



Memorandum

PD-441-309

1512-49420

Date January 5, 1982

From Director, Family Planning Evaluation Division, CHPE

Subject Foreign Trip Report (AID/RSSA): Philippines, Nov 3-4; Singapore, Nov 5; Indonesia, Nov 6-14; Thailand, Nov 14-15; Bangladesh, Nov 16-17; India, Nov 17; Bahrain, Nov 18; Switzerland, Nov 19-20; England, Nov 20, 1981

To William H. Foege, M.D.
Director, Centers for Disease Control
Through: Horace G. Ogden, Director
Center for Health Promotion and Education

- I. PLACES, DATES, AND PURPOSE OF TRAVEL
- II. PRINCIPAL CONTACTS
- III. REPRODUCTIVE EPIDEMIOLOGY COURSE - BANDUNG, INDONESIA
- IV. TABLES

I. PLACES, DATES, AND PURPOSE OF TRAVEL

A. Manila, Philippines, November 2-4, 1981

Presented two papers and moderated one session at the First International Congress on Maternal and Neonatal Health, sponsored by the Maternal and Child Health Association of the Philippines.

Papers:

(a) Rochat RW: Weighing the Health Consequences of Contraception versus Unplanned Fertility (presented to an audience of approximately 300).

(b) Foege WH: Keynote Address: Overview of the Risks of Morbidity and Mortality Due to Infection During Pregnancy, Delivery and Puerperium and the Implication of the Risks to Mother, Fetus and Neonate (presented to an audience of approximately 400).

Moderator for Dr. Foege, Session III, Prevention and Cure of Prevalent Infections in the Mother and in the Newborn.

2. Informal consultation with Steve Sinding and Bill Goldman (USAID/Manila) and John Laing (University of the Philippines, Population Institute).

B. Singapore, November 5, 1981

Consulted with Dr. Mark Cheng regarding analysis of 116 sterilization failures. Dr. Cheng invited me to collaborate in analyzing the failure rates and associated risk factors.

C. Jakarta, Indonesia, November 6, 1981

1. Discussed with Dr. Does Sampoerno a) continued collaboration on international sterilization death reporting, b) a request for a national workshop to train trainers in Reproductive Health Epidemiology (modeled after the Population Council/Centers for Disease Control/Ford Foundation workshop, September 1981, in Bangkok), and c) consultant assistance with four regional seminars in Indonesia.

2. Discussed with USAID/Jakarta possible consultation for Leo Morris to BKKBN on MCH/FP surveys in Indonesia.

3. Discussed with Dr. Joedo Prihartono and Rich Mahoney (PIACT) technical assistance by Dr. George Rubin (CDC) in April 1982 on prospective sterilization morbidity study. This study may provide key information for rapid expansion of sterilization services after national elections (May 1982).

C. Bandung, Indonesia, November 9-14, 1981

Gave 5 morning lectures (8:30-10:30)/problem sessions (11:30-12:30) on epidemiologic principles of reproductive health at Maternity Care Monitoring Research Methodology Workshop. Topics included problem definition, epidemiologic methods (including validity assessment), and scientific writing. Average pretest score for 29 physicians was 60%. No post-test given. See Section III. Professor Sulaiman asked if I would return and provide additional postgraduate training at the next annual BKS PENFIN Meeting. I proposed they consider a scientific meeting with presentations of their own data, possibly with critical reviews by others.

D. Bangkok, Thailand, November 14, 1981

Discussed with Andy Fisher revising sequence of topics for February 22-27 1982 Population Council/CDC/Ford Foundation Workshop on Reproductive Health Epidemiology. He proposed the following:

1. Zahniser - Problem Statement/Problem Definition exercises;
2. Rubin - Epidemiologic Principles;
3. Fisher, Rubin and Zahniser - Protocol Development and Potential Problem Analysis.

We need to develop criteria for evaluating relevance, importance, and feasibility of proposed research.

E. Dacca, Bangladesh, November 16-17, 1981

1. Consulted with Atiqur R. Khan, Tony Measham, Subhan Choudhury, Halida Akhter, Chris Zahniser, Ghyas, Pradip on research design, funding, and organizational roles for evaluation of Pathfinder's training in menstrual

regulation. CDC's primary role is in technical assistance in epidemiologic research design, data analysis and scientific report writing. Ghyas is project director and responsible for implementation, quality control, data editing, and writing a project report. PIACT/Bangladesh is funding the field work. Key issues discussed were case definitions of complications, sample size, comparison groups, and quality control of field investigation.

