterus and the calutein cysts. A chest X-ray is performed at diagnosis of molar pregnancy and repeated monthly until HCG disappears.

Measurements of HCG levels of serum are carried out at each visit by haemagglutination inhibition (HI) tests. Once the HI test becomes negative, HCG level is measured by the radio-immunoassay technique at each subsequent visit.

It is our policy to repeat a curettage if irregular bleeding persists after four weeks or if the HI test remains positive after six weeks. The HCG levels are expected to be negative by HI test after six weeks and by RIA by nine weeks (Curry et al, 1975) or twelve weeks (Goldstein, 1976). In general, if there is a sustained progressive fall with normal chest X-rays and normal clinical findings, we would allow the HCG level to remain above 3 m IU/ml until twelve weeks. After which, an effort should be made to look for possible malignancy. A pelvic arteriogram may then be indicated.

### C. Contraceptive Practice

It has been customary to defer pregnancies after a mole for at least one year because any rise in HCG levels would be difficult to interpret. However, with the advent of ultrasound, gestation sacs may be seen as early as five to six weeks. Perhaps, it is unnecessary now to restrict pregnancy beyond six months, provided the HCG levels had fallen satisfactorily.

## CONCLUSION

Epidemiological studies have shown that several factors such as age, parity, socioeconomic status predispose to molar pregnancies. These risk factors may all be related. Larger scale epidemiological studies are necessary to elucidate the relative importance and the relationship of the risk factors. The finding of apparent occurrence of epidemics of moles is important as it suggests an infective etiology. Again, this requires confirmation.

Great importance should be put on follow-up of mole cases for two reasons. Firstly, 82% of choriocarcinomas are preceded by a molar pregnancy and secondly, the mortality rate of choriocarcinoma increases sharply with increase in interval between the occurrence of mole and detection of choriocarcinoma. In my opinion, it is logical to follow-up mole cases for up to four years because 95% of our choriocarcinomas are detected within four years.

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# INCIDENCE AND FOLLOW-UP OF TROPHOBLASTIC DISEASES

*Prof. Ho Kei Ma*

This presentation is a discussion on the objectives, the possible achievements and the problems of a regional-wise or national-wise follow-up programme for patients with molar pregnancy. The Hong Kong follow-up programme is an on-going programme and will be used in this discussion only as an example. The data presented are not finalized, and therefore, should not be quoted.

Centralized laboratory is economical and probably easier for quality control, but the problem of transportation of specimens and communication need to be overcome.

4. Management of patients who show evidence of trophoblastic disease.

## OBJECTIVES OF A FOLLOW-UP PROGRAMME FOR MOLE PATIENTS

- 1) To study the post-abortal H.C.G. pattern.
- 2) To correlate the H.C.G. regression pattern with the course of the disease.
- 3) To make early diagnosis of residual or malignant trophoblastic disease in mole patients.

### Protocol

1. Duration of follow-up:  
Minimum : 6 months.  
Maximum : 24 months.
2. Clinical follow-up:  
History  
Examination  
Investigations for localization of tumour and its metastasis
3. Laboratory follow:  
H.C.G. estimation.

## PROBLEMS OF A MULTICENTER FOLLOW-UP PROGRAMME

- 1) Wrong diagnosis
- 2) Incomplete laboratory study
  - a) No sample
  - b) Non-delivery of samples
- 3) Loss to follow-up
- 4) Communication

### The Possible Achievements—

1. Selection of high risk mole patients for chemotherapy.
2. A survival rate of higher than 95% of patients with gestational trophoblastic diseases.
3. Reduction of cost of health care in a national programme.

# INCIDENCE AND FOLLOW-UP OF TROPHOBLASTIC DISEASES

Takashi Wagatsuma, M.D.

## INTRODUCTION

In 1971, the Ministry of Health and Welfare of Japan organized a task force for the research of trophoblastic diseases. Since then, both basic and clinical research on trophoblastic diseases have been carried out in more than thirty Japanese University hospitals and medical institutions.

## BASIC RESEARCH

It is impossible to describe every detail of the extensive research that is currently being conducted. The following is the summary of some interesting findings.

### 1) Androgenesis of the hydatidiform mole

Chromosome analyses of the hydatidiform mole have shown that in most cases (90%), their karyotypes were 46XX. Recently, it was found that in these cases all chromosomes were homozygous and of paternal origin; there were no chromosomes originating from the mother. This would suggest that the hydatidiform mole develops either from an ovum fertilized with diploid sperm or from the duplication of an ovum fertilized with 23X sperm. Detailed mechanisms of this are yet to be clarified.

### 2) Immunoselection theory as a mechanism for the development of the hydatidiform mole

Most embryos with various chromosomal abnormalities fail to develop in utero and die at an early stage of pregnancy. Most of the dead embryo are rejected as spontaneous abortions probably because of the disappearance of a specific immunological condition during gestation.

In cases of the hydatidiform mole, such an immunological condition (not yet clarified) continues due to some unknown reason resulting in the development of a mole from the embryo.

