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# NATIONAL WORKSHOP ON ESSENTIAL DRUGS

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REPORT OF A WORKSHOP HELD IN ISLAMABAD  
JUNE 3-4, 1992

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## PAKISTAN CHILD SURVIVAL PROJECT

*National Basic Health Services Cell*

*Ministry of Health*

*Government of Pakistan*

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## LIST OF ACRONYMS

ADHO	Assistant District Health Officer
AJK	Azad Jammu and Kashmir
BHSC	Basic Health Services Cell
BHU	Basic Health Unit
CDL	Central Drug Laboratory
DHO	District Health Officer
DHQ	District Headquarters Hospital
EPI	Expanded Program of Immunization
GNP	Gross National Product
GOP	Government of Pakistan
MCH	Maternal and Child Health
MO	Medical Officer
MPA	Member of Provincial Assembly
MSD	Medical Stores Depot
NLED	National List of Essential Drugs
ORS	Oral Rehydration Solution
PCSP	Pakistan Child Survival Project
PMA	Pakistan Medical Association
PNF	Pakistan National Formulary
PPA	Pakistan Paediatric Association
PVMS	Procurement Vademecum list of Medical Stores
RHC	Rural Health Centre
THQ	Tehsil/Taluka Headquarters Hospital
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

## EXECUTIVE SUMMARY

A National Workshop on Essential Drugs was held in Islamabad on June 3 to 4, 1992. The Workshop was sponsored by the Ministry of Health's Pakistan Child Survival Project, which is supported by the United States Agency for International Development. The objectives of the Workshop were: 1) to review the current status of drug policies and management in Pakistan; 2) to consider feasible interventions to improve the availability of essential drugs; and 3) to identify the specific steps needed to implement the selected interventions.

Fifty seven participants attended the Workshop. Representatives were drawn from the Federal Government, the four provinces, and, Azad Jammu and Kashmir, as well as from private and donor agencies such as Network Association for the Rational Use of Medication, the Pakistan Medical Association, the Pakistan Paediatric Association, the United Nations Children's Fund, the United States Agency for International Development, the World Health Organization and the Pakistan Child Survival Project.

The Inaugural Session was addressed by 1) the Chief Guest, the Federal Minister of Health; 2) the Federal Director General Health; 3) the Acting Mission Director of the United States Agency for International Development; and 4) the Regional Advisor for the Eastern Mediterranean Regional Office of the World Health Organization.

There were six presentations concerning issues confronting the Workshop on Essential Drugs. Dr. Syed Mohsin Ali, Director General Health/Additional Secretary, Health Division, Government of Pakistan, presented a Draft of a National Drug Policy in Pakistan which calls for: legislation to increase regulation and standardization of drugs; governmental assistance to promote in-country drug production; reviews of registered drugs to assure relevance and safety; continued reviews and revisions of the National List of Essential Drugs; up-grading of the drug supply system; improvement of the medical support system, particularly the pharmacy sector; a strengthening of the existing quality assurance program; better drug information; development of a national drug research program; and finally, continuing liaison with WHO and other international organizations to improve the national drug supply system.

The second presentation was given by Dr. F.R.Y. Fazli, Chairman of Quality Control, Health Division, Government of Pakistan, who analyzed the essential drugs concept from three different aspects: the meaning and use of medicine, the availability and use of money to buy drugs, and the many problems that arise in managing a drug program. He then traced the development of the concept of essential drugs and the role of a National Drug Formulary in rationalizing the procurement and use of drugs in Pakistan.

The third presentation was given by Dr. Youssef Tawfik, Drugs and Logistics Advisor, the Pakistan Child Survival Project, who spoke of the results of the research conducted by the Project to identify cost-effective interventions which would lead to improving the availability of essential drugs, especially in remote areas. The study results suggest that a periodic computerized auditing of procurement orders from all sources is one of the most cost-effective interventions. An audit can detect overspending and purchase of non-essential drugs. Monitoring of prescription patterns at health facilities can also serve as a means to improve the availability of drugs. Finally, it was recommended that provincial purchase committees exchange information on costs between provinces.

The fourth presentation was by Dr. F.R.Y. Fazli, who addressed ways to improve funding through three possible sources: government sector, foreign aid, and the private sector. Among the options suggested were supporting non-profit health foundations, having the government broaden the social security system, providing incentives to the private sector to encourage it to provide services, and establishing health maintenance schemes whose services would be paid for by their subscribers.

The fifth presentation was by Dr. Jumma Khan, the Medical Officer In-Charge of the Havelian Rural Health Centre, Northwest Frontier Province, who presented a model of a progressive rural health care centre. The Centre improved its service by ensuring its health staff performed at a high level of professional competence. In return the community supplied resources to supplement a number of essential commodity inputs and services.

The sixth presentation was by Dr. Abdel Aziz Saleh, Regional Advisor on Essential Drugs, Eastern Mediterranean Regional Office, World Health Organization. He discussed such problems as unnecessary drugs, non-standardized use of drugs, brand name confusion, substandard drugs, and inequities in distribution. An ideal national drug policy would identify drug needs, establish a drug supply system, have a national quality assurance system, develop a pricing policy, develop standardized use of drugs, conduct operations research and install a system of monitoring and evaluation.

The Provincial Status Reports follow the presentations. These address such questions as types of health facilities; budget; purchase sources/procurement/ distribution; quality control; and provincial formulary.

The recommendations that stemmed from the presentations and the subsequent discussions are presented in the next section, for ease of reference.

Two Annexes are included which indicate the organization of the Workshop Program and the List of Participants.

## RECOMMENDATIONS

The recommendations of the National Workshop on Essential Drugs are presented below:

### I. NATIONAL DRUG POLICY

The participants agree in general to the proposals specified in the draft "National Drug Policy" paper presented by the Director General Health (see "National Drug Policy in Pakistan", pp. 25 - 33). In addition to the specific areas noted in the recommendations which follow, the participants particularly wished to endorse the following points of the draft policy:

#### A. Legislation

Existing legislation should be amended to provide for better enforcement of the National Drug Policy. Furthermore, such enforcement should be strictly implemented, particularly concerning adherence to the National Drug Formulary.

#### B. Human Resource Development

The participants agree fully with the Human Resources Development activities as proposed in the Draft National Drug Policy paper.

#### C. Research and Development

The Drug Research and Development proposals described in the National Drug Policy are fully supported.

### II. NATIONAL DRUG FORMULARY/ESSENTIAL DRUG LIST

#### A. Preparation of a National Drug Formulary/Essential Drug List

A national list of essential drugs and a national formulary should be developed, under the direction of the Federal Health Ministry, with indications of which drugs are appropriate for use at various types of health institutions, with due consideration of local health needs. The following organizations and departments should be involved in the preparation:

- all provincial health departments;
- professional organizations such as Pakistan Medical Association, Pakistan Paediatric Association, etc.;
- a national committee of experts; and
- World Health Organization;

#### **B. Content of National Drug Formulary/Essential Drug List**

The following information should be included:

- list of drugs using generic names;
- drug dosages for children and for adults;
- indications;
- contra-indications;
- side effects; and
- interactions with other drugs.

#### **C. Implementation of National Drug Formulary**

The participants recommend that effective implementation could be achieved by adhering to the following measures:

- the National Drug Formulary should be uniform for all provinces.
- the Provincial Health Departments should strictly implement the National Formulary.
- the National Drug Formulary should be incorporated into the curriculum of medical institutions.
- professional bodies should be involved in the dissemination and the implementation of National Drug Formulary.
- the National Drug Formulary should be revised every two years.
- a drugs and therapeutics committee should be formed to monitor the implementation of the National Drug Formulary at all levels.

### **III. DRUG PRODUCTION, REGISTRATION AND SALES**

A. Local drug manufacturers should be encouraged to produce more of the basic drug items needed by the country.

B. The local pharmaceutical industry should be provided comparable incentives to those given to multinational companies.

C. Drug registration should be more restrictive, and the number of drugs should be limited to bring it in line with WHO recommendations and the needs of the country, while eliminating undesirable and inappropriate formulations.

D. All drugs should be labelled generically. If brand names are displayed, the brand name and the generic name should be equally prominent.

E. Drug prices should be standardized and monitored to control variations in prices for the same drug.

F. Some control on the prices of drugs should be maintained by the government.

#### IV. DRUG PROCUREMENT (INDENT) AND DISTRIBUTION

A. A system to assess the quantity of drugs required in relation to actual or projected health needs should be installed.

B. The budget for the purchase of medicines should be increased at Medical Stores Depot, as well as for health facility local purchases.

C. Medicines should be purchased on a competitive basis.

D. Provinces should coordinate and exchange information on costs in order to ensure the lowest standard drug prices.

E. Medicines to be purchased, whether local or imported, should have sufficient shelf life.

F. Packing for the drugs to be purchased for Medical Stores Depots should be simple to get drugs at lower prices and to reduce pilferage.

G. Well equipped drug testing laboratories with qualified staff should be established in all provinces. Samples of all items procured may be sent to quality control laboratories at provincial or at national level, after delivery at Medical Stores Depot. The Central Drug Laboratory (CDL) may be asked to report on the samples sent by Medical Stores Depot in the shortest possible time.

H. The drug distribution system should be improved by the provinces to ensure the availability of drugs throughout the year at all government health facilities.

## V. DRUG PRESCRIPTION

A. Professors of medical colleges and doctors should write their prescriptions using generic names, both in the hospitals and in their private clinics.

B. Professors of medical colleges and doctors should be encouraged to adopt the concept of essential drugs by prescribing simple and cost-effective medicines to their patients.

C. Undergraduate and postgraduate medical students should be trained in clinical pharmacology during their house job training.

D. Medical officers after joining service in the hospitals should be trained by specialists and professors in writing simple, cost-effective prescriptions using generic names.

E. Fresh medical officers posted at rural health centres and basic health units should receive additional training in how to write simple, cost-effective prescriptions using generic names from the formulary.

F. Broad spectrum antibiotics should be prescribed only for clear microbiological indications, and only after collecting specimens for sensitivity tests where possible.

G. Prescriptions should be complete and comprehensive, including information for the patient on how to use the drugs prescribed.

H. Prescriptions should be monitored and evaluated at every level by management, particularly to ensure use of the Drug Formulary and rational prescribing patterns.

## VI. APPROPRIATE USE OF DRUGS BY PATIENTS

A. Doctors and pharmaceutical staff should explain in detail to patients how to take the drugs and medicines prescribed for them.

B. Health education on appropriate use of drugs should be provided to the general public through posters, lectures, articles and advertisements in the press and electronic media.

C. The government should publish the prohibited drug list for the information of the general public.

## INAUGURAL SESSION

## INAUGURAL ADDRESS

by

**SYED TASNEEM NAWAZ GARDEZI**

*Minister for Health*

*Ministry of Health*

*Government of Pakistan*

Dr. Syed Mohsin Ali, Director General Health, distinguished participants, guests, ladies and gentlemen, it is a matter of great pleasure for me to be invited to the inaugural session of this important National Workshop on Essential Drugs. There is no denying the fact that a supply of essential drugs, including vaccines, is an essential component of a proper health system, geared to provide both preventive and curative health services.

The Government of Pakistan attaches a high priority to social sector development including health services and, accordingly, has made a substantial increase in the financial allocations to meet these health services needs. The provision of health services that are readily accessible to people is of great importance to achieve the goal of health for all by the turn of the century. I am happy that this workshop will be concentrating on the vital issue of the supply of essential drugs in public sector health establishments. Because of limited financial resources, we cannot adopt an open-ended drug policy. At the same time we have to ensure that essential drugs at reasonable costs are available to sick people. Fortunately, the World Health Organization (WHO) has done a lot of work on the subject of essential drugs and the standardized use of drugs, and I am sure that this workshop will build on the work already done by the WHO.

At present the federal government and all the provinces have different systems of drug supply in their respective hospitals and health centres, etc. The senior health officials who have gathered in this workshop must ponder this important issue and devise a workable, efficient, and economic system of drug supplies. The guiding principles for the supply of essential drugs should be as follows:

- basic needs and treatment of the common diseases prevailing in our communities must be kept in view;
- costs of the drugs must be taken into account;
- non-essential drugs should be eliminated from formularies; and

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- the system should ensure patient compliance to prescribed drugs. The concept of essential drugs will be helpful not only in maintaining a regular supply of all essential drugs but will also reduce expenditures on non-essential drugs. In this regard we should be guided by the Essential Drugs Program of the WHO which has similar objectives. I take this opportunity to request the WHO to provide its support to our activities under the Essential Drugs Program in Pakistan. A sharing of experience and speedy interactions among the WHO and other international agencies such as the United States Agency for International Development and the United Nations Children's Fund (UNICEF), with the Ministry of Health's professionals should be highly beneficial. This process will support the promotion of a standardized use of drugs and provide qualitative and efficacious medicines to patients.

It is an admitted fact that the public is always attracted to health facilities which have an adequate supply of medicines, whereas the shortage of drugs result in non-utilization of government health facilities and a loss of confidence in the services provided. Hence, the Government of Pakistan is determined to improve the availability of essential drugs in its health facilities in order to build the confidence of the people and to improve the utilization of health services.

In view of the high level of the officers attending this workshop, I would like to stress the importance of the Essential Drugs Program, the success of which will depend on the efficient administration of supply, storage, and distribution at every point from the manufacturers to the users. There is an urgent need to improve management in order to eliminate wastage and to ensure continuity of supply. Procurement policies should be based on detailed records of turnover. Drug utilization studies may contribute to a better understanding of the requirements.

I would like to thank the organizers of the workshop for inviting me to this session. I shall be keen to learn about the outcome of the workshop and its recommendations, especially for cost-effective measures to improve and to sustain the availability of essential drugs in public sector health facilities. I wish the workshop participants every success in their deliberations. Thank you.

## WELCOME AND KEYNOTE ADDRESS

by

DR. SYED MOHSIN ALI  
*Director General Health/Additional Secretary*  
*Ministry of Health*  
*Government of Pakistan*

Honourable Chief Guest Syed Tasneem Nawaz Gardezi, Federal Minister for Health, distinguished guests, ladies and gentlemen, it is my proud privilege to welcome you all to the inaugural session of the National Workshop on Essential Drugs. I particularly welcome the Chief Guest Syed Tasneem Nawaz Gardezi, Minister for Health, for having accepted our request to be the Chief Guest at this inaugural session. This reflects the keen interest he has always taken in improving the availability of essential drugs at health facilities.

It will be pertinent to recall at this stage that in 1975 the Director General of the World Health Organization (WHO), in his report to the 28th World Health Assembly, reviewed the main drug problems facing developing countries and outlined possible new drug policies. The Director General of the WHO mentioned that the schemes of essential drugs were intended to extend the accessibility of the most necessary drugs to a population whose basic health needs cannot be met by the existing supply system. It was pointed out that the selection of essential drugs would depend on the health needs and on the structure and development of health services in each country. By resolution WHA 28.66, the World Health Assembly requested the Director General to implement the proposals contained in his report and in particular to advise member states on the selection and the procurement, at reasonable cost, of essential drugs of established quality in accordance with their national health needs. Since that time, much work has been undertaken by the WHO on essential drug programs and rational drug use.

It must be mentioned that there is no standard list of essential drugs which is applicable universally. Each country has to formulate its own lists of essential drugs to be used at various levels of its health system, taking into account the prevalent diseases and the needs of the patients. The WHO only provides guidelines for such programs.

Essential drugs are those that satisfy the health care needs of the majority of the population; they should, therefore, be available at all times in adequate amounts and in the appropriate dosage form. The choice of such drugs depends on many factors such as the pattern of prevalent diseases, treatment facilities, the training and the experience of available personnel, financial resources, and demographic and environmental factors. Only those drugs should be selected for which sound and adequate data on their

efficiency and their safety are available from clinical studies and for which evidence of performance in a variety of medical settings has been obtained.