2. Consulted with Dr. Nargis Akhter and Dr. Rafiqul Islam regarding sterilization death surveillance and proposed publication of manuscript, Grimes DA, Satterthwaite AP, Rochat RW, Akhter N: Deaths from contraceptive sterilization in Bangladesh: rates, causes and prevention.

3. Consulted with Stan d'Souza and Jim Phillips (ICDDR/B), Atiqur R. Khan (PIACT), Tony Measham (Ford), Chris Zahniser and Halida Akhter (CDC) on proposed national workshop on Reproductive Health Epidemiology for early March 1982. To conserve expenses, we proposed this workshop one week after Population Council/CDC/Ford Foundation workshop in Bangkok. Because of the emphasis on sterilization studies, I recommend David Grimes as primary CDC medical epidemiologist instructor.

F. New Delhi, India, November 17, 1981

1. Informal telephone discussion with Dr. Badri Saxena on analysis of sterilization morbidity study. He requested review of manuscript, which he offered to mail me at CDC.

2. Informal discussion with Dr. Gary Merritt (USAID) on possible prospective study of oral contraception (OC) related morbidity. (OC's recently officially made available without prescription.) Chief problem may be ascertainment of relevant health problems.

G. Bahrain, November 18, 1981

Informal discussion with Dr. Hani Atrash, Ministry of Health, on reproductive health epidemiology research and training and health promotion in Bahrain. I also interviewed two persons seeking training at CDC (Randeh Hamadeh and Salam Semaan).

H. Geneva, Switzerland, November 19-20, 1981

1. Consulted with Dr. Petros-Bavasian, Dr. Sterky, and Dr. Brian McCarthy regarding continuing FPED assistance to Family Health Division in WHO training workshops. I discussed possible third year extension at WHO with Dr. McCarthy.

2. Consulted with Dr. Alex Kessler, Earl Wilson, and Susan Holck regarding possible assistance to Special Programme for Research in Human Reproduction in epidemiologic studies of sterilization (Bangladesh) and trophoblastic disease. I discussed with Dr. Holck the benefits of a second year working with WHO.

I. London, England, November 20, 1981

Informal discussion with John Anderson regarding his CDC work studies assignment at World Fertility Survey, International Statistical Institute. He is comparing Contraceptive Prevalence Survey and World Fertility Survey data on 1) levels of contraceptive use and 2) prevalence, duration of breastfeeding and supplemental feeding practices.

Recommendations:

1. CDC should expand and carefully evaluate its international training activities in reproductive health and family planning evaluation. Evaluation of training might include a) perceptions of trainees toward training, b) objective assessment of acquired knowledge (pretest, post-test), and c) objective assessment of acquired skills (e.g., written research proposals; appropriate requests for technical assistance (consultations; improved allocation of resources).

2. Careful evaluation of maternity care monitoring (MCM) data should provide a data base for evaluating trends in maternal health and for developing rational policy changes to improve maternal health.

II. PRINCIPAL CONTACTS

A. Manila, Philippines

1. Professor Hubert deWatteville, M.D., Secretary-General, IAMANEH
2. Fe del Mundo, M.D., Congress President and Founding President, Maternal and Child Health Association of the Philippines (MCHAP)
3. Perla Di Santos Ocampo, M.D., President, Philippine Medical Association
4. Remedios G. Arellano, M.D., President, MCHAP
5. Abdel R. Omran, M.D., Carolina Population Center
6. Mercedes Concepcion, Ph.D., Dean, Population Institute, University of the Philippines
7. R. R. Trussell, O.B.E., FRCOG, Professor, Department of Obstetrics and Gynecology, University of London
8. Claude Sureau, M.D., Chairman, University Clinic, Baudelocque, Paris, and President-Elect, International Federation of Gynecology and Obstetrics (FIGO)
9. Ransome Kuti, M.D., Professor of Pediatrics and Primary Care, Lagos, Nigeria

B. Singapore

1. Dr. Mark Cheng, Associate Professor, University Hospital Department of Obstetrics and Gynecology

C. Jakarta, Indonesia

1. Dr. Does Sampoerno, Dean, School of Public Health
2. Mr. Charles Johnson, USAID/Jakarta
3. Mr. Morrie K. Blumberg, USAID
4. Mr. David C. Piet, USAID
5. Dr. Steven Solter, Health Research Advisor, Ministry of Health
6. Mr. Richard Mahoney, PIACT
7. Dr. Joedo Prihartono