## CLINICAL RESEARCH

### 1) Diagnosis of the hydatidiform mole

The increasing utilization of ultrasound scanning equip-

ment (real-time electronic scanning) and the availability of immunological titration kits for urinary HCG determination have made early diagnosis of the hydatidiform mole simple and possible.

### 2) Differential diagnosis and evaluation of prognosis in the case of the invasive mole

Presently, no precise diagnostic method to differentiate invasive moles from simple (non-invasive) moles is available. Recently, pelvic angiography has been widely utilized to diagnose the invasive mole and was found to be useful in those cases in which following pregnancy and childbirth were desired. At present, it is considered that only precise and intensive follow-up of individual cases after evacuation of the hydatidiform mole can diagnose or prevent the development of both the invasive mole and choriocarcinoma. The standard follow-up formula will be discussed in a following section.

## The Incidence of Trophoblastic Disease in Japan

In 1974, the Trophoblastic Diseases Committee of the Japan Society of Obstetrics and Gynaecology started a registration system of the incidence of trophoblastic diseases in limited areas of Japan. The area has been gradually expanded and now the system covers 14 prefectures (Japan consists of 47 prefectures) where approximately 42.9 million people reside corresponding to a third of the entire population.

The following tables show the incidence of the hydatidiform mole, invasive mole, and choriocarcinoma in these selected prefectures. (These prefectures were selected according to the interests of researchers working in the large medical institutions located in these particular prefectures.) These results show that the incidence of the hydatidiform mole within these different prefectures is fairly constant at a rate of 5 to 6 per 100,000 population and 3.5 per 1000 live births. On the other hand, the incidences of the invasive mole and that of choriocarcinoma vary considerably in different prefectures. Japan's population in 1977 was 113,499,000 and the number of live births was 1,755,032, therefore, it is estimated that we have 5000 to 7000 cases of hydatidiform mole annually in Japan.

## Follow-up for the Hydatidiform Mole

As mentioned previously, an intensive follow-up of individual cases after the evacuation of the mole from the uterine cavity is the only way to prevent or to detect the development of the invasive mole or choriocarcinoma in the early stages. There are several different follow-up formulae recommended by various university hospitals, one of which is shown in the following figure.

Previously, the patient with a hydatidiform mole was strongly urged to defer following pregnancies for at least two years after the evacuation. The main reasons for this are as follows:

- 1) Previously, it was difficult to differentiate normal pregnancy from the development of choriocarcinoma.
- 2) It was believed that the possibility of malignant change of the previous hydatidiform mole became higher if the patient became pregnant soon after the evacuation of the mole.
- 3) It was considered that the incidence of abnormal pregnancy would increase when the patient became pregnant soon after a molar pregnancy.

Recently, however, differential diagnosis between normal intrauterine pregnancy at 6 - 7 weeks and the malignant change of the previous mole became possible due to the availability of the ultrasonic scanner. Furthermore, the possibility of the enhancement of malignant change due to a short pregnancy interval was refuted.

In 1978, Y. Kawashima studied the outcome of 337 preg-

nancies following molar pregnancies. Two hundred forty-nine cases (73.6%) had normal pregnancies, 45 (13.4%) had either spontaneous abortions or premature deliveries, 12 (3.6%) repeated hydatidiform moles, and 31 (9.2%) terminated their pregnancies.

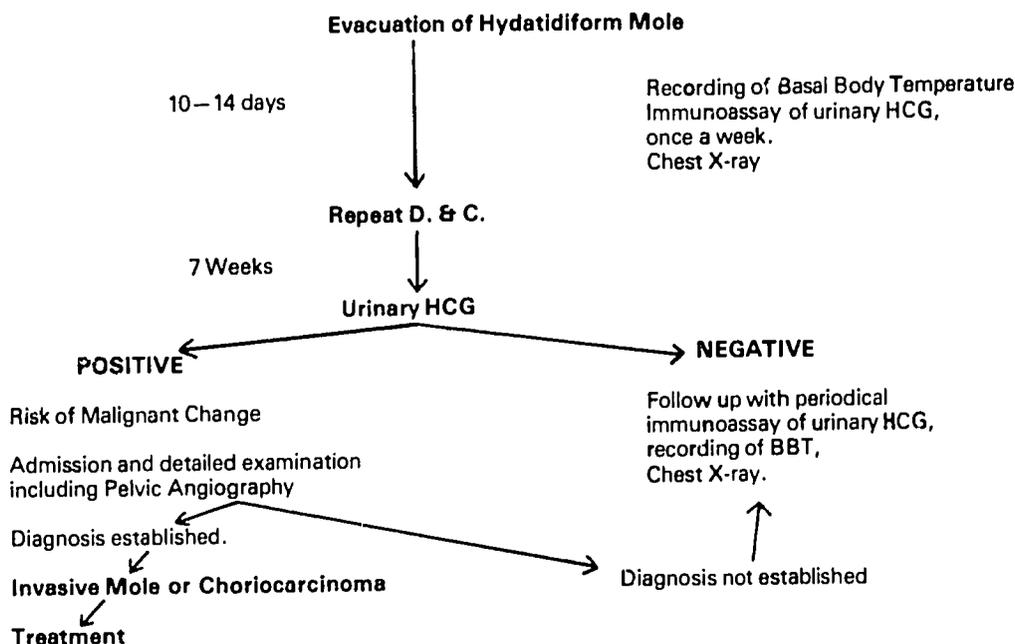
Although the incidence of spontaneous abortions, premature deliveries, and repeated moles was high among these cases, there was no statistically significant difference in the incidence of abnormal pregnancies between those who became pregnant less than one year and those who conceived more than one year after the molar pregnancy.