Where two or more drugs appear to be approximately similar in all respects, the choice between them should be made on the basis of careful evaluation of their relative efficacy, safety, quality, price and availability. In cost comparisons between drugs, the cost of the total treatment, not just the unit cost of the drug, must be considered. It may be mentioned that cost is a major consideration in the choice of some drugs for inclusion in the list of essential drugs.

It may be worth mentioning the various efforts which have been made to develop the list of essential drugs based on the Essential Drugs Program of the WHO. In the context of the Primary Health Care Program of Pakistan, lists of such drugs were developed to be used at basic health units and rural health centres. Although this concept was generally acceptable to the provinces, the work on the implementation could not be continued.

At the level of the Ministry of Health, a National Drug Formulary has been developed with the assistance of a committee of experts selected nationally. This formulary was developed primarily for use at the federal government hospitals. However, the provincial governments were also requested to follow this example. This National Drug Formulary has been revised periodically in order to keep the list up-to-date. At the same time, the Federal Ministry for Health has developed a policy for the purchase and supply of drugs to the federal government hospitals.

The subject of drug supply and logistics was included in the Pakistan Child Survival Project in view of the importance of this component. This project provides technical as well as financial assistance to combat the leading causes of child morbidity and mortality, that is, diarrhoeal diseases, acute respiratory infection, immunization against preventable diseases and malnutrition. The prime objective of the project is not only to reduce infant and child mortality but also to sustain the reduced rates. Generally, the desired reduction of infant and child mortality cannot be realized unless there is an efficient drugs and logistics system that ensures the availability of the needed essential drugs. For example, unless Oral Rehydration Solution (ORS) is available for the dehydrated child, antibiotics for the child with pneumonia, and vaccine for preventing infectious diseases, all efforts to reduce mortality will be useless. It is in this context that the Ministry of Health has organized this two day National Workshop on Essential Drugs.

Pakistan has an effective procurement and distribution system for the vaccines and equipment used by the Expanded Program of Immunization (EPI), but a very uneven system for procurement and for distribution of drug supplies. The pharmaceutical drug supply system to health facilities, especially in the rural areas, through the year is problematic. Despite relative high levels of spending on "emergency" drugs, most rural

health centres (RHC) and basic health units (BHU) are chronically short of essential drugs. RHCs and BHUs which need large quantities of a small number of drugs are instead stocked with a wide variety of drugs, many of which are not essential.

The objectives of the National Workshop on Essential Drugs are:

- to review the current status of drug policies and management in Pakistan;
- to develop possible interventions to improve the availability of essential drugs in general and child survival drugs in particular, especially, at peripheral health facilities; and
- to identify specific steps which need to be taken at the federal and provincial levels to implement selected interventions.

This workshop is being attended by high level officials from the Federal Ministry of Health, the provincial health departments, and Azad Jammu and Kashmir. Representatives from the Pakistan Medical Association; the Pakistan Paediatric Association; representatives from international agencies, such as the United Nations Children's Fund (UNICEF), the World Health Organization (WHO), and the United States Agency for International Development (USAID) have also been invited.

Presentations and discussions will be held by eminent experts on various important subjects such as the Pakistan National Drug Policy, the Essential Drug List and the National Drug Formulary; options to increase financial resources in the health sector; community mobilization to increase resources; and drug prescribing, use and quality control. A World Health Organization (WHO) expert has been invited to this workshop to discuss the objectives and the components of the National Essential Drug Program in developing countries and to share experiences drawn from other countries that can be adopted in or adapted to Pakistan.

The participants of the workshop will finally identify cost-effective, sustainable interventions to improve the availability of essential drugs, especially at the rural health facilities, and recommend specific steps to be taken at the federal as well as the provincial level to implement the selected interventions.

The recommendations of the workshop will be forwarded to the Federal Health Ministry and Provincial Health Departments for their consideration and their implementation.

Finally, I again thank the honourable Chief Guest for sparing his valuable time to grace this occasion.

## ADDRESS

by

Ms. NANCY TUMAVICK

*Acting Mission Director*

*United States Agency for International Development*

Your Excellency, Minister for Health, Syed Tasneem Nawaz Gardezi; Director General Health, Dr. Mohsin Ali; distinguished guests and participants: it is indeed a pleasure for me to be here today at the inauguration of the National Workshop on Essential Drugs. We at the United States Agency for International Development (USAID) have long viewed health care as an essential component of any country's development program. An unhealthy population simply cannot be a productive population. All countries want to provide their citizens the means to escape the misery of illness and disease. Essential drugs, with its necessary logistical support, are a critical part of an effective health services program. The United States Agency for International Development strongly supports the establishment of such a program and we have been pleased to work with the Government of Pakistan (GOP) for over 40 years to strengthen this and many other areas of the health sector.

Improving access to health care for the rural population in Pakistan has been an important objective of the Sixth and Seventh Five-Year Development Plans. Both federal and provincial health officials have established primary health care as a national priority. However, over the last decade the GOP and the USAID have concluded that many government health facilities are still under-utilized. One major factor causing the low rate of use is the lack of drugs. Why should people bother to go to a health centre if they can't get the medicines they need?

The USAID's resources, under the Primary Health Care and Child Survival Projects, have been directed towards improving the quality of services through better management of rural health centres, including the supply of appropriate drugs, and the training of staff to work in these centres. We are working with the GOP, the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) to implement treatment guidelines and health messages for the most common life-threatening conditions: namely, diarrhoeal diseases and acute respiratory infections; immunizable diseases such as tuberculosis; and problem areas such as malnutrition and malaria.

Under the Child Survival Project we are pleased to be working closely with the GOP on ways to reduce infant and child mortality and morbidity. Together we are making major efforts: to introduce an in-service training curriculum; to design and to implement a

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computerized Health Management Information System; to build the capability for conducting applied research on child survival problems; to use mass media communication, and to establish a health system that can be sustained financially.

The question of essential drugs is basic to one of the most critical issues facing the health sector today. That is the issue of sustainability. It will do no good, in the long run, for the government to provide expensive drugs that are not appropriate for the most common illnesses, and that cannot be supplied in adequate quantities. The broader issue which you are all dealing with is: how can the Government of Pakistan sustain a health system that provides care to those most in need? The USAID is working with the Ministry of Health to examine this question very carefully, to determine how to finance the delivery of health services in Pakistan in order to improve the effectiveness and the quality of care throughout the system, and to direct the government's resources to supporting basic health services for the poor.

Progress has been made. Using the standard guidelines and taking into account cost factors, essential drug and equipment lists have been agreed upon by provincial health authorities. A monitoring system is giving regular management information regarding the services. By adhering to a recommended essential drug list, the provinces are able to procure, on a regular basis, sufficient quantities of basic supplies and life-saving drugs rather than using scarce funds for expensive antibiotics and ineffective and dangerous pharmaceuticals, such as paediatric anti-diarrhoeal suspensions and cough syrups which are examples of very seriously harmful and expensive drugs.

The USAID strongly supports the efforts of the Government of Pakistan in the health sector. We look forward to working with the GOP towards achieving a sustainable primary health care program.

Before I conclude, I would like to thank all those present for their participation in the National Workshop on Essential Drugs. I wish you success in the workshop and in implementing its findings. Thank you.

## ADDRESS

*by*

DR. ABDEL AZIZ SALEH  
*Advisor On Essential Drug Programs  
Eastern Mediterranean Regional Office  
World Health Organization*

Your Excellency, Syed Tasneem Nawaz Gardezi, Minister for Health, Government of Pakistan; Dr. Syed Mohsin Ali; Director General Health, Government of Pakistan; dear colleagues: first of all, I would like to thank the Ministry of Health, the United States Agency for International Development (USAID) and the Pakistan Child Survival Project for inviting the World Health Organization (WHO) to participate in this important workshop. I congratulate the organizers of the workshop for the topics selected because they are relevant not only to Pakistan but also to other developing countries. I would also like to congratulate the Pakistan Child Survival Project on the operational research which explores possible interventions to improve availability of not only child survival drugs but also other essential drugs at all health facility levels.

The objectives of this workshop are very similar to the objectives of the WHO Essential Drug Program. The WHO also did operational research studies in different countries on the subject. The main problems that were identified were related to unequal distribution of drugs, non-standard prescribing of drugs by physicians, non-standard dispensing of drugs by pharmacists and non-standard use of drugs by patients. Large numbers of brand name drugs are available in the market, most of which are of substandard quality. The markets are flooded with expensive drugs beyond the reach of deserving patients.

The WHO is pleased to know that the Government of Pakistan's Ministry of Health has drafted a National Drug Policy which will be considered by the participants of this workshop for comments. This is a step which is very essential in showing that there is a political will in Pakistan to adopt the concepts of essential drugs. The Ministry of Health in collaboration with the WHO, the USAID, the United Nations Children's Fund, the Pakistan Pharmaceutical Association, and the Pakistan Child Survival Project should work together to develop a workable plan of action, based on a National Drug Policy, which can be practically implemented in the country. I am confident that the Ministry of Health will succeed in this implementation of a National Drug Policy in Pakistan.

I am very happy to convey the greetings and best wishes of Dr. Hussain al-Gezairy, Regional Director, Eastern Mediterranean Regional Office, WHO to the Government of Pakistan for organizing this important and successful workshop. Thank you.

## PRESENTATIONS

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## NATIONAL DRUG POLICY IN PAKISTAN

by  
DR. SYED MOHSIN ALI  
*Director General Health/Additional Secretary*  
*Ministry of Health*  
*Government of Pakistan*

Mr. Chairman and distinguished participants of this workshop, in my welcome address, I had highlighted the World Health Organization's (WHO) desire to introduce the concept of essential drugs and the need to prepare a national drug policy. The objective is to make necessary drugs accessible to a population whose basic needs are not being met by the existing supply system.

I also said that we have already developed a National Drug Formulary for hospitals which is being used by the federal government, and that provincial governments have also been asked to follow this same formulary.

Although the Ministry of Health and the provincial governments are following certain general guidelines towards improving drug management and their supply system, there is thus far no comprehensive document which clearly lays down government policy on the subject.

Today, I am happy to place before you a draft of a document which clearly lays down the policy of the government on all aspects of drug management in a comprehensive manner (see "A Draft of the National Drug Policy of Pakistan", pp. 25 - 33). In fact, the formulation of a National Drug Policy is an integral component of a National Health Policy. The purpose of the National Drug Policy is to ensure the regular availability of essential drugs of acceptable safety at affordable prices to all in need, irrespective of their socio-economic status, residence, or their geographic location, whether this is in the urban slums or the rural backward areas. By implication, such drugs are necessary to improve and to maintain health and to combat disease. The National Drug Policy is thus the means to buy more health with the money available for drugs in a poor country.

Towards achieving this goal, Pakistan already has fairly modern drug legislation, a drug quality control system, and a general policy to encourage local drug production.

Now, this National Drug Policy document outlines clearly the policy objectives and guidelines on all aspects of drugs including legislation, pharmaceutical production, registration of drugs, selection of essential drugs, drug supply system, human resource

development, quality assurance, drug information, research and development, and liaison with all concerned agencies.

Let me briefly highlight the features of the existing system and the proposed policy. As most of you know, Pakistan has a legislation called the Drugs Act, 1976, under which comprehensive rules have been framed on various aspects of drug control. These laws provide for a system of licensing of premises to manufacture drugs and a system for registration of finished drugs and their quality control. The former is done through a Central Licensing and Registration Board comprised of experts from the field of medicine and pharmacy, whereas the latter is done by effective inspection and laboratory services. These laws shall be modified to keep them up-to-date and to provide the legal basis for the support and the implementation of the National Drug Policy. Similarly, the laws relating to the traditional systems of medicine, that is, *unani* and homeopathy, are also being amended to regulate practices involving import and manufacture of medicines in order to bring standardization, to improve standards, and to protect the public from health hazards. The government shall provide the necessary infrastructure at the federal and provincial levels for the effective enforcement of all drug legislation.

Regarding the production of drugs, Pakistan is following a policy of encouraging the manufacture of drugs within the country. However, the industry is still dependent largely on imported raw materials, and there has been no assessment of the relationship of drugs to the health needs of the country. Therefore, in order to have a realistic assessment of the demand for essential drugs in relation to our health needs, the government shall arrange for an in-depth technical, economic, and marketing study; and a critical analysis of the existing situation of the pharmaceutical sector to find ways and means to meet this demand. The study shall also identify measures to achieve self-sufficiency in pharmaceutical production by exploring the feasibility of manufacturing active ingredients through fermentation, synthesis, and semi-synthesis; exploitation of local flora and fauna; and the application of modern methods of bio-technology and genetic engineering. These measures will include incentives for the transfer of technology and import substitution. The study shall also be required to recommend options to encourage the standardized use of medicines, strengthen human resource development, as well as conduct operational and applied research studies in order to produce quality medicines that meet the actual health needs of the country. On the basis of these studies, the most suitable options shall be adopted.

To ensure the introduction of safe and effective drugs in the market, all finished drugs are required to be registered. Presently some 12,000 drugs are registered; this includes some 4,000 products. Since drug registration is a dynamic process, registered drugs shall be reviewed on the basis of established criteria of safety, efficacy, quality, and health needs; and the need to remove non-standard products will be considered.

Action has already been taken to computerize data with respect to such registrations. This sphere of activity shall be extended to include all necessary information regarding

registered products that should be compiled and published. The system of drug pricing shall also be standardized to ensure availability of essential drugs at affordable prices.

As explained earlier, a National List of Essential Drugs has already been prepared in accordance with the health needs of the country and is being published in the National Hospital Formulary, which is also being updated. This list shall be followed for government purchases all over the country. Efforts will also be made to promote the concept of essential drugs and their standardized use.

The drug supply system in both public and private sectors is the legacy of the pre-independence era. There is much to be done to bring standardization in these systems both at the government level and in the private sector. At the government level, a scheme of hospital pharmacy is being introduced gradually in the country under both the federal and the provincial governments. This shall be extended to cover all hospitals in the country and shall be organized on a scientific footing. In the private sector, a system of scientific retail pharmacy service shall also be introduced in a gradual manner, depending upon the availability of adequate manpower.

There is an urgent need to develop a system, particularly an efficient drug supply system and the standardized use of drugs. This shall be done with the help of all concerned institutions. Arrangements shall also be made for the continued education of professionals in service. As recommended by the WHO, pharmacists will be encouraged to play their recognized role in all activities relating to drug control, management, supply, and distribution.

A well-defined quality assurance program exists in the country with inspection and laboratory services both at the federal and provincial levels. Inspection services shall be appropriately strengthened and equipped, and personnel trained, to ensure effective drug regulatory control that meets legislative requirements. Similarly, laboratory services shall be strengthened to meet the needs of the system.

An organized market surveillance shall be conducted for monitoring the quality of various products through sampling and testing. Action will be taken to remove substandard products from the market. Information regarding the standard quality equivalence of other products shall be widely disseminated to the medical and pharmacy professions to build their confidence in the quality of all competitive products in the country.

A new role shall be given to industry and trade for self-monitoring through market surveillance and for self-inspecting in order to create a sense of participation.

In the field of drug information, the pharmaceutical industry shall be required to provide correct information to the medical profession. A Drug Information Bulletin is already being issued by the government on a regular basis to provide unbiased

information to the medical profession; this shall continue on a regular basis. A revised Drug Formulary shall be published to serve as a reliable prescribing and dispensing guide to all doctors and pharmacists in the country.

A comprehensive national drug research program will be jointly developed by all concerned universities and research institutes according to national health priorities.

To ensure co-ordination and collaboration, proper liaison and exchange of information with the WHO and other international organizations will be sought to develop a standardized drug supply system in Pakistan.

A detailed document on drug policy has been circulated to all the participants of this Workshop for their views. I hope this paper will be discussed thoroughly in the small group activity tomorrow. I look forward to your considered opinions. Thank you.