D. Bandung, Indonesia

1. Professor Sulaiman Sastrawinata, Chairman, BKS PENFIN
2. Dr. Sudradji Sumapradja, Vice Chairman, BKS PENFIN
3. Dr. T. Agoestina, Secretary, BKS PENFIN
4. Dr. Erdjan Albar, Chairman, Department of Ob/Gyn, Pirngadi Hospital, Medan, Indonesia
5. Dr. Hamonangan Hutapea, Department of Ob/Gyn, Pirngadi Hospital, Medan, Indonesia
6. Dr. H.A.R. Syahrial, Chairman, Department of Ob/Gyn, M. Djamil Hospital, Padang, Indonesia
7. Dr. Junaidi, Department of Ob/Gyn, M. Djamil Hospital, Padang, Indonesia
8. Dr. Supono, Chairman, Department of Ob/Gyn, General Hospital, Palembang, Indonesia
9. Dr. Hakim Sarimuda Pohan, Department of Ob/Gyn, General Hospital, Palembang, Indonesia
10. Dr. Ratna Suprapti Samil, Chairman, Department of Ob/Gyn, Cipto Mangunkusumo Hospital, Jakarta, Indonesia
11. Dr. Abdul Bari Sjaifuddin, Department of Ob/Gyn, Cipto Mangunkusumo Hospital, Jakarta, Indonesia
12. Dr. Dinan S.B., Chairman, Department of Ob/Gyn, Hasan Sadikin Hospital, Bandung, Indonesia
13. Dr. Halim Makky, Department of Ob/Gyn, Hasan Sadikin Hospital, Bandung, Indonesia
14. Dr. Ariawan Soejoenoes, Chairman, Department of Ob/Gyn, Karijadi Hospital, Semarang, Indonesia
15. Dr. Ny St. Mutmainah, Department of Ob/Gyn, Karijadi Hospital, Semarang, Indonesia
16. Dr. Soeprono, Chairman, Department of Ob/Gyn, Mangkujudan Hospital, Yogyakarta, Indonesia
17. Dr. Saribin Hasibuan, Department of Ob/Gyn, Mangkujudan Hospital, Yogyakarta, Indonesia
18. Dr. Soehartono Sayid, Chairman, Department of Ob/Gyn, Saiful Anwar Hospital, Malang, Indonesia
19. Dr. Achmad Hidayat, Department of Ob/Gyn, Saiful Anwar Hospital, Malang, Indonesia

20. Professor M. Haryono Soedigdomarto, Chairman, Department of Ob/Gyn, Soetomo Hospital, Surabaya, Indonesia
21. Dr. Marsianto, Department of Ob/Gyn, Soetomo Hospital, Surabaya, Indonesia
22. Dr. I.B. Gde Manuaba, Chairman, Department of Ob/Gyn, General Hospital Sanglah, Denpasar, Indonesia
23. Dr. Suanda Duarasa, Department of Ob/Gyn, General Hospital Sanglah, Denpasar, Indonesia
24. Professor Dr. J. L. Makalew, Chairman, Department of Ob/Gyn, Pelamonia Hospital, Pandang, Indonesia
25. Dr. Ny. Army Murah Manu, Department of Ob/Gyn, Pelamonia Hospital, Pandang, Indonesia
26. Dr. G. Esther Wowor, Chairman, Department of Ob/Gyn, Gunung Wenang Hospital, Manado, Indonesia
27. Dr. Nan Warouw, Department of Ob/Gyn, Gunung Wenang Hospital, Manado, Indonesia
28. Dr. Biran Affandi, Raden Saleh Hospital, Jakarta, Indonesia
29. Dr. Nanta, Thai Fertility Research Association
30. Dr. Kamheang, Thai Fertility Research Association
31. Dr. Chitra, Thai Fertility Research Association
32. Dr. Daranee, Thai Fertility Research Association
33. Dr. Roger P. Bernard, International Fertility Research Association
34. Dr. Judith Fortney, International Fertility Research Association

E. Bangkok, Thailand

1. Andy Fisher, Sc.D., Population Council

F. Dacca, Bangladesh

1. Mr. Charles Gurney, USAID
2. Dr. John Naponick, USAID
3. Ms. Susan Olds, USAID
4. Dr. Atiqur R. Khan, PIACT
5. Mr. Youssef Choudhury, PIACT
6. Dr. Subhan Choudhury, Pathfinder
7. Dr. Ghya Juddin Ahmed, MR Training Evaluation Project Director
8. Dr. Anthony Measham, Ford Foundation
9. Dr. Narghis Akhter, Director, Service Unit, PCFP
10. Dr. Rafiqul Islam, Deputy Director, Service Unit, PCFP
11. Dr. Stan d'Souza, ICDDRL/B
12. Dr. Jim Phillips, ICDDRL/B
13. Dr. Halida Akhter, CDC Epidemiologist Consultant
14. Ms. Chris Zahniser, CDC Epidemiologist Consultant