Therefore, the patient with a molar pregnancy who wishes to have a child in the near future may proceed to plan the next pregnancy provided that the following conditions are fulfilled. The urinary HCG level must decrease after the evacuation to a level below normal LH (less than 20 IU/L) and must stay at that level for at least three normal ovulatory cycles.

### THE EFFECTIVENESS OF CHEMOTHERAPY AND THE MORTALITY RATE OF CHORIOCARCINOMA

The standard therapy against choriocarcinoma today is a hysterectomy combined with chemotherapy. Both MTX (0.4 mg/kg/day for five days, repeated for three courses) and Actinomycin-D (10 ug/Kg/day for five days) improved the prognosis of choriocarcinoma significantly compared to other chemotherapeutic agents such as Nitrogenmustard or Chlorambucil. As shown in the following table, the prognosis of choriocarcinoma is still much higher than that of the invasive mole.

FIGURE I - FOLLOW-UP FORMULA OF HYDATIDIFORM MOLE



**TABLE I**  
**INCIDENCE OF TROPHOBLASTIC DISEASES IN SELECTED PREFECTURES IN JAPAN (1974)**

Prefecture	Pop. x 1,000	Live Birth	Mole	Inv. Mole	Chorio- Carcinoma	Unclassified	Mole/Pop. 1)	Mole/Birth 2)	Mole + Inv. Mole/Birth 3)	Chorio Ca./Birth 4)
Hokkaido	5,271	94,356	217	9	6	8	4.12	2.30	2.40	0.064
Fukushima	1,946	32,884	88	4	2	4	4.52	2.68	2.80	0.061
Niigata	2,365	38,905	124	9	7	0	5.24	3.19	3.42	0.179
Gumma	1,746	31,939	112	3	6	3	6.41	3.51	3.60	0.188
Chiba	3,990	82,080	205	7	5	14	5.14	2.50	2.58	0.061
Kanagawa	6,276	116,675	286	8	4	38	4.56	2.15	2.52	0.034
Hyogo	4,952	93,347	292	29	14	14	5.90	3.13	3.44	0.150
Shimane	769	11,338	33	4	1	2	4.29	2.91	3.26	0.088
Tottori	577	8,778	29	1	0	0	5.02	3.30	3.42	0
Kumamoto	1,682	26,144	45	1	1	11	2.68	1.72	1.76	0.038
Fukuoka	1,374	19,628	49	2	3	0	3.57	2.49	2.59	0.015
Aichi	5,863	120,763	349	12	9	22	5.95	2.89	2.99	0.075
Total	36,811	676,837	1,829	89	58	116	4.70	2.55	2.69	0.086

Trophoblastic Diseases Committee, Japan Society of Obstet. & Gynec.

- 1) Incidence of Moles/100,000 Population
- 2) Incidence of Moles/1,000 Live Births
- 3) Moles + Inv. Moles/1,000 Live Births
- 4) Incidence of Chorio Ca./1,000 Live Births

TABLE II

## INCIDENCE OF TROPHOBLASTIC DISEASES IN SELECTED PREFECTURES IN JAPAN (1975)

Prefecture	Pop. x 1,000	Live Birth	Mole	Inv. Mole	Chorio- Carcinoma	Unclassified	Mols/Pcp. 1)	Mole/Birth 2)	Mole + Inv. Mole/Birth 3)	Chorio Ca./Birth 4)
Hokkaido	5,329	89,631	165	5	9	8	3.10	1.84	1.90	0.100
Fukushima	1,974	31,013	113	4	4	1	5.72	3.64	3.77	0.129
Niigata	2,392	37,524	153	14	7	0	6.39	4.08	4.45	0.187
Gumma	1,761	29,616	110	2	7	5	6.25	3.71	3.78	0.236
Chiba	4,149	77,415	196	7	2	15	4.72	2.53	2.62	0.026
Kanagawa	6,423	117,269	293	10	8	33	4.56	2.50	2.58	0.068
Hyogo	4,992	86,839	296	28	14	14	5.93	3.41	3.73	0.161
Shimane	770	10,870	32	2	4	1	4.16	2.94	3.13	0.368
Tottori	583	8,581	31	4	1	1	5.32	3.61	4.08	0.117
Kumamoto	1,717	25,146	75	4	2	8	4.37	2.98	3.14	0.080
Fukuoka	1,515	28,982	49	1	5	5	3.23	1.69	1.73	0.173
Aichi	5,939	111,535	306	13	11	21	5.16	2.74	2.86	0.099
Wakayama	1,072	17,140	62	5	0	2	5.79	3.62	3.91	0
Total	38,617	671,561	1,881	99	74	114	4.87	2.80	2.95	0.110

Trophoblastic Diseases Committee, Japan Society of Obstet. &amp; Gynec.