# A DRAFT OF THE NATIONAL DRUG POLICY OF PAKISTAN

## I. INTRODUCTION

A. Pakistan is committed to the goal of "health for all by the year 2000," which is based on the principle of social equity. To achieve this, the government is taking all possible measures in the field of health services at large and drugs in particular. The formulation of a national drug policy forms an integral component of a national health policy, the purpose of which is to ensure the regular availability of essential drugs of acceptable safety at affordable prices to all in need, irrespective of their socio-economic status or their residence. By implication, such drugs must be needed to improve and to maintain the health of the people and to combat disease. The goal in brief is to promote, within the resources of the country, the availability of drugs to control common diseases and to alleviate pain and suffering. A drug policy is thus the means to buy more health for the available drug money.

B. To achieve this goal, Pakistan has a good drug legislation, a well-defined quality control system, a policy to encourage local drug production, a plan for research and development, and a strategy to promote the essential drug concept. Similarly, legislation to regulate traditional medicines is also being amended.

C. This document outlines a National Drug Policy which has been formulated for the first time in Pakistan to serve as a future guide to deal with all aspects of drugs in a comprehensive manner.

## II. OBJECTIVES

The specific objectives of the National Drug Policy are:

A. to develop and to promote the concept of essential drugs in accordance with the health needs of the country and to ensure the regular uninterrupted availability of good quality drugs in adequate quantities at affordable prices to those in need;

B. to protect the public from the health hazards of sub-standard, spurious, superfluous, and unsafe drugs;

C. to inculcate the concept of a standardized use of drugs by all related sectors and personnel to safeguard the public from over-use, under-use, misuse, or inappropriate use of drugs;

D. to encourage the local production of drugs, both finished products as well as the manufacture of the active ingredients in drugs, in order to create relative self-reliance and self-sufficiency in the country;

E. to develop adequately trained manpower in all fields related to drugs; and

F. to develop a research base, particularly in operational and applied research, in order to achieve the objectives mentioned above.

### III. LEGISLATION

A. In order to ensure the availability of safe, effective, and quality products at affordable prices, Pakistan has fairly modern legislation called the Drugs Act, 1976. Under this law, comprehensive rules have been framed on various aspects of drug control. These laws provide for a system for licensing premises that manufacture drugs, for registering finished drugs, and for controlling their quality. The former is done through a Central Licensing and Registration Board comprised of experts in the fields of medicine and pharmacy, whereas the latter is done by effective inspection and laboratory services. The law also provides for complying with good manufacturing practices by manufacturers; for fixing drug prices; and for regulating advertising, imports, exports, and the sale of drugs.

B. The laws relating to the traditional systems of medicines, that is, *unani* and homeopathy, shall also be amended to regulate all practices involving the import, the manufacture, the sale, and the dispensing of medicines within these systems in order to standardize them, to improve their standards, and to protect the public from any health hazards they may pose.

C. The government shall provide the necessary infrastructure at the federal and provincial levels for the effective enforcement of all drug legislation.

D. These laws shall be modified as and when needed to keep them updated in view of the need of the time and to provide the legal basis for the support and implementation of the National Drug Policy.

### IV. DRUG PRODUCTION

A. Pakistan is following a policy of encouraging the manufacture of drugs within the country. There was virtually no pharmaceutical manufacturing in Pakistan

at the time of its independence in 1947; today about 80 percent of the drugs in the market are locally produced, manufactured by some 230 companies. This includes 29 multinationals. However, the industry is still dependent largely on imported raw materials, and there is no assessment of the relationship of drugs to the health needs of the country.

B. Therefore, in order to have a realistic assessment of the actual demand for essential drugs, which corresponds to our health needs and our quantity requirements, the government shall arrange for an in-depth technical, economic, and marketing study and a critical analysis of the existing situation in the pharmaceutical sector. This study shall also be required to identify measures to enhance the production of pharmaceutical products to bring a high level of self-sufficiency to the country, coupled with a gradual integration in the manufacture of active ingredients through fermentation, synthesis and semi-synthesis, exploitation of local flora and fauna, and application of modern methods of bio-technology and genetic engineering. These measures will include incentives for transfer of technology and import substitution.

C. In light of the existing system for creating and for stimulating the demand for medicines and their utilization, the study shall also be required to recommend options to encourage the standardized use of medicines, human resource development, and the conduct of operational and applied research studies in order to produce quality medicines that meet actual health needs. On the basis of these studies, the most suitable options shall be adopted.

## V. REGISTRATION OF DRUGS

A. Under the Drugs Act, 1976, all pharmaceutical manufacturers are required to be licensed and all finished drugs are required to be registered through the Central Licensing and Registration Board. Presently some 12,000 drugs are registered, including some 4,000 which are imported in the finished form.

B. Our next Five Year Plan provides for a review of registered drugs on the basis of established criteria for the safety, efficacy, quality of drugs and for the health needs of the country. As a result of this review, all useless, non-standard, unsafe, obsolete, and unnecessary products shall be de-registered.

C. Action has already been initiated to computerize data with respect to such registrations. Computerization shall be expanded to include all the necessary information relating to registered products and their procedures that is needed for quick retrieval.

D. Information concerning all registered drugs shall be compiled and published in a document which shall be made available freely to all concerned. Efforts

will be made to make everyone concerned strictly follow all the provisions of the law with respect to registered drugs.

E. The system of drug pricing for registered drugs shall be reviewed and standardized, and efforts will be made to ensure the availability of essential drugs at affordable prices. Disparities in the prices of identical essential products shall be kept to a minimum. The element of price competition between similar products shall be introduced.

## VI. SELECTION OF ESSENTIAL DRUGS

A. A National List of Essential Drugs (NLED) has already been prepared in accordance with the health needs of the country. This is published in the National Hospital Formulary. This is being updated from time to time. The purchase of drugs for federal government hospitals and other health institutions is already being made in accordance with this list. The provincial governments have also been advised to adopt this list and make purchases for their institutions in accordance with it.

B. Efforts will be made to promote the concept of essential drugs both in the public and the private sectors. Policy will be geared to increase the share of essential drugs which are locally produced, as well as to make such drugs available at affordable prices wherever needed. Efforts will also be made to promote standardization in drug prescribing and use. To encourage this, Drug Information Sheets similar to the World Health Organization model, providing concise, accurate and comprehensive information, shall be prepared and widely circulated.

C. The National List of Essential Drugs will be periodically reviewed and updated every two years by a committee that includes competent specialists in clinical medicine, pharmacology, pharmacy, and other related fields. The new National List of Essential Drugs will specify the health care level at which each of the essential drugs are to be used. Concise, accurate and comprehensive information sheets will be prepared for each drug listed on the NLED.

D. Only generic names for drugs will be used in the National List of Essential Drugs, the new Pakistan National Formulary (PNF) and all public sector drug lists, inventory sheets, and tender documents. Practitioners in the public sector will be required to use generic drug names in their hospital practice.

## VII. DRUG SUPPLY SYSTEM

A. The drug supply system in both the public and the private sectors is the legacy of the pre-independence era. There is much needed to bring standardization to these systems, both at the government level and in the private sector.

B. At the government level, a scheme of hospital pharmacy is being introduced gradually in the country, both under the federal and provincial governments. The existing Five Year Plan provides for the appointment of at least one hospital pharmacist for each one hundred beds, to be followed at all levels. The hospital pharmacy system will be organized on scientific lines to provide an efficient drug supply system and limited production of pharmaceuticals wherever possible.

C. The federal and provincial drug supply system for the hospitals, dispensaries, etc., will be modernized and strengthened and will be managed to ensure correct ordering, efficient procurement and proper packaging, storage, distribution and inventory control with less waste through deterioration and loss. The system will ensure the availability of essential drugs in health facilities according to their level. Allocated drug schedules for different categories of hospitals and health units will be followed as far as possible.

D. In the private sector, a system of scientific retail pharmacy service shall be introduced in a gradual manner, taking into consideration the availability of adequate manpower. A scheme shall be developed in consultation with the provincial governments for more standardization in issuing future sales licenses.

## VIII. HUMAN RESOURCES DEVELOPMENT

A. There is an urgent need for the development of qualified manpower for a more efficient drug supply system which would encourage the standardized use of drugs.

B. The government will encourage and support faculties of medicine and pharmacy to strengthen their curricula in clinical pharmacology, therapeutics, hospital pharmacy, clinical pharmacy and pharmaceutical technology. The curricula should also promote the concept of essential drugs, standardized drug use and other related subjects such as drug supply management, communication techniques, and drug utilization studies.

C. Formal training curricula for ancillary health workers and nurses will similarly be revised and strengthened.

D. In-service training courses in the standard uses of drugs, drug supply management, communication techniques, etc., will be organized for all medical officers, pharmacists, graduate nurses and ancillary health workers so as to improve their diagnostic, prescribing, and dispensing skills.

E. Refresher and continuing education courses, seminars and lectures to promote the concept of essential drugs and standardized drug therapy will be organized on a regular basis at the national and provincial levels.

F. As recommended by the World Health Organization, pharmacists shall be made to play their recognized role in all activities relating to drug control, management, supply and distribution. Their services shall be effectively utilized in the management of prescription drugs, in particular the standardization of their use.

## IX. QUALITY ASSURANCE

A. A well-defined quality assurance program exists in the country with inspection and laboratory services both at the federal and provincial levels. At present there are 81 regular inspectors of drugs in addition to about 150 ex-officio inspectors and five Drug Testing Laboratories including one very modern laboratory for appellate testing at the National Institute of Health.

B. Inspection services shall be appropriately strengthened and equipped with the necessary logistics and communication facilities in order to ensure effective drug regulatory control in accordance with legislative requirements.

C. Good manufacturing practices as laid down under the law shall be updated, in accordance with the recommendations of the World Health Organization, and the modern requirements for effective quality control and implementation will be incorporated in both the letter and the spirit.

D. Inspectors shall be provided regular training to keep abreast of the latest techniques in quality control, and inspection in compliance with the good manufacturing practices.

E. Under the federal and provincial structure, inspector posts already exist in various grades. Uniformity in this structure and hierarchy shall be created to provide a proper chain of command with clearly defined duties for each level and an efficient system of management and control.

F. The system of licenses for the sale of drugs shall also be streamlined to provide an effective control by drug inspectors.

G. A new federal drug laboratory will be set-up and provincial laboratories shall be appropriately strengthened.

H. A standard procedure for good laboratory practice in drug quality control laboratories will be developed along the lines recommended by the World Health Organization, and implemented so as to ensure effective management, meticulous operational procedures, and timely reporting.

I. Stability studies will be performed by quality control laboratories to verify studies done by the manufacturer of the exporting country.

J. A nation-wide drug recall system will be developed, to be implemented when a hazardous product is identified.

K. An organized market surveillance shall be conducted to monitor the quality equivalence of various products by sampling and testing. Action will be taken to remove substandard products from the market. Information regarding the standard quality equivalence of products shall be widely disseminated to the medical and pharmacy profession to build their confidence in the quality of all competitive products in the country.

L. A new role shall be given to industry and trade for self-monitoring and self-inspection quality assurance through market surveillance in order to create a sense of self-participation.

M. The drug and quality control organizations at the federal level shall be strengthened according to the recommendations of the Services Management Division. Similarly, the provincial drug institutions shall be organized in line with the recommendations of the Senate Committee on Health.

## X. DRUG INFORMATION

A. The Drugs Act, 1976, provides for the regulation of promotional activities of the pharmaceutical industry and the supply of correct information to the medical profession. The government issues a Drug Information Bulletin on a regular basis to provide unbiased information to the medical profession. This shall be published on a regular basis and distributed to all doctors, pharmacists, and other health professionals. Apart from providing these professionals with accurate and timely information, the bulletin will endeavour to promote the concept of essential drugs and standardization.

B. The pharmaceutical industry and all others concerned shall be required to follow the criteria for medical promotional activities in line with those recommended by the World Health Organization.

C. A revised and updated Drug Formulary shall be published so as to serve as a reliable prescribing and dispensing guide to all doctors and pharmacists in the country, as well as an effective teaching aid.

D. Workshops and seminars will be organized to develop standard treatment guidelines for common diseases. These guidelines will also be printed in a small pocket-size booklet and distributed to all prescribing doctors and pharmacists.

E. A computerized poison and drug information and an adverse drug monitoring centre will be established at the federal level. The centre will be provided with comprehensive library and literature search service facilities. The centre will also undertake post-marketing surveillance studies on newly registered drug products that contain newly developed drug substances.

F. Health activities to educate the public in the proper use of drugs, compliance, the hazards of misuse, etc., will be communicated to the public through health workers, school teachers, community leaders, mass media, printed pictorial and information material, seminars and community gatherings.

## XI. RESEARCH AND DEVELOPMENT

A. The Drugs Act, 1976, requires manufacturers to contribute a certain percentage of their profit towards research, specifically a Drug Research Fund. These funds will be spent for conducting research on the development of new drugs to encourage standardized drug therapy and to strengthen drug testing facilities.

B. A comprehensive national drug research program will be jointly developed by all universities and research institutes active in this field, which will be in accordance with national health priorities, to ensure coordination and collaboration in drug research.

C. Operational and applied research will be encouraged in the following and related fields:

- drug utilization studies;
- drug stability studies;
- evaluation surveys of patients' compliance, essential drugs availability, standardized prescribing and dispensing, cost of treatment, etc.;
- traditional medicines; and the
- exploitation of local resources for drug manufacture.

These studies shall be primarily aimed at achieving the objectives of the National Drug Policy as outlined above.

## **XII. LIAISON WITH INTERNATIONAL ORGANIZATIONS**

A. Proper liaison, coordination, exchange of information and collaboration with the World Health Organization and other international organizations will be sought to develop a standardized drug delivery system in Pakistan in order to fulfil the commitment of the federal government to provide the population with safe, efficacious, good quality, and cost-effective drugs.

# ESSENTIAL DRUGS AND THE NATIONAL DRUG FORMULARY

by  
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The essential drugs concept involves three main elements: Medicine, Money and Management.

## I. MEDICINE

### A. Meaning of the Term

Medicine means the alleviation of human suffering and sometimes even saving lives. The demand for medicines continues to grow in a poor country with a high population growth rate like Pakistan. Medicine is also one of the best means to make money, and, as such, the pharmaceutical industry is considered one of the most lucrative industries in Pakistan.

Medicine is a commodity, the selection of which is not in the user's hand but in somebody else's. A demand for a specific brand of medicine can be created by the pharmaceutical industry through aggressive sales promotions. Consequently, there are innumerable "imitative" products that are non-standardized, unnecessary, and even harmful preparations. At the same time there are shortages of some essential medicines. This results in health hazards to the public at-large and confusion for the medical profession, which results in non-standard prescribing.

### B. Morbidity and Mortality

There are no reliable data on disease morbidity and mortality for the whole country. However the statistics from the Jinnah Postgraduate Medical Centre (JPMC) and the JPMC Children's Hospital in Karachi, and the Federal Government Services Hospital in Islamabad indicate the following causes for morbidity, which are ranked in descending order of frequency:

- accidents and injuries;
- infectious diseases;

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- neoplasms;
- prenatal disorders; and
- circulatory disorders.

The main causes leading to mortality in children in developing countries are:

- diarrhoea;
- acute respiratory infections;
- malaria; and
- measles.

## II. MONEY

The other side of the story relates to the availability of money to buy medicines in times of need. This is always limited, both with the government and the patient who, in a poor country, is too poor to afford even basic needs. Thus, the purchase of unnecessary medicines with scarce money means 'binding' or 'wasting' of money that could have been used for more urgent needs. A major portion of health care money is wasted on non-essential and/or high priced medicines.

There is no system presently for assessing the actual quantitative need for drugs or for monitoring their consumption; moreover, the pattern of growth in sales has no necessary correlation with disease patterns.