G. New Delhi, India

1. Dr. Badri Saxena, Deputy Director, Population and Family Planning
2. Dr. Gary Merritt, USAID

H. Bahrain

1. Dr. Hani Atrash, Assistant Professor, American University in Beirut, School of Public Health (assigned to Ministry of Health, Bahrain)

I. Geneva, Switzerland

1. Dr. Petros-Bavarian, Director, Family Health Division
2. Dr. Goran Sterky, Chief, Maternal and Child Health
3. Dr. Brian McCarthy, Medical Officer, FHD/MCH
4. Dr. Rick Guidotti, Medical Consultant, FHD/MCH
5. Dr. Alex Kessler, Director, Special Programme for Research in Human Reproduction (HRP)
6. Dr. Earl Wilson, Medical Officer, HRP
7. Dr. Susan Holck, Medical Officer, HRP

J. London, England

1. Dr. John Anderson, Demographer, World Fertility Survey

III. REPRODUCTIVE EPIDEMIOLOGY COURSE - BANDUNG, INDONESIA

In Bandung I taught epidemiologic principles to a group of clinicians, most (25/29) of whom were academic obstetrician-gynecologists. All 25 participate in the IFRP supported Maternity Care Monitoring (MCM) and are based in 12 medical schools. I conducted a 20-minute pretest (21 questions) of 29 participants on the first morning. Overall, the average score was 60%; seven scored 76% or higher, and six scored less than 50%. (See Tables 1A and 1B.) When I examined the questions most commonly missed, I observed a bimodal distribution. In my opinion, the 12 questions missed by less than one-third of the participants were those requiring simple logical interpretation, while the 10 questions missed by more than 50% of the participants required specific knowledge of epidemiologic terms. I infer that the course participants are bright, have acceptable English skills for multiple choice exams, but lack adequate knowledge and skills to conduct epidemiologic studies.

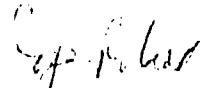
During the course, I focused attention on problem statements, problem definitions, types of epidemiologic studies, interpretation of epidemiologic studies and possible biases. I lectured from examples prepared by my colleagues, Ms. Chris Zahniser and Dr. George Rubin, for the September 1981 Population Council/Centers for Disease Control/Ford Foundation workshop in Bangkok. I developed examples from the Maternity Care Monitoring data presented in the afternoons by Drs. Roger Bernard and Judith Fortney.

At the end of each morning, I assigned each of 4-6 groups specific projects (e.g., write a problem statement, outline a research protocol, write an abstract) which the group leader presented to the entire class after lunch. The participants worked well, and the leaders gave excellent presentations. However, fewer than half the groups completed the assigned tasks in a manner consistent with my training objectives. I believe I set my sights too high

and tried to cover too much material in too short a time frame. Some participants would have preferred more time on clinical trials and statistical analysis. The lecture on scientific writing evoked the most discussion. The lecture on selection bias gained the greatest attention. The selection bias example is worth noting.

First, the Maternity Care Monitoring records show that for women with 6 or fewer years of schooling, the risk of puerperal mortality associated with singleton births is about 6.0 times greater for those with 0-3 prenatal visits (696 per 100,000 births) than for those with 4 or more prenatal visits (119 per 100,000 births). For women with 7 or more years schooling, 0-3 prenatal visits was associated with puerperal mortality of 271 per 100,000 compared with 107 for those with 4 or more visits--a relative risk of 2.5. We might infer that prenatal visits may be an important determinant of lowered puerperal mortality (Table 2) and that 82% of puerperal deaths might be prevented solely by providing health care during the prenatal period--without any change in education. This contrasts with a public policy of improving education without prenatal care which would appear to prevent 61% of puerperal deaths. This is an extremely important consideration for the allocation of national and local resources.