- 1) Incidence of Moles/100,000 Population
- 2) Incidence of Moles/1,000 Live Births
- 3) Moles + Inv. Moles/1,000 Live Births
- 4) Incidence of Chorio Ca./1,000 Live Births

TABLE III

## INCIDENCE OF TROPHOBLASTIC DISEASES IN SELECTED PREFECTURES IN JAPAN (1976)

Prefecture	Population x 1,000	Live Birth	Mole	Inv. Mole	Chorio- Carcinoma	Unclassified	Mole/Pop. 1)	Mole/Birth 2)	Mole + Inv. Mole/Birth 3)	Chorio Ca./Birth 4)
Hokkaido	5,386	86,335	121	3	4	11	2.25	1.40	1.44	0.046
Fukushima	1,988	31,287	92	1	5	0	4.63	2.94	2.97	0.159
Niigata	2,404	37,602	130	9	6	0	5.41	3.46	3.70	0.160
Gumma	1,782	29,356	107	5	1	6	6.00	3.64	3.82	0.034
Chiba	4,268	75,601	195	3	5	14	4.57	2.58	2.62	0.066
Kanagawa	6,522	119,438	272	10	5	38	4.17	2.28	2.36	0.042
Hyogo	5,034	82,405	275	19	7	18	5.46	3.34	3.57	0.085
Shimane	773	10,480	39	1	1	0	5.04	3.72	3.82	0.095
Tottori	587	8,657	38	1	1	2	6.47	4.39	4.51	0.116
Kumamoto	1,734	29,285	58	6	1	2	3.35	1.98	2.19	0.034
Fukuoka	1,395	18,021	50	5	1	2	3.59	2.77	3.05	0.055
Aichi	5,988	106,353	280	7	1	31	4.68	2.63	2.69	0.099
Wakayama	1,074	16,576	50	8	6	0	4.66	3.02	3.49	0.362
Total	38,935	651,396	1,707	78	44	124	4.38	2.62	2.74	0.068

Trophoblastic Diseases Committee, Japan Society of Obstet. &amp; Gynec.

- 1) Incidence of Moles/100,000 Population
- 2) Incidence of Moles/1,000 Live Births
- 3) Moles + Inv. Moles/1,000 Live Births
- 4) Incidence of Chorio Ca./1,000 Live Births

**TABLE IV**  
**PROGNOSIS OF TROPHOBLASTIC DISEASES**

		No. of Cases	Died (%)	Alive and Well (%)
Choriocarcinoma	Histologically Confirmed	87	33 (37.9%)	54 (62.1%)
	Diagnosed by Clinical symptoms	35	7 (20.0%)	28 (80.0%)
	Total	122	40 (32.8%)	82 (67.2%)
Invasive Mole	Histologically Confirmed	88	1 ( 1.1%)	87 (98.9%)
	Diagnosed by Clinical symptoms	172	0	172 (100 %)
	Total	260	1 ( 0.4%)	259 (99.6%)

Y. TOMODA et al. Nagoya University Hospital 1965 – 1977.

# INCIDENCE AND FOLLOW-UP OF TROPHOBLASTIC DISEASES IN TAIWAN

Pei-Chuan Ouyang, M.D.

It is well known that gestational trophoblastic diseases have a striking geographical distribution. They occur most frequently in nearly all of Asia<sup>(1)</sup>. Taiwan has an apparently high incidence of gestational trophoblastic diseases, like other Oriental countries<sup>(2)</sup>.

As 457 cases have been accumulated in the year 1951 through 1978 in National Taiwan University Hospital, it seems appropriate to evaluate the variation in incidence according to the changes of period and a comparison of the therapeutic results of destructive mole and choriocarcinoma either with or without chemotherapy is attempted in this study.

## Materials and Methods

In the 28-year period from 1951 through 1978, 457 patients with gestational trophoblastic diseases among 56,727 deliveries were investigated and treated in the Department of Obstetrics and Gynaecology, National Taiwan University Hospital. The surgical specimens of the patients were classified into three categories, i.e., hydatidiform mole, destructive mole and choriocarcinoma according to Novak's histologic criteria by our pathologists<sup>(3, 4)</sup>. However, in a part of the patients who did not permit positive identification of the lesion, the diagnosis was based on unequivocally positive clinical, hormonal and radiologic evidence.

All of the patients were divided into three groups, i.e., a 10-year period from 1951 to 1960 and 1961 to 1970 and an 8-

year period from 1971 to 1978. The incidence in each period was compared to see any variation in its occurrence according to the change of time.

The prognosis for patients with choriocarcinoma and related gestational trophoblastic neoplasms has markedly improved since the institution of chemotherapy in 1956<sup>(5)</sup>. Methotrexate was introduced in Taiwan since 1962<sup>(6)</sup>. In this study the outcome of 60 destructive moles and 89 choriocarcinomas was examined according to the group of use or non-use of methotrexate and a comparison of the results between the groups was made.