In 1990 we do know that the sale of 10 out of 29 leading therapeutic groups was as follows in descending order:

- systemic antibiotics;
- vitamins;
- analgesics;
- systemic anti-rheumatics;
- cough and cold therapies;
- anti-parasitics, antacids and anti-ulcer agents;
- dietetics;
- intravenous solutions; and
- anti-tuberculosis drugs.

Out of these, the first three groups accounted for nearly 50 percent of total sale of drugs in Pakistan.

It is also interesting to see that in the same year (1990) only 15 leading products had more than 15 percent share of the drug market which had a total of 11,000

products. Out of these, ten were antibiotics, three were anti-rheumatic/analgesics, one was an anti-amoebic and one was a vitamin preparation.

The per capita expenditure on drugs shows a sharp increase; for example, it went from Rs.54 in 1986 to Rs.96 in 1990 despite the relatively stagnant prices of drugs and an unchanged disease pattern. The annual rate of increase in Pakistan is about eight percent compared to about six percent in the rest of Asia and about five percent in Western Europe.

### III. MANAGEMENT

The third element of essential drugs relates to management problems. The more medicines, the more the problems of supply management, that is, selection, procurement, purchase, inventory control, storage, distribution, and, particularly, quality control. It is far easier to determine the specifications of a lesser number of well established and standardized products than the multiplicity of similar imitative products.

### IV. ESSENTIAL MEDICINES

The problems relating to medicine, money and management highlight the need to make a choice or a selection of ESSENTIAL DRUGS from the vast array of drugs. This is one of the main objectives of a National Drug Policy. A drug policy thus becomes the means to have more health for the money spent on medicine in a poor country.

What is essential? Essential means what is really needed to take care of a health problem. The basic needs of the poor and the rich are the same. The difference is in the more sophisticated desires of the rich. By contrast, an essential drug is the one which meets the basic needs for the health of all the people.

The selection of essential drugs means restriction. The idea of restriction generates negative feeling and criticism. In the field of medicine, the forces opposing standardization are many. Strong opposition is always faced from the pharmaceutical industry which clamours about any loss of their market. Doctors may consider standardization to be a restriction of their freedom to prescribe. Some of them have great influence on other doctors and on public opinion.

It would be worthwhile to recall the experience of Pakistan in 1972 when the United Kingdom *Drugs Therapeutic Bulletin* bore a headline that "PAKISTAN LEADS THE WORLD". A scheme was envisaged that had two objectives:

- a) to allow manufacture of only the essential drugs compiled in a National Formulary of Pakistan; and
- b) to allow only generic names in labelling drugs.

This experiment, however, failed and the scheme was withdrawn in 1976 for two main reasons: 1) the government had not prepared itself to face the challenges of quality control; and 2) strong resistance developed from many health professionals.

Even as the generic scheme in Pakistan was being scrapped, the 28th World Health Assembly, in 1975, passed a resolution (WHA 28.66) in which the World Health Organization Director General was requested "to develop the means by which the organization can be of greater direct assistance to member states in advising on the selection and the procurement, at reasonable cost, of essential drugs of established quality corresponding to their national health needs".

With this resolution the World Health Organization entered the area of essential drugs which culminated with a model list of Essential Drugs in 1977, the first of its kind, which was followed by many revisions. In 1981, the World Health Organization also started an Action Program on Essential Drugs.

Today the concept of essential drugs has been adopted by over 70 countries; now it is time for Pakistan to follow.

An Essential Drugs List can improve the quality of **Medicine**, can decrease **Money** costs, and can improve **Management**.

An Essential Drugs List can improve the quality of Medicine by improving:

- the efficiency and safety of drugs;
- the prescribing, use, and, consequently, the treatment;
- quality assurance; and
- monitoring.

An Essential Drugs List can decrease Money costs by reducing:

- the purchase price; and
- the losses from un-reliable suppliers.

An Essential Drugs List can produce numerous Management benefits for it can simplify and improve the following:

- enumerating quantities;
- storage keeping;

- supply management;
- inventory control; and
- theft control.

## V. NATIONAL DRUG FORMULARY

Certain steps must be taken to create a National Drug Formulary.

First, support for the concept must be obtained from the government, the medical community, health care workers, and the public.

A selection committee of experts must be established.

Information on the prevalence of diseases; the drugs available; patient characteristics (sex, age); types of health care personnel at each level; local manufacture; existing drug lists; and pharmaceutical logistic problems must be gathered and analyzed.

A formulary must be established. Such elements as structure, format, and criteria for selection must be considered and decided upon.

Drugs must be selected and information on prescribing must be included.

The National Drug Formulary must be published and circulated widely.

An educational campaign for health care personnel and for patients must be undertaken.

Regulations must be promulgated.

Periodic reviews and updating of the National Drug Formulary must be done.

### A. Process of Formulary Development

In 1987 the Federal Health Ministry set up a working group for preparing a National List of Essential Drugs under the name National Formulary. This group included experts from the fields of medicine and pharmacy, and representatives from federal and provincial governments and WHO. The specialists included were primarily from general medicine, surgery, gynaecology and obstetrics, ophthalmology, ear, nose and throat, paediatrics, psychiatry, anaesthesia, orthopaedics, and dentistry. Assistance and expert advice were also obtained from a large number of other specialists.

The group met repeatedly and, using the WHO Essential Drug List as a basic document as well as the federal and provincial lists for hospital purchases, decided to

modify the basic document of the WHO in accordance with the local needs. The following selection criteria were established:

- establish efficacy and acceptable risks;
- examine clinical trial reports;
- determine cost of the product; that is, determine the cost of the treatment prescribed rather than the cost of the dosage; determine the cost of treatment in relationship to savings, that is, the reduction in cost of surgery or hospitalization;
- select drugs under their generic names;
- give selection preference to a product which had the most favourable benefit/risk ratio; was the most thoroughly investigated; had the greatest stability; was locally manufactured rather than imported; and was of reliable quality;
- restrict the number of dosage forms for a drug to a minimum based on therapeutic experience;
- investigate established drugs for quality, contraindications, precautions and adverse effects; and
- accept fixed-ratio combinations only after the following criteria were met:  
1) the clinical documentation justified the use of more than one drug;  
2) the therapeutic effect of the combination was greater than the sum of the effects for each drug; 3) the cost of the combination product was less than the costs of the sum of the individual products; 4) the drug ratio allowed dosage adjustments according to the needs of the majority of the population.

As a result of the deliberations of this group of experts in a number of meetings, the first list of 310 drugs was prepared, and published in the *Pakistan Drug Information Bulletin No.1* of November 1988, which was widely circulated.

## **B. Graduated Management**

A National Essential Drug List must be adjusted to the level of health services, that is, to whether or not the list is for use at:

- basic health units;
- rural health centres; or
- tehsil, district, or teaching/consultant hospitals.

Similarly, in private practice, general practitioners usually belong to general hospitals while private specialists belong to consultant hospitals.

Graduated lists of essential drugs would link availability to the capacity of the staff and to the equipment available in a particular health service to ensure

appropriate use of drugs and to avoid their misuse. For example, basic health units would have primarily simple over the counter products. Rural health centres would have drugs for diseases, the diagnosis of which depends upon microscopy or other diagnostic techniques which are available at a rural health centre.

### **C. Revision**

It was decided that new drugs would be added only if they offered distinct advantages over drugs previously selected. If new information on any drug included in the list shows an unfavourable benefit/risk ratio, the drug would be deleted or replaced.

This list has been revised three times with some additions and deletions having taken place. To revise the Formulary, a revision form for scientific evaluation is used.

### **D. Format of the Formulary Manual**

The National Formulary Manual should be organized into categories by: 1) therapeutic class; 2) indication or disease; and 3) level-of-use.

The Formulary should provide the following information:

- drug therapy indications;
- drug summary;
- cost comparison (if possible);
- standard treatment for a common disease;
- dosage forms and strengths;
- recommended doses;
- contra-indications;
- precautions; and
- advice for the patient.

### **E. Implementation of the National Hospital Formulary**

Although we have a National Hospital Formulary at the federal level, provincial governments also have their own. We need to follow one formulary established at the national level, if we really want to benefit from this concept.

Although the National Formulary specifies generic names, the purchases are made regardless of the name. Consequently, prescribers are confused because each time a purchase is made, if a supplier is different, a drug can be supplied under a different brand name. Second, some of the purchasing agencies still insist on buying specific brand names even when competitive products from other sources are available that are cheaper and of equally good quality. It may, therefore, be worthwhile to require

the supplier to label a drug with the generic name along with a brand name, if it is to be retained at all, in equal size to and prominence with a brand name.

**F. Review and update**

The Formulary must be reviewed and updated periodically and all concerned must be informed of the amendments.

**G. Legal Support**

The establishment of the Formulary should be provided with a legal back-up for maximum impact. A committee should set up the procedures, and the use should be defined.

**H. Publicity**

A comprehensive public information should be launched to enhance understanding and acceptance of the Formulary by patients and health care workers.

# IMPROVING THE AVAILABILITY OF ESSENTIAL DRUGS IN GOVERNMENTAL HEALTH FACILITIES

**The Results of The Pakistan Child Survival Project Operations Research**

*presented*

*by*

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*Pakistan Child Survival Project*

## **I. INTRODUCTION**

The Pakistan Child Survival Project (PCSP) has conducted research with the objective of identifying the most cost-effective interventions which would lead to improving the availability of essential drugs at governmental health facilities, especially in remote areas. The results of the assessment were presented on many occasions, including specific provincial presentations to relevant decision makers in all the provinces. These important results were also published in the "Drugs and Logistics Summary Report" series. This presentation summarizes the important findings as they relate to the general objectives of the National Workshop on Essential Drugs. The focus of the assessment was to determine the financial resources available for drug supply and to evaluate the way these resources were allocated.

## **II. ASSESSMENT METHODOLOGY**

Two drug procurement (indent) cycles, 1989/90 and 1990/91, were examined for Medical Stores Depots (MSD) in all four provinces. The name of every drug item, its unit price, and the quantity ordered were entered in a computer using spreadsheet software. At the district level, the indent cycles for 1990/91 in Mansehra, North West Frontier Province; and Lasbela, Balochistan were examined. The prescribing patterns in ten selected rural health centres in Mansehra and Lasbela districts were also investigated.

### III. SUMMARY OF STUDY RESULTS

#### A. Availability of Data

The study proved that the information necessary to analyze spending on drugs is available and accurate in all four provinces. The assessment team was able to collect needed data on unit price and quantities ordered for each drug item procured by the provincial Medical Supply Depots. While data was available, it was not computerized and it was not uniformly structured in different provinces. Before the Pakistan Child Survival Project (PCSP) assessment study there were very little analysis done to utilize the available procurement data in order to understand the pattern of drug indent/ procurement. This procurement data can be very valuable in monitoring and modifying budget allocations for drugs.

#### B. Analysis Indent System

Grouping drugs in the indenting/procurement process by therapeutic class was found to be the most useful way of presenting indent data. This grouping provides a basic understanding of how a budget is allocated and allows for monitoring changes in spending patterns over time. For example, in Sindh, arranging drugs by therapeutic class revealed that a combination of antibiotics, surgical dressings, hormones and similar types of products, anti-tuberculosis and electrolyte solutions consistently consume the majority of Medical Stores Depot budgets for drugs. See Figure 1.

Therapeutic Class	Percent of 1989/90 Indent	Percent of 1990/91 Indent
Antibiotics	30	32
Surgical dressings	11	10
Hormones and allied	7	10
Anti-tuberculosis	6	4
Electrolyte solutions	5	11
Total	59	64

Figure 1

It is important to monitor the fund allocation to a therapeutic class over time in order to detect any change in the spending pattern. For example, tracking the amount of money allocated to anti-diarrhoeals in Punjab and Sindh provinces revealed a sharp drop in the spending pattern for the two years in Punjab and a consistent, relatively low, spending pattern in Sindh. See Figure 2.

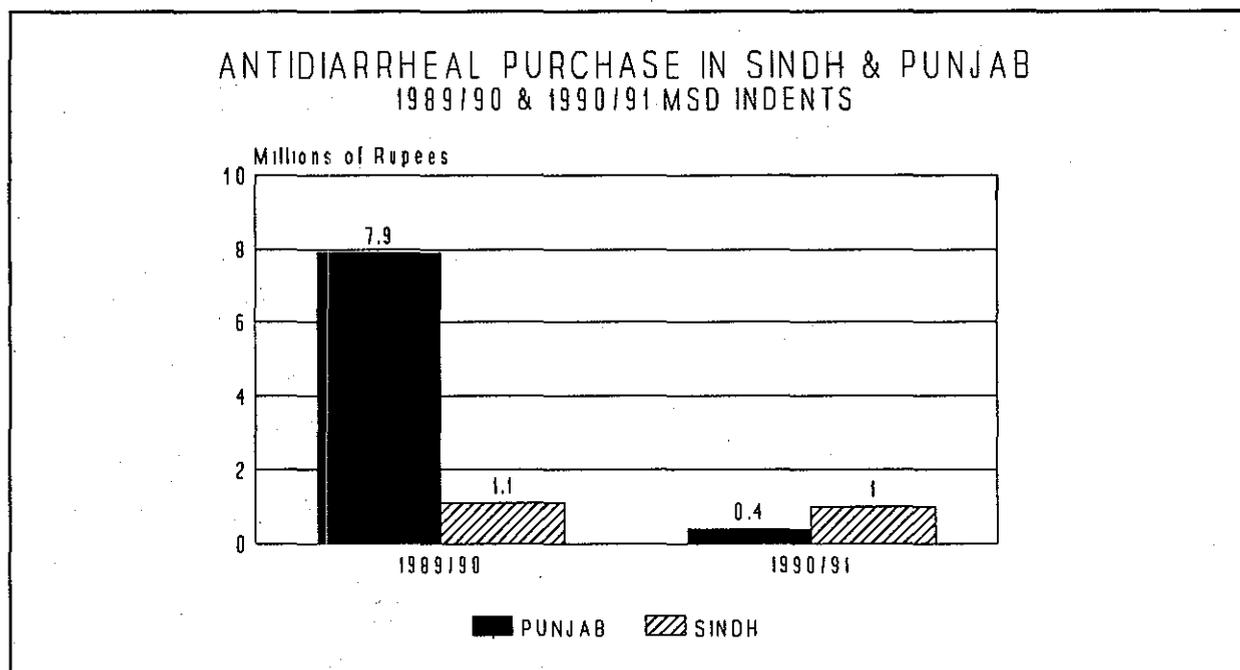


Figure 2

Arranging drug procurement by therapeutic class is useful in understanding the budget allocation at the district level also. In the Mansehra District, surgical dressings and electrolyte solutions, items not usually required at the primary health care level, consumed 20 percent of the District's total budget for drugs in the 1990/1991 procurement order. In the Lasbela District, antibiotics, analgesics and vitamins consumed more than half of the District's drug budget for 1990/91. Surgical dressings and electrolyte solutions were not among the main money-consuming items. See Figure 3.