Hypothetically, however, selectively greater hospitalization of complicated cases among women with 0-3 prenatal visits could lead to a spuriously elevated relative risk of 5.7 (Table 3). While these data are hypothetical, any increased risk based on hospital population data should be evaluated for possible selection bias. Selection bias can be formally evaluated, and I have used preliminary data from MCM and rough estimates of population parameters to show one way to evaluate this bias (Table 4). The data in Table 4 should be substantiated in any formal report of relative risks from hospital based reporting systems. This preliminary evaluation suggests that selection bias does not contribute importantly to the relative risk determined with MCM data.



Roger W. Rochat, M.D.

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TABLE 1A

Pretest Scores in Reproductive Health Epidemiology for 29 Participants
in MCM Research Methodology Workshop

<u>Number of Incorrect Answers</u>	<u>Number of Persons</u>	<u>Score</u>
2	2	90%
3	1	86%
5	4	76%
7	1	67%
8	5	62%
9	5	57%
10	5	52%
11	1	48%
12	2	43%
13	2	38%
<u>15</u>	<u>1</u>	<u>29%</u>
Overall	29	Mean Score = 60%

TABLE 1B

Frequency With Which Pretest Questions Were Missed

<u>Frequency of Misses</u>	<u>Question Number</u>
<5	1, 3b, 11, 14
5-9	3c, 4, 5, 6c, 8, 10, 11, 14
10-14	9
15-19	3a, 6b, 7, 12a, 10B, 10C, 12, 14
20-24	2, 6a

TABLE 2

Puerperal Mortality in 11 Indonesian Medical School Hospitals¹
 Maternity Care Monitoring, IFRP, 1978-1979

<u>Public Policy</u>		<u>No. of Women</u>	<u>Puerperal</u>		<u>Relative Risk⁴</u>	<u>Health Impact Of Public Policy⁴</u>	
<u>Prenatal Visits</u>	<u>Education</u>		<u>Deaths</u>	<u>Rate³</u>		<u>Deaths Expected</u>	<u>Percent Prevented⁵</u>
"Healthy" Women		15,492	13	84	0.9	25.1	87.3
4+	7+ yrs.	8,447	9	107	1.0	30.6	84.6
4+	≤6 yrs.	5,044	6	119	1.1	34.0	82.0
0-3	7+ yrs.	8,492	23	271	2.5	77.5	61.1
0-3	≤6 yrs.	14,222	99	696	6.5	199.1	0
Current Overall		28,605	137	479	4.5	137	31.2

- ¹Excludes data on 8,173 (22.2%) women for whom data are not available.
²Assuming these puerperal mortality rates were applied to all women.
³Per 100,000 singleton births
⁴Compared to women with 4+ prenatal visits, 7 or more years' education
⁵Compared to women with 0-3 prenatal visits, ≤6 years' education

TABLE 3

Hypothetical Example of Selection Bias and Spurious Relative Risk

<u>Number of Prenatal Visits</u>	<u>0-3</u>	<u>4+</u>
<u>Number of Women</u>		
Characteristic		
Fatal puerperal complication (FPC)	10	10
Without FPC	990	990
Total	1000	1000
<u>Percent Hospitalized</u>		
With FPC	60%	80%
Without FPC	10%	80%
<u>Number Hospitalized</u>		
With FPC	6	8
Without FPC	99	792
Total	105	800
<u>Hospital Fatality Rates</u>		
(Per 1,000)	57.1	10.0
<u>Spurious Relative Risk</u>	5.7	1.0

Note Assumptions:

1. The null hypothesis is that puerperal mortality is the same for women with 0-3 and 4+ prenatal visits.
2. Women with and without FPC who have made at least 4 prenatal visits are equally likely to be hospitalized.
3. Women with FPC and 3 or fewer prenatal visits are more likely to be hospitalized because of complications of pregnancy than women without FPC and 3 or fewer prenatal visits.

TABLE 4

Estimated Hospitalization Rates¹ At Puerperium for Pregnant Women
In 12 MCM Hospitals, Indonesia, 1978-1979

<u>Number of Prenatal Visits</u>	<u>0-3</u>	<u>4+</u>	<u>Overall</u>
Number of Admissions to MCM Hospitals			
With Fatal Puerperal Complication (FPC)	80	20	100
Without FPC	46,725	25,175	72,000
Pregnancies Terminated Outside MCM Hospitals			
With FPC	1,980	20	2,000
Without FPC	974,825	25,175	1,000,000
Hospitalization Rates			
With FPC	4.0%	100%	5.0%
Without FPC	4.8%	100%	7.2%

¹Data based on estimated population of 15 million population, CBR = 36,
2 years observation, and other parameters from MCM preliminary data.