## Results

The material studied here represents 457 patients with gestational trophoblastic diseases among 56,727 deliveries admitted to National Taiwan University Hospital from 1951 to 1978. The classification and incidence are shown in Table I.

The over-all incidence of gestational trophoblastic diseases to deliveries was 1:124. This figure is higher than that in any Western country. The incidence in the 1950's was 1:82, in the 1960's was 1:157 and 1:136 in the 1970's. The incidence to deliveries somewhat decreased with advancing period due to the increase in hospital deliveries. But the actual number of the patients slightly increased in the 1970's. The ratio of destructive mole to choriocarcinoma was 1:1.5.

TABLE I  
CLASSIFICATION AND INCIDENCE OF TROPHOBLASTIC DISEASE IN NATIONAL TAIWAN  
UNIVERSITY HOSPITAL, 1951 THROUGH 1978

Type of Trophoblastic disease	1951 — 1960		1961 — 1970		1971 — 1978		Overall Incidence	
	No. of cases	Incidence to deliveries [12,903]	No. of cases	Incidence to deliveries (22,176)	No. of cases	Incidence to deliveries (21,648)	No. of cases	Incidence to deliveries (59,727)
Hydatidiform mole	103	1:125	84	1:264	114	1:190	301	1:189
Destructive mole	23	1:561	20	1:1,109	17	1:1,273	60	1:946
Choriocarcinoma	26	1:496	35	1:634	28	1:773	89	1:637
Syncytial endometritis	3	1:4,301	2	1:11,086			5	1:11,345
Unclassified	2	1:6,451					2	1:28,364
Total	157	1:82	141	1:157	159	1:136	457	1:124

The age distribution and incidence according to parity of hydatidiform mole, destructive mole and choriocarcinoma are shown in Tables II, III and IV respectively.

It can be seen from these tables that the incidence of

gestational trophoblastic diseases relative to deliveries was disproportionately high in the age group of over-40 and in the parity of 5 or more in all categories. Number of deliveries of teens and over-40 decreased markedly in the 1970's, so did that of parity of 3 or more.

**TABLE II**  
**AGE DISTRIBUTION AND INCIDENCE ACCORDING TO PARITY IN HYDATIDIFORM MOLE**

Age	1951 — 1960			1961 — 1970			1971 — 1978		
	Per cent of deliveries	No. of cases	%	Per cent of deliveries	No. of cases	%	Per cent of deliveries	No. of cases	%
Under 19	6.4	6	5.8	1.7	3	3.6	0.8	2	1.8
20 — 29	61.8	65	63.1	61.6	46	54.7	66.5	69	78.1
30 — 39	29.3	27	26.2	34.3	22	26.2	31.3	20	17.5
Over 40	2.5	5	4.9	2.4	13	15.5	1.4	3	2.6
<b>Parity</b>									
0	27.2	23	22.3	33.2	30	35.7	44.5	43	37.7
1	21.8	19	18.4	28.1	15	17.9	32.4	40	35.1
2	17.1	15	14.6	19.4	8	9.5	14.5	18	14.0
3	12.3	14	13.6	9.6	8	7.2	5.2	6	5.3
4	8.6	11	10.7	4.8	7	8.3	1.9	2	1.8
5 or more	13.0	21	20.4	4.9	16	21.4	1.5	7	6.1
Total		103			84			114	

**TABLE III**  
**AGE DISTRIBUTION AND INCIDENCE ACCORDING TO PARITY IN DESTRUCTIVE MOLE**

Age	1951 — 1960			1961 — 1970			1971 — 1978		
	Per cent of deliveries	No. of cases	%	Per cent of deliveries	No. of cases	%	Per cent of deliveries	No. of cases	%
Under 19	6.4	1	4.3	1.7			0.8	1	5.9
20 — 29	61.8	14	60.9	61.6	6	30.0	66.5	10	58.8
30 — 39	29.3	4	17.4	34.3	6	40.0	31.3	2	11.8
Over 40	2.5	4	17.4	2.4	8	30.0	1.4	4	23.5
<b>Parity</b>									
0	27.2	7	30.4	33.2	2	10.0	44.5	7	41.1
1	21.8	3	13.1	28.1	1	5.0	32.4	6	35.3
2	17.1	2	8.7	19.4	5	25.0	14.5	1	5.9
3	12.3	3	13.1	9.6	1	5.0	5.2	1	5.9
4	8.6	2	8.7	4.8	4	20.0	1.9		
5 or more	13.0	6	26.0	4.9	7	35.0	1.5	2	11.8
Total		23			20			17	