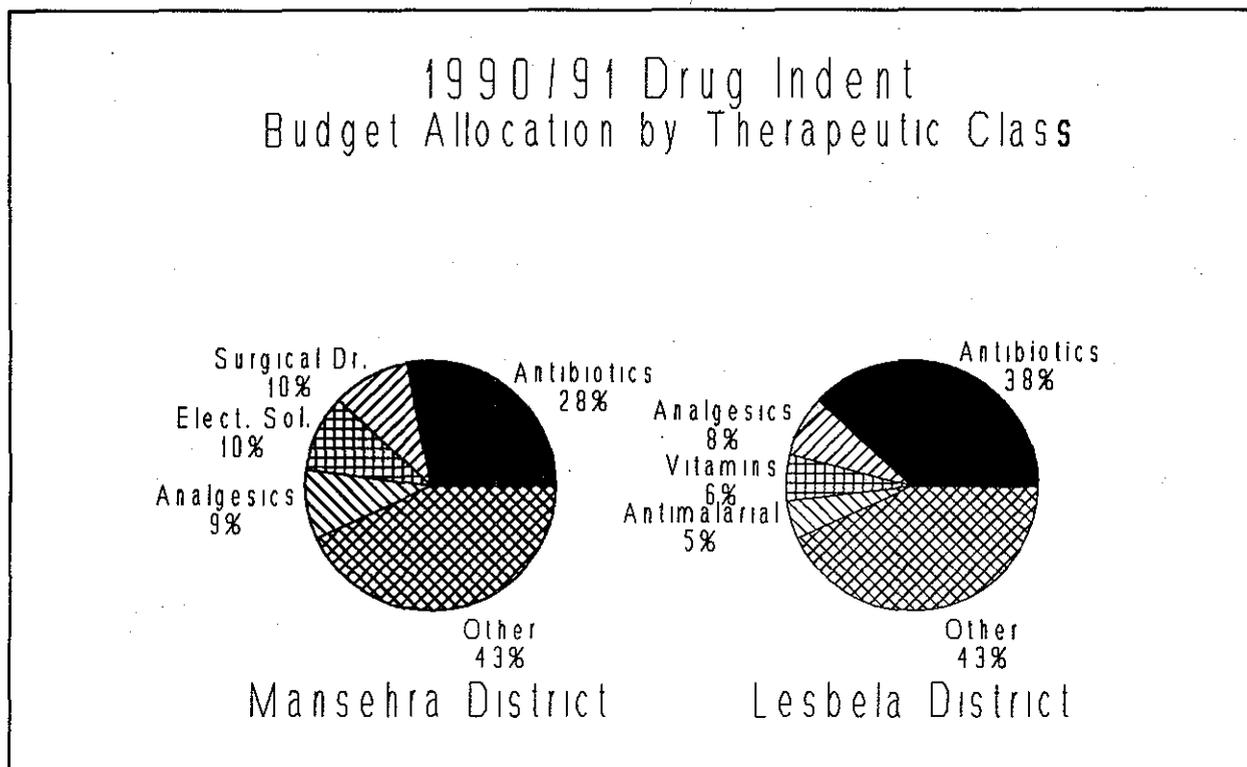


Figure 3

### C. Computer Applications to the Indent System

The studyteam was able to use a spreadsheet for data entry and analysis. The important advantages of such a simple computer application are that:

1. it allows decision makers to explore alternative ways of allocating money easily within each therapeutic class. This can be done by calling the data for each therapeutic class upon the screen. The name, unit cost and quantity ordered for each item is shown. Upon changing the quantity ordered the computer will immediately give the cost implications of the suggested change. For example, in Punjab's 1990/91 Medical Stores Depot Indent, a total of 1.2 million tablets of Diclofenac Sodium, an analgesic costing five times more than Rumafeen tablets, was ordered. The cost implications of reducing the quantity of Diclofenac Sodium ordered and increasing the quantity of Rumafeen that is ordered can be easily explored on the computer screen;

2. it allows rearranging indent data in various ways according to the requirements of an analysis. Sorting drug items alphabetically, by drug form, cost or by therapeutic class can easily be done;

3. it saves data entry time, calculations, and analysis for future indents. Since data for a previous indent can be copied and modified, it is not necessary to enter data for a new indent each time an indent is made;

4. it allows comprehensive cost-effective analysis of different treatment alternatives. For example, analysis of the cost of treating one episode of Acute Respiratory Infection among children less than five years old revealed that Cotrimoxazole tablets followed by Cotrimoxazole syrup and Ampicillin syrup, respectively, is the least expensive treatment. See Figure 4.

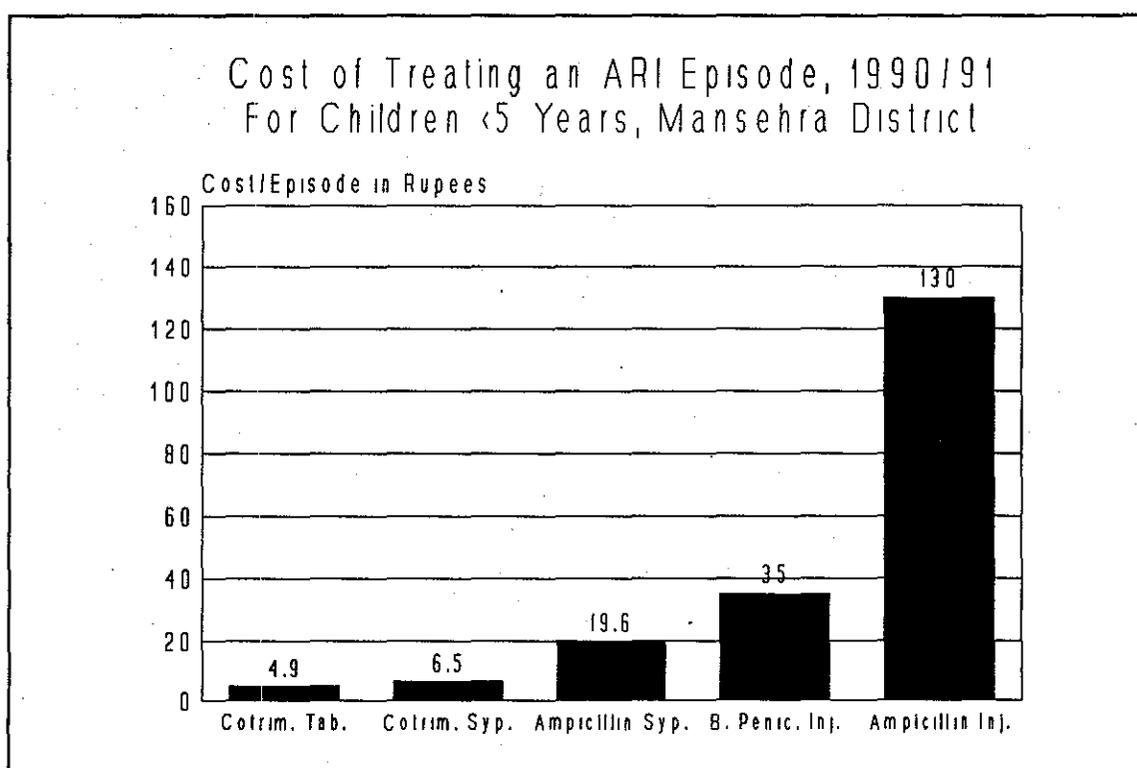


Figure 4

#### D. Comparing Unit Price and Drug Quality

Since each province procures drugs separately, exchanging information between provinces about the unit price of drug items can result in obtaining more competitive prices. For example, in the 1990/91 Indent one province purchased Paracetamol syrup locally for Rs.1.88 a bottle versus Rs.4.99 that another province paid to a multinational supplier. A comparison of the quality of the drug obtained by the two provinces can be very important in deciding whether the difference in price justifiable. See Figure 5.

<b>Unit Price Comparison of Selected Items, 1990/91 MSD Provincial Indents</b>						
ITEM	UNIT	AVERAGE RATE Rs.	RATES IN RUPEES			
			BALO	NWFP	SIND H	PUNJA B
Cotton Wool	100gm	3.70	3.95	3.11	3.30	4.42
Erythrocine 250mg Tab	Tab	1.18	1.28	1.25		1.00
Cotrimoxazole Plain Tab	Tab	0.43	0.54	0.49	0.27	
Streptomycin 1gm Ing	Vial	1.53	1.39	1.95	1.24	
Gauze Surgical	Meter	2.35		2.90	1.89	2.27
Paracetamol Syrup	60ml	3.46	4.99	3.50	1.88	
Paracetamol Tab	Tab	0.11	0.16	0.10	0.07	
Hyocin Plain Tab	Tab	0.29	0.42		0.23	0.21
Glucose in Water 5%	1000ml	20.07	21.2 5	18.70	18.8 7	21.45

Figure 5

### E. Monitoring Prescribing Patterns

Prescribing from a selected list of drug items (Child Survival Drugs) was monitored retrospectively in a sample of rural health centres in Mansehra and Lasbela districts. The diagnosis recorded in an outpatient register for children under five years was studied to find out whether the selected drugs were prescribed in a standardized way. In Lasbela District, 12 percent of Cotrimoxazole Syrup was prescribed needlessly for cases of malaria. Benzyl Penicillin injections were over-prescribed in cases of skin diseases in Mansehra District. See Figure 6.

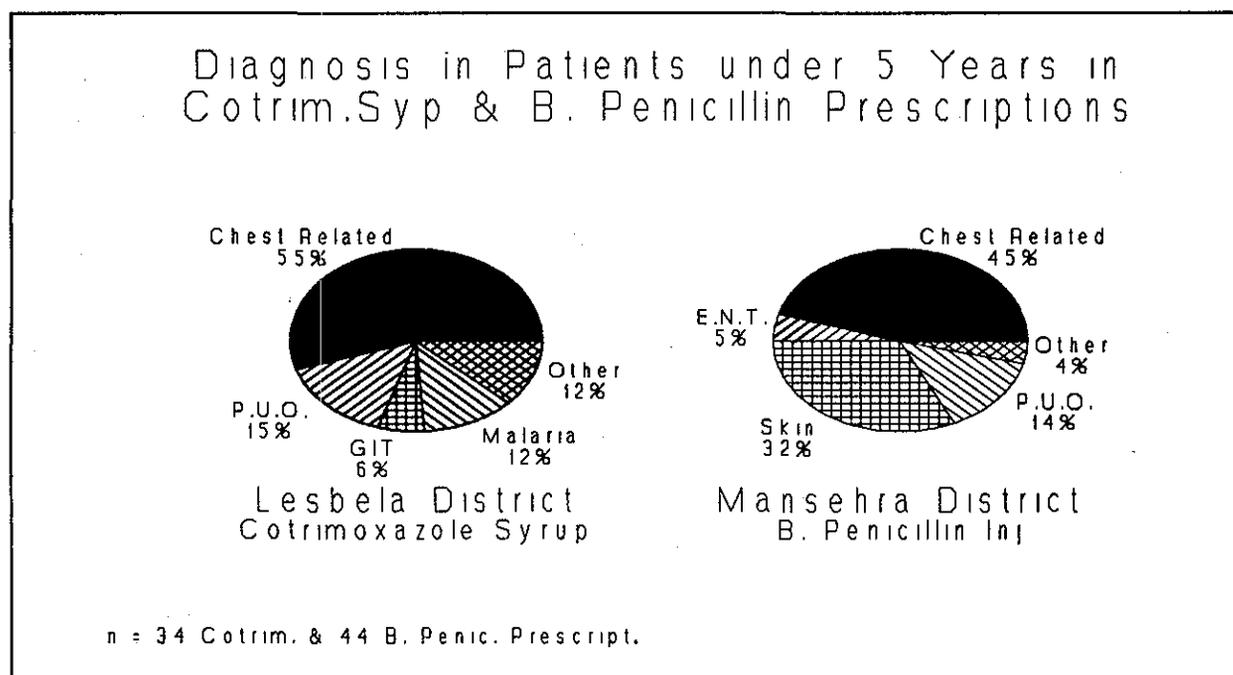


Figure 6

#### IV. CONCLUSION

Auditing a drug indent system to identify potential cost-reducing changes, and to provide feed-back to a drug procurement committee is one of the most cost-effective interventions to improve the availability of essential drugs in Pakistan. Such audit and feedback can identify and promote specific recommendations to cut spending on non-essential drugs and increase spending on essential ones. The suggested auditing and feed-back can be applied at the Medical Stores Depot or the provincial level, to hospital local purchase, and to district indents.

Monitoring prescribing at a health facility level can be a cost-effective intervention to eliminate or to minimize over-prescribing and incorrect prescribing.

## OPTIONS TO INCREASE FINANCIAL RESOURCES

by  
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### I. LIMITED FINANCIAL RESOURCES

One of the major problems facing Pakistan today is the lack of adequate financial resources to meet recurrent expenditures and development expenditures. During the current year, the federal budget to meet all the needs of the people should have been Rs.293 billion. However, the actual amount available was Rs.247 billion, that is, Rs.45.4 billion less than needed. Consequently, there is little to offer for the social sector and for health services. Other options to increase financial resources need to be considered carefully.

Our economy is primarily based on the agriculture sector. Thus in 1988-89, agriculture, forestry, and fishing contributed over 27 percent of the Gross Domestic Product versus 16 percent for manufacturing.

CONTRIBUTORS TO Gross Domestic Product 1988/89	% GDP
Agriculture, forestry, and fishing	27.2
Banking and insurance	3.3
Construction	4.3
Electricity and Gas	2.6
Manufacturing	16.0
Mining and quarrying	0.8
Ownership of dwellings	3.6
Public administration and defense	9.8
Services	7.5
Transport, storage, and communications	7.4
Wholesale and retail trade	17.6

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Any country depending on agriculture, forestry, and fishing is considered to be a poor country. Industrialized countries are called developed or rich countries. The nature of the financial resources of a country determine whether it is rich or poor. If we are to develop adequate financial resources, the direction towards our country's industrialization has to be clear and continuous.

## II. EXPENDITURE ON HEALTH

The share of Gross National Product (GNP) spent on health has always remained meagre; there has been, at times, little growth, no growth or negative growth. The total expenditure as a percent of the GNP from 1978 to 1982 was only 0.58; this gradually rose to 1.02 in 1987-88, but now in 1990-91 it has fallen to 0.89, that is, again less than 1 percent.

There are imbalances in the allocation of health resources between the rural and urban areas, between preventive and curative activities, between special programs and general health services and in the output of doctors and para-medical staff. Thirty percent of urban pressure groups consume nearly two thirds of the health and family planning resources. There is also a rural-urban imbalance in the distribution of health personnel. The doctor-nurse ratio is 4:1 which is the reverse of other countries. There is one doctor for 2730 persons, one nurse for 6 hospital beds, one paramedic for 1545 persons and one Public Health Care facility for 11,230 persons.

Pakistan shows a world-record population growth-rate of 3.1 percent. Presently, the population is estimated to be about 120 million with more than 70 percent living in the rural areas. With the present trend, it is likely to reach 150 million by the year 2000. This rapid growth is not only increasing pressure on the existing resources but also neutralizing any increase in their availability.

Of the present population, about one fourth has been found to be "Very Poor" and 30 percent "Poor" according to a survey conducted in 1988. The patterns of poor societies such as the lack of safe drinking water, proper sanitation, sewage disposal and poor nutrition further leads to health problems. Thus, there is a vicious circle of poverty breeding disease and disease breeding poverty.

## III. FUNDING OF THE HEALTH SECTOR

There are three sources for funding health services: 1) the government; 2) foreign aid; 3) the private sector.

### A. The Government

The government is the main source of funding health services. A study of the funding from 1973-87 shows that there has been a 15 times increase in government funding for health services.

### B. Foreign Aid

Government funding has been primarily from domestic sources. Foreign aid has been restricted to development projects principally in the fields of population planning, malaria control, vaccine and sera, and purchase of medical equipment.

### C. The Private Sector

There are high levels of private health spending in Pakistan compared to other developing countries in the same region.

## IV. OPTIONS FOR INCREASING FINANCIAL RESOURCES

Historically, socially, and politically, people of this country expect free health services. Almost every political party holds out hope of giving free treatment and providing better health services to the public. However, health is universally a purchasable commodity whether it is purchased directly as in the free enterprise system of the United States or indirectly as in the welfare states of some European countries. This needs to be brought home to the public clearly and, with that, various options need to be considered for mobilizing financial resources for community participation at all levels. Simultaneously, there is a need to make efforts to increase efficiency and effectiveness and to remove the imbalances in the public sector that are identified above.

### A. Proposed Solutions

#### 1. Private Sector Involvement

The Punjab's government has allocated Rs.250 million and the North West Frontier Province government has allocated Rs.50 million to establish "Health Foundations" to attract capital in to the private health sector. They will provide financial support to **non-profit** health institutions with equity participation of 33 percent. The investment proposed is a grant, the rest is an interest-free loan.