**TABLE IV**  
**AGE DISTRIBUTION AND INCIDENCE ACCORDING TO PARITY IN CHORIOCARCINOMA**

Age	1951 — 1960			1961 — 1970			1971 — 1976		
	Per cent of deliveries	No. of cases	%	Per cent of deliveries	No. of cases	%	Per cent of deliveries	No. of cases	%
Under 19	6.4			1.7	1	2.8	0.8		
20 — 29	61.8	10	38.5	61.8	14	40.0	66.6	13	46.4
30 — 39	29.3	12	46.1	34.3	10	28.6	31.3	5	17.9
Over 40	2.5	4	15.4	2.4	10	28.6	1.4	10	35.7
<b>Parity</b>									
0	27.2	2	7.7	33.2	5	14.3	44.5	4	14.3
1	21.6	4	15.4	28.1	5	14.3	32.4	8	28.6
2	17.1	5	19.2	19.4	7	20.0	14.5	1	3.6
3	12.3	6	23.1	9.6	5	14.3	5.2	4	14.2
4	8.6	3	11.5	4.8	3	8.5	1.9	3	10.7
5 or more	13.0	6	23.1	4.9	10	28.6	1.5	8	28.6
Total		26			35			28	

Table V shows the relative incidence of gestational trophoblastic diseases in the surgical specimens examined at the Department of Pathology of National Taiwan University and the Taipei Medical College in the 10-year period of 1957 — 1966 and 1967 — 1976.

In the series of 1957 — 1966 it was 0.48% (7), and in recent 10 years 0.40% (8). These figures represent closely the whole area of Taiwan. It seems to be quite high in this area compared with that of other pathological institutes.

**TABLE V**  
**RELATIVE INCIDENCE OF TROPHOBLASTIC DISEASE IN SURGICAL SPECIMENS\***  
(1957 — 1966) (1967 — 1976)

Years and source	Hydatidiform mole	Destructive mole	Choriocarcinoma	Unclassified	Total	No. of Surg. specimen	%
1957 — 1966 Taiwan Univ. Hospital	228	70	57		355	73,413	0.48
1967 — 1976 Taiwan Univ. Hospital	191	24	30	28	273	121,735	0.22
1967 — 1976 Taipei Med. College	290	34	50	23	397	97,731	0.40
Total	709	128	137	51	1,025	292,879	0.35

\* Dr. T.Y. Chen, Department of Pathology, TUH & TMC.

In both destructive mole and choriocarcinoma the diagnosis of the patients with or without tissue is shown in Table VI.

In this study one fifth of destructive mole and one third of choriocarcinoma could not obtain positive tissue proof. The proportion of the patients with choriocarcinoma in which the tissue proof available remained unchanged throughout the three periods. However, the acquisition of tissue proof in the patients with destructive mole has greatly decreased in the 1970's because of the early chemotherapeutic intervention.

Table VII shows the results of follow-up in patients with

hydatidiform mole. Of 301 patients, 110 were followed over 5 years and 97 were 1 to 4 years. There were 8 deaths in 1950's group but none in both 1960's and 1970's. Of these 8 fatal cases, 3 died during or immediately after evacuation and 5 died during follow-up, among which 3 were possibly due to choriocarcinoma. The follow-up rate was 71.4%.

With transition of periods more uteri were conserved. The subsequent pregnancy rate was very high as seen from Table VII, but it does show a decreasing tendency. More than half of the first subsequent pregnancies occurred within one year after evacuation of molar pregnancy.

**TABLE VI**  
**CLASSIFICATION OF GESTATIONAL TROPHOBLASTIC DISEASES**

Condition	1951 — 1960 No. of cases	1961 — 1970 No. of cases	1971 — 1978 No. of cases	Total
Destructive mole	23	20	17	80
With tissue proof	22	19	7	48
Without tissue proof	1	1	10	12
Choriocarcinoma	26	35	28	89
With tissue proof	17	23	20	60
Without tissue proof	9	12	8	29
Total	49	55	45	149

**TABLE VII**  
**FOLLOW-UP STUDY OF HYDATIDIFORM MOLE**

	1951 — 1960	1961 — 1970	1971 — 1978	Total
Living and well	80	61	66	207
Over 5 years	64	28	20	
4 to 5 years	3	7	9	
3 to 4 years	4	9	6	
2 to 3 years	4	6	12	
1 to 2 years	5	13	19	
No follow-up available	15	23	48	
Died	8*	0	0	
Total	103	84	114	
Malignant sequelae	3	2	4	9 (4.3%)
Uterus conserved	72	62	105	
Subsequent pregnancy	58 (80.6%)	34 (54.8%)	49 (46.7%)	
Within 6 months	34 (58.6%)	13 (38.2%)	15 (30.6%)	
Within 1 year	45 (77.6%)	23 (67.6%)	27 (55.1%)	

\* Three died immediately after evacuation, 5 died during follow-up, among which 3 were possibly due to choriocarcinoma.

The distribution of cases by use or non-use of methotrexate and the survival is shown in Table VIII. Of 60 patients with destructive mole, 42 were followed more than one year, in which 32 were followed more than 5 years. Seven deaths occurred, of which 2 occurred after 2 years and the remaining 5 died within 2 years. The 2 late deaths had a solitary tissue evidence of destructive mole.

Comparison of the outcome in the patients with destructive mole, with and without tissue proof, is shown in Table IX. The survival rate in groups between use and non-use of metho-

trexate did not show any significant difference in this study. Both groups had a high survival rate well over 80%.

The distribution of cases with choriocarcinoma by use or non-use of methotrexate and survival is shown in Table X.

Of 89 patients, 80 were followed over one year, of which 18 were living and well over 50 years. There were 48 deaths, all within 2 years, in which 37 died within 6 months, 8 between 7—12 months, 2 in 1—1½ years and 1 in 1½—2 years.

**TABLE VIII**  
**FOLLOW-UP STUDY OF DESTRUCTIVE MOLE (1951 — 1978)**

	Non-use of MTX		Use of MTX		Total
	With tissue proof	Without tissue proof	With tissue proof	Without tissue proof	
Living and well	29	2	8	3	42
Over 5 years	26	1	5		
4 to 5 years	0	0	0	0	
3 to 4 years	1	0	3	0	
2 to 3 years	2	0	0	1	
1 to 2 years	0	1	0	2	
Died	4	1	1	1	7
Within 1 year	2	0	0	1	
1 to 2 years	1	1	0	0	
2 to 3 years	1	0	0	0	
3 to 4 years	0	0	1	0	
No follow-up available	4	1	2	4	11
<b>Total</b>	<b>37</b>	<b>4</b>	<b>11</b>	<b>8</b>	<b>60</b>

**TABLE IX**  
**COMPARISON OF THE RESULTS IN OVER-ALL DESTRUCTIVE MOLE AND SUSPECTED PATIENTS (1951 — 1978)**

Groups	Total No. of cases	No. of living & well over 1 year	Death	Survival rate
Non-use of MTX	36	31	5	86.1%
Use of MTX	13	11	2	84.6%
<b>Total</b>	<b>49</b>	<b>42</b>	<b>7</b>	

**TABLE X**  
**FOLLOW-UP STUDY OF CHORIOCARCINOMA (1951 — 1978)**

	Non-use of MTX		Use of MTX		Total
	With tissue proof	Without tissue proof	With tissue proof	Without tissue proof	
Died	21	15	9	3	48
Within 6 months	15	13	7	2	37
7 to 12 months	3	2	2	1	8
13 to 18 months	2	0	0	0	2
19 to 24 months	1	0	0	0	1
Living and well	5	0	18	9	32
Over 5 years	5	0	9	4	18
1 to 4 years	0	0	9	5	14
No follow-up available	1	2	6	0	9
<b>Total</b>	<b>27</b>	<b>17</b>	<b>33</b>	<b>12</b>	<b>89</b>

Comparison of the survival rate in the patients with choriocarcinoma is shown in Table XI.

As seen from the Table, the survival rate was clearly

different between the use or non-use of methotrexate, 69.2% versus 12.2%. In this respect methotrexate has definitive value on the cure of choriocarcinoma.

TABLE XI  
COMPARISON OF THE RESULTS IN OVER-ALL CHORIOCARCINOMAS AND SUSPECTED PATIENTS (1951 — 1978)

Groups	Total No. of cases	No. of living & well over 1 year	No. of dead within 2 years	Survival rate
Non-use of MTX	41	5	33	12.2%
Use of MTX	39	27	12	69.2%
Total	80	32	48	

## DISCUSSION

In our previous reports(2, 9) the extraordinarily high incidence of gestational trophoblastic disease in Taiwan had been explained by the following three facts. First, our hospital was what may be called the wastebasket of pathologic cases; second, the hospital delivery rate was low, and third, Chinese women were very prolific, the birth rate being over 40, thus the frequent subjection of the individual to pregnancies favors the development of trophoblastic diseases.

From that time on the number of hospital deliveries increased rapidly year by year due to the growth of population in Taipei area. Family planning has been practiced on a large scale recently. Consequently the birth rate dropped considerably in the 1950's. It is around 20 in the 1970's. On the one hand well-equipped, high standard hospitals have increased in number with the expansion of Taipei area, rapid growth of population and improvement of the level of living. Accordingly, the tendency for patients to concentrate in our hospital does not exist recently. In a word our hospital is no longer the wastebasket for pathologic cases. The improvement of nutritional status also became remarkable with the economic growth.

In this study the incidence relative to deliveries was much higher in the 1950's, later somewhat decreased with the increased number of the hospital deliveries, but yet the incidence remained 1:136 in 1970's, obviously much higher than that reported from Western sources(10, 11). However, the actual number of the patients increased in 1970's in spite of the great improvement of socio-economic status in Taiwan.

A number of attempts have been made to relate low socio-economic status to a relatively high frequency of gestational trophoblastic diseases(12, 13, 14). However, Douglas was unable to find an association between the frequency of mole and socio-economic status in data for New York, and also unable to find evidence of high incidence of mole amongst Oriental women living in Western countries(15).

On the other hand Ishizuka (16) has reported a relatively high incidence in Japan, which has experienced substantial economic development. The number of hydatidiform mole occurred 1 per 522 registered pregnancies or 1 per 348 live births for 10-year period from 1962 through 1971 based on census figures in Aichi Prefecture of mid-Japan.

From our data it is unable to find that the tremendous improvement in the socio-economic status in Taiwan has any effect upon the occurrence of the gestational trophoblastic

diseases. Of course the true incidence is extremely difficult to determine from this hospital based statistics. However, the actual number of patients seen in our hospital per year is undoubtedly larger than any clinic in Western countries except some well-organized trophoblastic disease centers.