Despite the incentives, there is relatively little in organized financing in the private sector. The reasons for this inadequate development are as follows: 1) the incentives are not well known to many; 2) most of these incentives are for non-profit organizations; 3) the private sector does not consider the health field as a potentially

profitable commercial proposition; therefore, compared to other business fields, it has not taken advantage of the government-supported credit facility to any large degree; and 4) equity participation is high.

## 2. Health Insurance

Health insurance which is fundamentally a conservative and universally accepted way of raising funds to provide health coverage to the majority of the population exists in Pakistan only to a limited extent. It usually covers affluent urban employees and is purchased by the employees' companies.

## 3. Social Security

Social security is another form of health insurance which only covers factory employees with lower incomes. The middle income employees, the self-employed, and the rural population are not covered by any private sector health insurance.

## V. RECOMMENDATIONS

A. The health sector should be considered an industry which is eligible for loans from all financial institutions at subsidized rates of interest.

B. The provincial health foundations should give priority support to financially viable non-profit organizations which offer services to under-served areas with preventive and Maternal and Child Health components. The foundations should also give limited support to profit-oriented organizations working in rural areas.

C. Government resources should be diverted from the curative care of the privileged section of society to the poorer classes, to rural health promotion, and to preventive measures only.

D. Savings should be secured in the public sector through improved efficiency, effectiveness and balanced human resource development.

E. Action should be initiated to introduce health insurance. For this, a consultation should be held with all the related sectors, that is, provincial governments, the medical profession, corporate law authorities, the controller of insurance, the companies, and the army medical services. Public opinion should also be mobilized for acceptance at the community level. Since this process is going to involve a lot of time, the concept should be introduced in a modified form as pilot projects in the context of our socio-political environments. This can be done in a health maintenance scheme.

## VI. HEALTH MAINTENANCE SCHEME (PIMA), HOSPITAL AUTONOMY

According to this concept, the large government hospitals would be converted into autonomous bodies with fixed annual grants from the government and freedom to develop their own management system and resources for funding, including imposition of user charges, except for programs such as child survival.

### A. Premium/User Charges

A local management committee headed by a member, the Chairman of the Union Council and a representative from the Rural Health Centre could be formed to run the cost recovery system.

Health facilities using this system would provide treatment on the basis of joint spending by the facility and by the patient. That is to say a portion of the cost would be paid for by the patient. Payment would be done in the following two ways:

1. A fixed pre-payment premium could be required annually or each month, and the patient would receive services at the time of need. The level of premium could be fixed on the basis of various packages offered.

2. Payment could be required from patients for different services offered by the health facility, that is, consultation, laboratory facilities, surgical operations and medicines. These could be either a certain percent of the actual charges or a fixed amount for each facility. The medicines should be from the National Hospital Formulary. If purchased elsewhere, the cost should be paid entirely by the patient.

3. People above 60 years of age with an income below certain limits; jobless, disabled, poor patients, and patients with long illness as such as tuberculosis may be given completely free treatment. To help such persons each hospital could set up a social welfare unit to which deserving persons would go for help. Funds from Zakat and Baitul Mal may be used for offering these facilities of free treatment.

### B. Hospital Pharmacy

Hospital pharmacy services organized on modern lines, such as is in the Aga Khan Hospital, should be introduced in order that interventions in a hospital pharmacy could be adopted to encourage the pharmacy to play a more active role in monitoring and minimizing over-prescribing. The hospital pharmacy would also be encouraged to save money by making simple medicines, such as antacids and cough syrups in the pharmacy which would result in much lower costs than buying them ready-made.

## C. Other Organizations and Foundations

### 1. Self-sustaining non-profit organizations

Two types of self-sustaining non-profit organizations could be allowed to offer similar health maintenance schemes such as:

- trusts and foundations which are already established and offering health care in one way or the other, such as, Edhee, Ansar Burney, Fatmeed, Shifa, Fouji, Shaheen could offer the scheme.
- non-governmental organizations, that is, Bahbood and others, which could be allowed to offer health maintenance on a non-profit basis on the same lines as government hospitals and satellite clinics, etc.

### 2. Private Hospitals and Group Doctors

Private hospitals and physicians who render medical care in a cooperative fashion located in one facility could also be allowed to undertake a health maintenance scheme on a private basis. They must have certain minimum basic facilities and must have a sizeable staff besides general physicians, paediatricians, surgeons, and similar other specialists with para-medical staff and auxiliary services appropriate for the size and the nature of the community. The following principles should be set for such organizations:

- premium contributions should be required on a monthly/yearly basis;
- all medical staff should be salaried;
- all facilities should be integrated under one roof and consultative service should be made readily available;
- satellite clinics for screening patients in the neighbourhood should be set up;
- these clinics should be open 24 hours a day and 365 days a year and have doctors on call;
- there should be comprehensive coverage, including both out-patient and in-patient care, home health service, and drug coverage;
- comprehensive coverage should provide health education and early disease detection through the use of multiple health examinations;

- the quality of service should be under constant review; and
- unnecessary surgery and hospitalization should cease.

### 3. Extension of Facilities of Social Security

Social Security Institutions already have a reasonable infrastructure and network which could be expanded to cover a larger segment of society. Under this scheme, higher-wage industrial employees, low grade employees of autonomous and semi-autonomous bodies, and self-employed who were contributing to the scheme could also be enrolled.

## VII. CONCLUSION

The Government's role should be not only to give a clear cut direction to the development of the costs of such a recovery system but also provide a general umbrella to monitor the quality of services offered to the public.

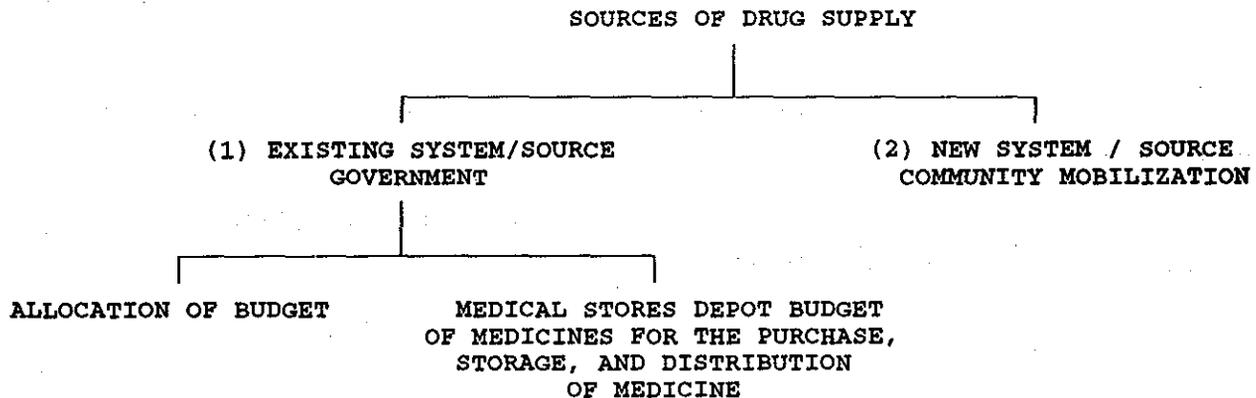
## COMMUNITY MOBILIZATION TO INCREASE HEALTH RESOURCES

by  
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### I. INTRODUCTION

One of the alternatives to increasing financial resources for the health sector is community mobilization. This presentation summarizes a unique experience in which I was able to solicit the support of the community in my area. Through community support I was not only able to assure a continuous supply of drugs in the Havelian Rural Health Centre, but I was also assured the availability of free water supply, telephone installation, transportation, and other supplies to the health facility.

The following chart shows the current sources of drug supply for the Havelian Rural Health Care Unit:



In the existing system the annual budget allocation is fixed for every health facility irrespective of the patient load. For example:

Rupees 55,000 are allocated to a rural health unit with a patient load of 200 per day; and

Rupees 55,000 are also allocated to a rural health care unit which has a patient case load of 20 per day.

The draw-back in such a system is that facility "A" will in all probability use its stock of drugs and will be without drugs for a maximum period of the year, while facility "B" will have surplus drugs which will either expire or be wasted.

Some changes in the existing system of budget allocation are obviously needed to redistribute drugs among facilities as required.

Another problem beside financing is the lack of essential drugs. It is not known why the Essential Drugs List for Rural Health Centres and Basic Health Units already prepared by the Primary Health Care Project was not implemented by the provinces.

## II. COMMUNITY MOBILIZATION

It was my experience that a community is willing to support preventive activities if it is provided with satisfactory curative services. But we have to gain the good will of the community first by providing reliable curative services with the support of the Department of Health.

### A. Health Staff Input

To provide satisfactory curative services to the community, the health staff must take the following measures:

1. demonstrate a spirit of team work with good problem-solving approaches;
2. evidence punctuality and demonstrate the availability of the staff round the clock at the health facility;
3. show the devotion of the staff to the profession;
4. provide full attention to their patients;
5. demonstrate attentive behaviour by the health towards all patients, particularly towards:
  - lady patients
  - religious leaders
  - working class patients

6. maintain an impartial attitude by the doctors and by the staff to all sectors of the community and political parties;
7. have the facility's staff refrain from undesirable activities so that they can gain the respect of the community;
8. show respect for and interact with the community in accordance with their norms, customs and traditions;
9. ensure that the facility is maintained properly;
10. maintain good relations with local practitioners and non-traditional healers; and
11. have consolidated support from the senior officers in the health department.

#### **B. Community Inputs**

The community demonstrated its support of the Havelian Rural Health Care Centre by:

1. purchasing essential drugs for children;
2. purchasing essential drugs for emergencies;
3. supplying rent-free water at the facility;
4. installing a telephone at the facility;
5. purchasing tube-lights, lamps, and emergency lights for the Havelian Rural Health Centre;
6. purchasing electric fans;
7. purchasing sanitary items;
8. purchasing wheel chairs;
9. providing free transportation to needy patients; and
10. purchasing materials required for minor repairs of facility building and its garden.

### III. CONCLUSIONS

The experience of Havelian can be replicated in other facilities. If the support mentioned above is provided, successful community participation is possible.

# THE COMPONENTS OF ESSENTIAL DRUG PROGRAMS IN DEVELOPING COUNTRIES

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## I. INTRODUCTION

I am glad to participate in the National Workshop on Essential Drugs in Pakistan. For the past two days I have been listening to presentations and discussions from the workshop participants and I have come to realize that, indeed in Pakistan, there are experts in the area of drug supply management who are capable of identifying the problems in the system and finding the solutions to them.

## II. PROBLEM AREAS

Programs of Essential Drugs in developing countries start with identifying the important problems facing the drug supply and use system in the country. Experience has shown that in most cases the common problems are:

### A. Unnecessary Drugs

The availability of *unnecessary, sometimes harmful, and expensive drugs* in the markets of many developing countries. The responsibility for such a problem lies not only on the pharmaceutical industry but equally on the drug regulatory authority of the developing country.

### B. Non-standardized use of Drugs

Increasingly, it is becoming realised that the non-standardized use of drugs is a serious problem in many developing countries as well as in some developed countries. This problem has two factors contributing to it: first, the non-standardized prescribing of medicine by medical professionals; second, the non-standardized use and demand of patients who, in many countries, can buy medicines without prescriptions.

## 1. Bacterial resistant antibiotics

One of the most serious consequences of the non-standardized use of drugs is the development of bacterial resistant antibiotics. Recent studies in many countries prove that a growing number of antibiotics available in the markets are becoming ineffective in combating infectious diseases caused by bacteria. A recent study in a developing country showed that gram-positive bacteria have become resistant to a number of antibiotics. See Figure I.

Percent of Resistant Gram-positive isolates  
to Various Antimicrobial Agents

Antimicrobial Agent	Staph. aureus	Staph. epidermidis	Micrococci Spp.	Str. Pneumonia
Ampicillin	93%	90%	100%	100%
Amoxicillin	100%	90%	33%	100%
Chloramphenicol	86%	50%	0	100%
Erythromycin	14%	30%	0	0
Gentamicin	7%	40%	0	0
Lincomycin	14%	30%	100%	0
Rifampicin	0	0	0	0
Tetracyclines	71%	70%	66%	100%

Figure I

## 2. Inappropriate Drug Prescription

Another recent evaluation of the prescriptions given to children showed that drugs were often used for children for self-limiting conditions and for symptoms for which drugs efficacy had not been established. Problem areas include:

- antibacterial drugs used for upper respiratory tract infections that are usually viral;
- the overuse of decongestants for upper respiratory tract congestion, causing unacceptable adverse effects;
- the use of drugs in diarrhoea;
- the use of oral anti-emetics for vomiting;

- the use of tricyclic antidepressant drugs for nocturnal bed-wetting;
- the sedation of sleepless children or those falsely labelled hyperactive;
- the use of spasmolytics in abdominal pain;
- the use of antipyretic agents for fever;
- the use of drugs to increase appetite; and
- the use of "prophylactic" immunoglobulins for small children with frequent upper respiratory tract infections.

In sum, these areas of drug use account for about 70 percent of all medicines taken by children, and therefore as much as two thirds of all drugs used by children may have little or no value.

#### **C. Brand Name**

The large number of brand name drugs available in the market leads to confusion among physicians. The task of the quality control for authorities becomes almost impossible when the market is flooded with thousands of brand name drugs. Also, the general management of the drug supply system becomes very difficult. This problem is the responsibility of the drug industry and the regulatory authority which must control the registration of brand name drugs.

#### **D. Substandard Drugs**

Substandard drugs of inferior quality are another common problem. The quality of drugs, is not automatically assured simply because the supplier is multinational or the drug is imported. The common complaint that locally manufactured drugs are of inferior quality compared to imported ones is intentionally exaggerated, in my opinion, to undermine the production capacity of the national drug industry.

The problem will continue as long as there is no reliable unbiased source which can examine drug quality. There is also a lack of objective information about drugs, in general. Sometimes, the only available source of information about available drugs is the medical representative of the drug supplier.

## E. Distribution

Inequity in the distribution of drugs is often seen between urban and rural areas. In most cases the health facilities located in the large cities enjoy better availability of drugs than those in the rural areas. However, in some countries in which foreign aid is focused on rural areas the situation may be the opposite.

All the above mentioned problems should be addressed ideally in a comprehensive essential drug program. A first corner stone would be the development of a national drug policy to describe the intentions of the government and the direction selected for managing the production, selection, procurement, distribution, prescription and use of drugs in the country. The national drug policy should be in line with a general national health policy which in turn should be parallel to national socio-economic and development policy. The objectives and components of a typical national drug policies in a developing country are described below.

## III. COMPONENTS OF A NATIONAL DRUG POLICY

The objectives of a National Drug Policy are to ensure an adequate supply of safe and effective drugs of good quality and to promote standardization in their use. To serve these objectives require a number of steps.

### A. Drug Needs

First, a national committee of experts should be established to agree on a National List of Essential Drugs. A mechanism should be developed to assure the regular updating of the list. The WHO has developed a model list of essential drugs that can be used by this committee of experts as a guide for developing a National List of Essential Drugs.

Second, a policy should specify ways of estimating the quantities needed for selected drugs. There are two essential ways to estimate drug needs. The first way is the **Morbidity Method** in which needs are calculated from data about disease incidence, its prevalence in the community, and the standard treatment guidelines for combating each disease. The second method is the **Consumption Method**. This is the one used most frequently; forecasts of future drug needs are made by studying past consumption patterns.

### B. Drug Supply System

Policy should specify: 1) the strategy for drug procurement, that is, whether it will encourage local production or rely on importation; 2) the storage and distribution

system should also be described; 3) the level of decentralization; and 4) the responsibilities of the federal and the provincial governments should be described.

### C. National Quality Assurance System

Legislation should be reviewed to assure careful control of drug quality. Legislation should include regulations for drug registration, conditions for sales of over-the-counter medicines and prescription drugs.