The age distribution of the gestational trophoblastic diseases relative to deliveries in this series was disproportionately high in women over 40 years old of all categories. A similar high incidence in the older age group in hydatidiform mole was reported by others(15, 17).

Edmonds(18) and Bagshawe(19) found an increased incidence in women under 20 and over 40 years old. The relative frequency of hydatidiform mole in their teens is varied. Our data did not show an elevated incidence among the very young. However, Marquez-Monter et al.(12) reported no significant correlation between age and incidence of moles in their series.

Incidence in the older age group with destructive mole and choriocarcinoma in this series shows much higher than that of others(3, 10, 20, 19). In this respect the advancing age appears to have clearly been established as a predisposing factor to the gestational trophoblastic diseases(11, 21, 22).

The relative incidence of each categories in this series was disproportionately high in parity 5 or more, grand multiparas. Chun et al.(13) found in Hong Kong the relative incidence of hydatidiform mole was disproportionately low with first and second pregnancies and high in subsequent pregnancies. In relation to parity it might be considered that there is either no association or that the association is complicated by geographical factor(3, 12, 19).

In our hospital the number of deliveries of teens and over 40 years old has markedly decreased in 1970's, so does that of the parity of 3 or more.

The relative incidence of trophoblastic diseases among the surgical specimens in the Department of Pathology, National Taiwan University Hospital and Taipei Medical College was 0.48% and 0.40% respectively in a 10-year period of 1957 — 1966 and 1967 — 1976(7, 8). These figures might be regarded roughly as the relative incidence in whole Taiwan. It is quite the same in relative incidence with the advancement of period and seems to have a high incidence in this locality from another angle.

In the majority of the patients in our series the diagnosis

was based upon Novak's histologic criteria(3) by our pathologists(4). But some patients in whom the histologic evidence did not permit positive proof were categorized by unequivocal clinical, hormonal and radiological evidence.

The morphological classification system is becoming little use since the precise histologic diagnosis is frequently unavailable and the early detection of malignant transformation has been possible by the sensitive tests for human chorionic gonadotropin(23, 24, 25), and thus chemotherapy is instituted in the majority of patients regardless of the histologic type. To overcome the short-comings of morphologic classification, several clinically oriented classification systems have been suggested(27, 28, 29, 30, 31). To find an ideal and suitable clinical classification system of trophoblastic diseases for use in our locality is now under way.

The subsequent postmolar pregnancies occurred in 80.6%, 54.8% and 46.7% respectively in each period in whom the uterus was conserved. More than half of these subjects became pregnant within one year. Although the patients were instructed to avoid further pregnancy for at least one year after evacuation, the incidence revealed considerably higher. However, the declining tendency can be seen with the advancement of the period. In the occasion of distinguishing between normal and postmolar sequelae, ultrasonic scanning has been shown to be a safe and practical method(32).

The survival rate in hydatidiform mole was 96.3%, and in destructive mole before the introduction of chemotherapy was 86.1%, whereas in destructive mole with use of methotrexate was 84.6%. There are no significant differences between these two groups.

A review of the 1960 USA and UK literature by Ober et al. revealed 94% of the survival rate with destructive mole(33). Generally speaking, hydatidiform mole and destructive mole are rather benign conditions, thus rarely fatal. It could be cured by hysterectomy even with metastases.

In contrast, the survival rate in choriocarcinoma before introduction of methotrexate was only 12.2%, whereas with use of chemotherapy it was improved to 69.2%. It is generally agreed that the survival rate of choriocarcinoma prior to chemotherapy is somewhere between 10 and 20% in the literature(14, 34).

In this study a great majority of the patients with choriocarcinoma before the introduction of chemotherapy terminated fatally, usually within one year. In comparison of the results it can be definitely concluded that methotrexate therapy has a substantial value on cure of choriocarcinoma.

### SUMMARY

1. Four hundred and fifty-seven patients with gestational trophoblastic diseases were treated and investigated between 1951 and 1978.
2. The over-all incidence relative to deliveries was 1:124. This figure is considerably higher than that of Western countries. However, the actual number of the patients is not decreased, though, a remarkable improvement in socio-economic status has been achieved in Taiwan in recent years.
3. The frequency of gestational trophoblastic diseases rela-

tive to total deliveries is substantially higher in the age group of over-40 and in grand multiparas.

4. A high incidence is also shown in this locality from a standpoint of surgical specimens submitted to pathological examination.
5. The survival rate in hydatidiform mole and destructive mole, either with or without chemotherapy, is equally good. In contrast, choriocarcinoma is quite malignant. The survival rate prior to chemotherapy was only 12.2%, clearly different with destructive mole.
6. The histological diagnosis is completely acceptable, however, its availability is limited because of the improvement in early detection and in early institution of chemotherapy in the occasion of malignant transformation. Accordingly, a practical and ideal clinically oriented classification system should be adopted in this locality.
7. After chemotherapeutic intervention, the survival rate of choriocarcinoma has been improved very much. Methotrexate has a definitive value on cure of choriocarcinoma.

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