A quality control laboratory should be established and used effectively to provide information about the quality of available drugs in the market. Selected tests for drug bio-availability should be performed for locally manufactured drugs, for drugs obtained from multinational suppliers, and for imported drugs equally. It does not necessarily hold true that the bio-availability of imported drugs is better than the locally manufactured ones.

Inspection for good manufacturing practices should be done for all registered manufacturers and suppliers.

### D. Pricing Policy

It is very difficult to address the question of what is a reasonable price for a drug. There are available guidelines published internationally with a comparison of the prices of essential drugs obtained from a number of well-known international suppliers. Such guidelines can be of help to policy makers to determine what should be the price of the product in their local markets.

### E. Standardized Use of Drugs

Many parties are responsible for promoting the standardized prescribing of drugs by health staff and for better compliance by patients. The standardized use of drugs can be promoted by:

1. academic institutions introducing the topic of standardized prescribing in the curricula of undergraduates. Professional associations can play a leading role in promoting standardized prescribing.

2. drug information being made available to prescribers from unbiased sources. The WHO is regularly publishing "Drug Information" which contains specific news and scientific facts about individual drugs. In addition, national drug formularies provides a good management tool and guide to prescribers.

3. regulating drug promotion activities as well as monitoring them to assure compliance with a code of ethics for drug advertisements.

4. including topics for promoting the standardized use of drugs by the community health education program. The messages that are included should be based on understanding patients' preference for certain drugs or for certain forms, that is, injections.

#### **F. Operational Research**

Operational research can be of great value for policy makers and officials involved in the implementation of essential drug programs. Research can be directed towards such topics as understanding drug utilization patterns, drug stability in the distribution pipeline, and ways of improving patient compliance.

#### **G. Monitoring and Evaluation**

The National Drug Policy should address the question of how the whole essential drug program will be monitored and evaluated.

#### **H. Regional and international cooperation**

Regional and international cooperation should also be sought in a comprehensive national drug policy.

### **IV. CONCLUSION**

Finally, I would like to emphasize that the concept of essential drugs is a logical means to get rid of unsafe, ineffective, or substandard drugs. It is the most logical way for a developing country to assure the availability of needed drugs in presence of financial constraints.

## PROVINCIAL STATUS REPORTS

The provincial status reports which follow discuss the type of health care facilities in the provinces; their budgets; the sources from which medicines are purchased and their procurement and distribution procedures. Discussions about quality control and the status of the provincial formulary are also included.

## AZAD JAMMU AND KASHMIR HEALTH DEPARTMENT

### I. TYPES OF HEALTH FACILITIES

A.	TERTIARY HEALTH FACILITIES	
	Teaching Hospitals	NIL
B.	SECONDARY HEALTH FACILITIES	
	District Hospitals/ Combined Military Hospitals	4
	Tehsil Hospitals	7
	Chest Hospitals	1
C.	PRIMARY HEALTH FACILITIES	
	Rural Health Centres	20
	Maternal and Child Health Centres	28
	Leprosy Sub-Centres	11
	Basic Health Units	120
	Dispensaries	128
	First-Aid Posts	149
	Tuberculosis Centres	25

### II. BUDGET

The total annual budget, which is Rs.16,122,200, is as follows:

• District Hospital	Rs.3,000,000.00
• Combined Military Hospital	Rs.4,400,000.00
• Dispensary	Rs. 94,000.00
• Tehsil Hospital	Rs. 400,000.00
• Chest Hospital	Rs. 400,000.00
• Rural Health Centre	Rs. 150,000.00
• Maternal and Child Health Centre	Rs. 50,000.00

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• Leprosy Sub-Centre	Rs. 20,000.00
• Basic Health Unit	Rs. 100,000.00
• First-Aid Post	Rs. 30,000.00
• Tuberculosis Centre	Rs. 30,000.00

For local purchase of medicines, a total budget of Rs.16,122,300 is allocated for these institutions. Treatment outside Azad Jammu and Kashmir and Pakistan can also be charged to this budget.

### III. PURCHASE SOURCES/PROCUREMENT/DISTRIBUTION

#### A. Purchase Sources

At present, the sources for supply of medicines in Azad Jammu and Kashmir are as follows: 1) the Armed Forces Medical Stores Depot, Nowshera; 2) the Directorate of Health Services Procurement Section; and 3) the local market place.

For purchase of medicines, a Departmental Purchase Committee is present at department level, consisting of the following members: 1) Secretary Health, Government of Azad Jammu and Kashmir; 2) Director Health Services; 3) Assistant Director Health Services; and 4) Assistant Drugs Controller.

The Departmental Purchase Committee sends their procurement lists to the Central Purchase Committee which consists of the following members: 1) the Additional Chief Secretary (General), the Chairman of the Committee, Government of Azad Jammu and Kashmir; 2) the Secretary Works; 3) the Secretary Health; 4) the Director Health Services; 5) the Deputy Secretary Works; and 6) the Deputy Secretary Finance.

#### B. Procurement

1. The District Health Officers and the Combined Military Hospital directly procure their drugs from the Armed Forces Medical Stores Depot, Nowshera on a quarterly basis, according to their needs.

2. The Procurement Section, Directorate of Health Services, after receiving a drug list prepared by District Headquarters Hospitals and the Combined Military Hospitals level, reviews this list. This review is done by the Purchase Committee which uses the following criteria:

- the financial resources;
- the pattern of prevalent disease;
- the treatment facilities at health units;
- the training of available personnel; and
- geographic conditions of the area (AJK).

The selection between the medicines of the same group is made on the basis of their relative efficacy, safety, quality, price and availability.

3. Local purchases can be made from the local market if medicines are available within the hospitals or at the District Headquarters Office. For this purpose, necessary funds are placed with the medical centres.

#### IV. QUALITY CONTROL

Because there is no drug testing laboratory in Azad Jammu and Kashmir, the Azad Jammu and Kashmir Health Department usually tries to purchase medicines only from those firms which are well reputed and have the best standards.

To keep a check on the quality of drugs, the drug inspectors of the area obtain drug samples from drug stores and hospital stores and send them to a drug testing laboratory in Lahore for test and analysis.

The Azad Jammu and Kashmir Health Department purchases bulk medicine from manufacturers to reduce the cost of medicines. After purchase, the bulk medicines are stored in the Central Medical Stores Depot, Islamabad, from which they are distributed according to the demands of the area. In the Central Medical Stores Depot, Islamabad, the Stores Officer keeps the inventory control and the records of medicines up-to-date.

#### V. PROVINCIAL FORMULARY

There is no Provincial Formulary. Only medicines according to the Essential Drugs List are purchased. The medical staff from the District Headquarters Hospitals and dispensaries prescribe medicines according to the medicines stocked by the hospitals or dispensaries.

## BALUCHISTAN HEALTH DEPARTMENT

### I. TYPES OF HEALTH FACILITIES

A.	TERTIARY HEALTH FACILITIES	
	Teaching Hospitals	1
B.	SECONDARY HEALTH FACILITIES	
	District Hospitals	20
	Tehsil Hospitals	2
C.	PRIMARY HEALTH FACILITIES	
	Rural Health Centres	39
	Basic Health Units	421
	Maternal and Child Health Centres	73
	Civil Dispensaries	398

### II. BUDGET

The total budget for the Provincial Medical Stores Depot for drugs and medicines is Rs.9 million for the year 1992-93. Approximately 50 percent of the provincial health budget is for procurement of medicines and is allocated to the three hospitals in Quetta. Sandman Civil Hospital, being the largest one, receives 40 percent while the other two receive from 8 to 10 percent. The rest of the budget is distributed among the districts depending upon their population and the extent of their facilities.

Indents from the Medical Stores Depot to districts depend on the budget allocation for each specified district. The District Health Officer may order his quota of drugs/ medicines in one, two, three or more indents. The allocation of the Medical Stores Depot quota for each district depends on the number of health facilities in the district. A larger amount is reserved for a district with a larger population. The Government has specified Rs.20,000 for civil dispensaries and Rs.40,000 for basic health units.

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### III. PURCHASE SOURCES/PROCUREMENT/DISTRIBUTION

#### A. Purchase Sources

A list of medicines, consisting of approximately 430 drugs, is circulated by the Provincial Medical Stores Depot to all the hospitals, including divisional headquarters, districts hospitals, Divisional Directors and District Health Officers. The list of medicines is subjected to revision every year by members of the Purchase Committee. Indents are prepared by the respective District Health Officers and Medical Superintendents of the hospitals and sent to the Medical Stores Depot, from which supplies are received.

#### B. Procurement

The Officer In-Charge of the Medical Stores Depot who is also the Secretary of the Drug Purchase Committee, invites tenders throughout the country. Upon receipt of the tender offers, the members of the Drug Purchase Committee in the presence of the bidders make their selection and approve them.

After items are selected, tenders are again invited for negotiation on unit price. Rates are generally reduced another 5 percent.

After approval by the Health Minister, orders are finally placed with firms.

All medicines and other items purchased by the Medical Stores Depot are entered in the stock register maintained by the Medical Stores Depot and checked by the Purchase Committee members and auditors on a regular basis. There is only one Purchase Committee in Balochistan province. The members are: 1) Secretary for Health, Government of Balochistan, Quetta; 2) Director General Health Services, Government of Balochistan, Quetta; 3) Medical Superintendent, Sandeman Provincial Hospital, Quetta; and 4) Secretary Finance, Government of Balochistan, Quetta. The Committee holds its meetings at the request of Secretary Health, Government of Balochistan. The Committee is also responsible for quality control, purchases, distribution, and inspection of drugs and medicines at the Medical Stores Depot.

#### C. Distribution

The Medical Stores Depot distributes the drugs on the basis of population density, the number of Out Patient Department cases, and the number of medical officers in a unit.

### IV. QUALITY CONTROL

On receipt, the drugs are physically checked.

Each year the Purchase Committee members decide to check various selected items. These are sent to the Central Drug Testing Laboratory in Karachi for a quality check. The following items were selected this year for a quality check.

Tablet Mastran	Mastra (Pvt) Limited
Suspension Mastran	Mastra (Pvt) Limited
Suspension Nicotin	Nicholas (Pvt) Limited
Injection Gentacin	Nicholas (Pvt) Limited
Tablet Ralaxapam	Mastram (Pvt) Limited

This year the report sent from Central Drug Laboratory indicated that the quality of these drugs are 99.9 percent correct according to its defined composition.

## V. PROVINCIAL FORMULARY

Although no separate list of essential drugs is maintained, all such items are listed on the Medical Stores Depot purchase list, including replacement of anti-diarrhoeals by Oral Rehydration Solution. Due consideration is paid to the World Health Organization and to the Federal Government's drug recommendations.

## NORTH WEST FRONTIER PROVINCE HEALTH DEPARTMENT

### I. TYPES OF HEALTH FACILITIES

A.	SECONDARY HEALTH FACILITIES	
	Teaching Hospitals	3
	Hospitals	145
B.	PRIMARY HEALTH FACILITIES	
	Rural Health Centres	73
	Basic Health Units	772
	Dispensaries	342
	Maternal and Child Health Centres	67
	Sub-health/other Centres	50

### II. BUDGET

The total annual Medical Stores Depot drugs budget is Rs.60 million. The budget for each district or agency is according to the type of facilities, hospitals, rural health centres, basic health units, dispensaries, and mother/child health centres, etc. The budget for each health facility is not standardized, due to the variation in the number of health facilities in each district. Local purchases are made by the Teaching Hospitals and District and Agency Headquarters Hospitals.

### III. PURCHASE SOURCES/PROCUREMENT/DISTRIBUTION

#### A. Purchase Sources

The drugs/medicines are purchased by the Medical Stores Depot, Peshawar.

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## B. Procurement

Drugs are purchased by the Drugs Purchase and Inspection Committee which is comprised of the following ten members: the Health Minister, a Member of the Provincial Assembly (MPA), who serves as a public representative, Professor of Surgery, Hayyat Shaheed Teaching Hospital, Peshawar, Assistant Professor of Medicine, Lady Reading Hospital, Peshawar, Deputy Director Administration, Health Directorate, Peshawar, Civil Surgeon, Peshawar, the Officer In-Charge, Government Medical Stores Depot, Peshawar, Inspector of manufactured drugs, and the Chief Pharmacist, Lady Reading Hospital, Peshawar.

This committee determines the quantity, on the basis of the previous year's purchases, the balance in stock, and the current requirements of the particular health institution, and prepares a list of drugs to be purchased based on the National Formulary.

1. An advertisement is placed in newspapers with wide circulations. A list of the required drugs is also sent to pre-qualified manufacturing firms and distributors.
2. Quotations are received on or before a specified date and are opened by the Drugs Purchase and Inspection Committee. These are duly signed by all the members.
3. A comparison of the quotations is made. Drugs and other related items are selected by the Drugs Purchase and Inspection Committee, after a thorough discussion on the basis of quality and rates.
4. A full cost statement on the quantity and quality of the selected drugs is made and submitted to the Director Health Services for sanction.
5. After the sanction is received, orders, accompanied by a list of the terms and conditions of the Medical Stores Depot, are placed. A two months period is given to deliver the supply. After that, penalties are imposed on the value of items which are not supplied within the specified period.

## C. Distribution

1. When drugs are received, they are signed by the Receipt Section In-Charge and countersigned by the Medical Stores Depot In-Charge.
2. The drugs are distributed to six sections or stores in the Medical Stores Depot, entries are made, and both the Receipt Section In-Charge and the Medical

Stores Depot In-Charge sign the entry registers. They are periodically checked, as well as at the end of the year, to calculate the balance on hand.

3. Indenting/Procurement Officers are allotted different dates to collect supplies from the Medical Stores Depot. Distribution is generally made within three months of ordering but is not restricted to this period. If drugs are not available at the Medical Stores Depot, a non-availability certificate is issued to the Indenting Officer who can then make local arrangements for purchase.

#### **IV. QUALITY CONTROL**

On receiving drugs and other related items from the supplier, the Drugs Purchase and Inspection Committee checks the drugs for quality conformity to the quotation requirements. Some drugs may be sent, upon recommendation of the Committee, to a drugs testing laboratory in Peshawar for quality control testing or to the National Institute of Health, Islamabad for re-checking, if needed. Meetings of the Drugs Purchase and Inspection Committee can be arranged at any time of the year, as needed, to check drugs for quality conformity.

#### **V. PROVINCIAL FORMULARY**

There is no provincial drug formulary. The National Hospitals Formulary is followed.

## PUNJAB HEALTH DEPARTMENT

### I. TYPES OF HEALTH FACILITIES

The medical needs of the 65 million people in Punjab are met by both the private and the public sectors.

The public sector, provides medical services through certain types of medical institutions, facilities, and programs. These are as follows:

A.	TERTIARY HEALTH CARE FACILITIES	
	Teaching Hospitals	14
B.	SECONDARY HEALTH CARE FACILITIES	
	District Headquarters Hospitals	25
	Special Hospitals, such as mental hospitals	15
	Tehsil Headquarters Hospitals	57
C.	PRIMARY HEALTH CARE FACILITIES	
	Rural Health Centres	284
	Basic Health Units	2202
	Maternal and Child Health Centres	470
	Dispensaries and hospitals such as Munshi Trust Hospital and government rural dispensaries	346

## II. BUDGET

Fifty percent of the total health budget is meant for the purchase of medicines. The budget itself is set according to predetermined criteria. This is as follows:

A.	TERTIARY HEALTH FACILITIES	
	Teaching Hospitals	Rs.60 per day/bed
B.	SECONDARY HEALTH FACILITIES	
	District Headquarters Hospitals and Specials Hospitals	Rs.40 per day/bed
	Tehsil Headquarters Hospitals	Rs.25 per day/bed
C.	PRIMARY HEALTH FACILITIES	
	Rural Health Centre	Rs.150,000 per year/unit
	Basic Health Units	Rs.25,000 per year/unit

## III. PURCHASE SOURCES/PROCUREMENT/DISTRIBUTION

### A. Drug Sources

Drug supplies may be purchased from the Government Medical Stores Depot (MSD) or by local purchase.

### B. Procurement

While drugs may be purchased from the pharmaceutical factory run by the Government Medical Stores Depot or by rate contract and open tender, they must be purchased according to a preset formula, which is as follows:

TYPE OF HEALTH CARE FACILITY		MSD	Local
1.	TERTIARY HEALTH CARE FACILITIES		
	Teaching Hospitals	60%	40%
2.	SECONDARY HEALTH CARE FACILITIES		
	District Headquarters Hospital and Special Hospitals	75%	25%
	Tehsil Headquarters Hospitals	85%	15%
3.	PRIMARY HEALTH CARE FACILITIES		
	Rural Health Centres	100%	NIL
	Basic Health Units	100%	NIL
	Maternal and Child Health Centres	100%	NIL
	Dispensaries	100%	NIL

### C. Distribution

The Government Medical Stores Depot, upon receiving medicines, issues them to the sub-offices. After fixing price and receipt of bank draft for cost of medicines. The Medical Stores Depot is required to purchase drugs for an annual budget of Rs.14.5 million.

## IV. QUALITY CONTROL

Health care facilities ensure quality control through a number of steps:

### A. Long Shelf Life

Ninety percent of all locally manufactured medicines and 80 percent of all imported medicines that are purchased must have a long shelf life.

### B. Testing and Inspection Procedures

1. Samples are sent to a drug testing laboratory in Lahore.
2. An inspection board, comprised of senior doctors and a senior pharmacist inspects the medicines.

3. Certain medicines are sent for retesting at National Institute of Health, Islamabad at any stage, if required.

### **C. Purchase Restrictions**

Another quality control measure which has been taken is the revision of the Procurement Vademecum List of Medical Stores Depot. This list is now restricted to 415 medicines which have been approved for purchase by hospitals; this includes teaching hospitals. Medical superintendents have been directed to limit their local purchases in accordance with these lists.

Separate lists containing names of essential medicines have been prepared and are enforced for basic health units and rural health centres.

## **V. THE ESSENTIAL DRUGS LIST/PROVINCIAL FORMULARY**

A concept has developed in the minds of the people that it is their right to have free medicines. This does not take into consideration financial constraints.

Adopting a policy concerning essential drugs has helped to solve the conflict between the people's expectations and financial constraints. A List of Essential Drugs for all levels of the public sector was formulated. This List has been enforced in Punjab at every level of health facility. Procurement for the year 1992-1993 has been made according to this List of Essential Drugs.

The criteria used in preparation of a list of essential drugs have been that

- (1) drugs widely used and accepted by the medical profession should be included;
- (2) drugs that are of good quality should be listed by their cheaper generic names; and
- (3) drugs which cover the treatment of common diseases should be included.

## SINDH HEALTH DEPARTMENT

### I. TYPES OF HEALTH FACILITIES

The medical needs of the people in Sindh are met by medical services provided through a variety of institutions, facilities, and programs. These are as follows:

A.	TERTIARY HEALTH CARE FACILITIES	
	Teaching and Specialized Hospitals	8
B.	SECONDARY HEALTH CARE FACILITIES	
	District Headquarters Hospitals	30
	Sub-District Hospitals	48
C.	PRIMARY HEALTH CARE FACILITIES	
	Rural Health Centres	69
	Basic Health Units	502
	Sub-Health Centres	26
	Maternal and Child Health Centres/Maternity Homes	53
	Dispensaries	84
Total		820

There are a total of 11,492 beds available. Of these, 4,211 are in teaching hospitals, and 1,100 are in specialized hospitals.

## II. BUDGET

The budget for supplying medicines and drugs to the various health facilities is set according to predetermined criteria. The budget includes the provision of drugs in outpatient departments and the casualty departments. This budget is as follows:

A.	TERTIARY HEALTH CARE FACILITIES	
	Teaching Hospitals	Rs. 35 per day per bed
B.	SECONDARY HEALTH CARE FACILITIES	
	Major Hospitals	Rs. 35 per day per bed
	District Hospitals	Rs. 35 per day per bed
C.	PRIMARY HEALTH CARE FACILITIES	
	Rural Health Centres	Rs. 80,000 per year
	Basic Health Centres	Rs. 30,000 per year
	Sub-Health Centres	Rs. 20,000 per year
	Maternal and Child Health Centres	Rs. 20,000 per year
	Dispensaries	Rs. 20,000 per year

## III. PURCHASE SOURCES/PROCUREMENT/DISTRIBUTION

### A. Purchase Sources

Seventy-five percent of the budget must be purchased from the Government Medical Stores Depot or by local purchase. Of the 25 percent allocated to non-Medical Stores Depot purchase, 15 percent may be used to purchase drugs directly from manufacturers and 10 percent from the local market. This is governed by a preset formula which is as follows:

1.	TERTIARY HEALTH CARE FACILITIES	MSD	Local
	Teaching Hospital	75%	25%
2.	SECONDARY HEALTH CARE FACILITIES		
	Major Hospitals	75%	25%
	District Headquarters Hospitals	75%	25%
	Sub-District Hospitals	75%	25%
3.	PRIMARY HEALTH CARE FACILITIES		
	Rural Health Centres	75%	25%
	Basic Health Units	75%	25%
	Sub-Health Centres	75%	25%
	Maternal and Child Health Centres	75%	25%
	Dispensaries	75%	25%
4.	SPECIAL CATEGORIES		
	Service hospitals for government employees	50%	50%
	Buffer stock for Medical Stores Depot	100%	0%

## B. Procurement

The procurement of drugs is done by the Health Department, which has a Purchase Section under the Additional Health Secretary Technical. The procedures are as follows:

### 1. Preparation of the Procurement Request

Requests are prepared in health outlets, keeping in mind budgetary allocations, the balance on hand, and the consumption during the previous year. The Provincial Formulary is also used as a guideline in preparation of requests. These requests are submitted to the Officer In-Charge, Medical Stores Depot, by the middle of February of each year.

The Officer In-Charge of the Medical Stores Depot consolidates the requests by assessing the needs versus the stock balance and matching them with

budgetary allocations. These new lists are submitted to the Purchase Section of the Health Department, together with budget certifications, that is, the costs of the lists, by March 15.

These requirements are next submitted to a Technical Committee, which is made up of a Senior Professor of Pharmacology, a Senior Professor of Medicine, Director General or his representative; a medical superintendent of a teaching hospital; the Deputy Secretary Technical, or a Section Officer of the Medical Stores Depot. This committee determines the quantities to be procured, their costs, then approves the request, and returns it to the Purchase Section by March 30.

## 2. Procurement Order

The procurement order goes to an Indent Screening Committee by April 15 to decide the method of procurement. The Committee is made up of the Deputy Secretary Health Technical, Section Officer Budget, Medical Stores Depot Section Officer, and Purchase Officer. It is decided whether items should be tendered as proprietary items, that is, as a single tender; as a limited tender; or as a general tender. This tender is published in newspapers.

On May 15, the tender offers are opened and evaluated by a Tender Board comprised of the Deputy Secretary Health Technical or the Section Officer of the Medical Stores Depot and Purchase Officer, then submitted to the Additional Secretary Health Technical for approval. After approval, the purchase proposal is prepared by the Purchase Section and submitted to the Secretary Health. If not approved, the tendering process is repeated.

## IV. QUALITY CONTROL

After the supply is received at the Medical Stores Depot, the Officer In-Charge orders random testing done at the drug testing laboratory.

Inspection of the stock supplied is done by an Inspection Committee, which is comprised of the Deputy Secretary Health Technical or the Section Officer of the Medical Stores Depot and the Officer In-Charge Medical Stores Depot. After approval, payment is released. Stocks then are registered and stored. If the stock fails to meet the quality standards, action is taken against the supplier under the Drug Rules/ Quality Control Board.

## V. PROVINCIAL FORMULARY

The Sindh Health Department prepared its Formulary in 1987. Drug procurement is based on this Formulary. However, it was difficult to indent and to distribute large number of drugs so the list was sub-divided into lists of drugs needed by the various types of health outlets. Drug Lists are prepared according to the various types of health facilities: 1) teaching hospitals; 2) District/Major Hospitals; 3) Tehsil Hospitals; 4) Rural Health Centres; and 5) the Basic Health Units, Sub-Health Centres, Maternal and Child Health Centres and Dispensaries have those basically the same lists.

These Lists have been followed for the last two years. The Formulary Committee meets at regular intervals to evaluate suggestions received from intents/procurement offices and to include them, if feasible. The process is continuous.

## ANNEX 1: WORKSHOP PROGRAM

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## WORKSHOP PROGRAM

**June 3, 1992**

- 8:30 Registration of Participants
- 9:20 Guests to be seated
- Chairperson** Inauguration Session  
*Chief Guest*  
Syed Tasneem Nawaz Gardezi  
Federal Minister for Health  
Government of Pakistan
- 9:30 Recitation from the Holy Quran
- 9:40 Welcome and Keynote Address  
*Dr. S. Mohsin Ali*  
Director General Health/Additional Secretary, Health Division  
Government of Pakistan
- 10:00 Address  
*Ms. Nancy Tumavick*  
Acting Mission Director  
United States Agency for International Development
- 10:10 Address  
*Dr. Abdel Aziz Saleh*  
Regional Advisor, Eastern Mediterranean Regional Office  
World Health Organization
- 10:20 Address by the Chief Guest  
*Syed Tasneem Nawaz Gardezi,*  
Federal Minister of Health,  
Government of Pakistan
- 10:30 Vote of thanks  
*Dr. Riaz Ahmed Malik*  
Assistant Director General Health  
Basic Health Services  
Government of Pakistan
- 10:25 Tea

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<b>Chairperson</b>	<b>Morning Session</b>	<i>Dr. M. Sajjan Memon Director General Health Government of Sindh, Hyderabad</i>
10:45	National Drug Policy in Pakistan	<i>Dr. S. Mohsin Ali Director General Health/ Additional Secretary Health Division Government of Pakistan</i>
11:15	Discussion	
11:35	Essential Drugs and National Drug Policy	<i>Dr. F.R.Y. Fazli, Chairman Quality Control, Health Division Government of Pakistan</i>
12:05	Discussion	
12:25	Provincial Status Reports	<i>Reports from the Health Departments of Azad Jammu and Kashmir, Balochistan, North West Frontier Province, Punjab and Sindh</i>
13:25	Discussion	
13:45	Lunch and Prayer	
<b>Chairperson</b>	<b>Afternoon Session</b>	<i>Dr. Musa Baloch Director Health Services Makran Division Government of Balochistan</i>
14:30	Improving the Availability of Essential Drugs	<i>Dr. Youssef Tawfik Drugs and Logistics Advisor Pakistan Child Survival Project</i>
15:00	Discussion	
15:30	Options to Increase Financial Resources	<i>Dr. F.R.Y. Fazli Chairman Quality Control Health Division Government of Pakistan</i>
16:00 - 16:30	Discussion	

4th June, 1992

<b>Chairperson</b>	Morning Session I	<i>Dr. Abdul Qadir Director General Health Government of Punjab</i>
8:30	Community Mobilization to Increase Resources	<i>Dr. Jumma Khan Medical Officer In-Charge Havelian Rural Health Centre</i>
9:30	Discussion	
<b>Chairperson</b>	Morning Session II	<i>Dr. Nadir Khan Director Health Services North West Frontier Province</i>
10:00	Components of National Essential Drug Programs in Developing Countries	<i>Dr. Abdel Aziz Saleh Regional Advisor Eastern Mediterranean Regional Office, The World Health Organization</i>
10:45	Discussion	
11:15	Small Group Activity on Recommendations	
13:00	Lunch and Prayer	
<b>Chairperson</b>	Concluding Session	<i>Dr. S. Mohsin Ali Director General Health/ Additional Secretary Health Division Government of Pakistan</i>
14:00	Small Group Presentations of Recommendations	
15:00	Discussion	
15:30	Closing remarks of Chairperson	
15:45	Vote of Thanks	<i>Dr. Riaz Ahmed Malik, Assistant Director General Basic Health Services Government of Pakistan</i>

## ANNEX 2: LIST OF PARTICIPANTS

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# NATIONAL WORKSHOP ON ESSENTIAL DRUGS PAKISTAN CHILD SURVIVAL PROJECT

JUNE 3-4, 1992

## LIST OF PARTICIPANTS

A total of 57 representatives attended the National Workshop on Essential Drugs. These representatives were from the federal government, the four provincial governments and Azad Jammu and Kashmir. Representatives from the Network Association for Rational Use of Medication, the Pakistan Medical Association, the Pakistan Paediatric Association, the United States Agency for International Development, the Pakistan Child Survival Project, the United Nations Children's Fund, and the World Health Organization also attended.

### Federal Government

Dr. Syed Mohsin Ali, Director General Health/ Additional Secretary, Ministry of Health, Islamabad

Dr. Mushtaque Ahmad Chaudhry, Project Director, World Food Program, and Pakistan Child Survival Project, Ministry of Health, Islamabad

Dr. F.Y.R. Fazli, Chairman, Quality Control, Ministry of Health, Islamabad

Dr. Azhar Mahmood Deputy, Director General Health, Procurement Supply of Drugs and Medicine, Ministry of Health, Islamabad

Mr. Abdul Sattar Chaudhry, Health Education Advisor, Ministry of Health, Islamabad

Miss Farzana Chaudhry, Deputy Drug Controller (Registration), Ministry of Health, Islamabad

Mr. Khadim Hussain, Deputy Drug Controller (Licensing), Ministry of Health, Islamabad

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Dr. Riaz Ahmad Malik, Assistant Director General Health (Operation), Basic Health Services Cell, Ministry of Health, Islamabad

Dr. Atta Mohammad Mangi, Director, Central Health Establishment, Karachi

Sheikh Ansar Ahmed, Vice-Chairman, Quality Control, Ministry of Health, Islamabad

Mr. A.Q. Javed Iqbal, Chief Pharmacist, Pakistan Institute of Medical Services, Islamabad

Mr. Nasiruddin Ahsan, Secretary, Pharmacy Council of Pakistan, Islamabad

### **Azad Jammu and Kashmir**

Major General M. A. Hamid Khan, Secretary, Health Department

Dr. Abdul Aziz Ansari, Deputy Director Health Services, Communicable Disease Control

Dr. Mohammad Rafique, Provincial Program Manager, Expanded Program for Immunization

Dr. Mohammad Anwar, Assistant Director Health Services, Director Health Services Office

Mr. Mushtaq Ahmad Chaudhry, Assistant Drug Controller, Director Health Services Office

Mr. Rajab Ali Khan, Stores Officer, Medical Stores Depot, Islamabad

### **Balochistan Province**

Dr. Rashid Tareen, Project Director, Pakistan Child Survival Project, Health Department, Quetta

Dr. Shahjahan Khan, Officer In-Charge, Medical Stores Depot, Health Department, Quetta

Dr. Iqbal Baloch, Assistant District Health Officer, District Lasbela

Dr. Haseeb Sheikh, Deputy Director, Communicable Disease Control, Health Directorate, Quetta

**North West Frontier Province**

Dr. Nadir Khan, Director Health Services, Peshawar

Dr. Irfan Mir Khan, Officer In-Charge, Government Medical Stores Depot, Peshawar

Dr. Pervez Akbar, Deputy Director (Communicable Disease Control), Health Directorate, Peshawar

Dr. Taj Mohammad Afridi, Deputy Director, Basic Health Services Cell, Health Directorate, Peshawar

Dr. Mohammad Ayub, District Health Officer, Mansehra

Dr. Jumma Khan, Medical Officer In-Charge, Rural Health Centre, Havelian

Dr. Professor Inayat Ahmad Khan, Physician, Hayat Shaheed Teaching Hospital, Peshawar

**Punjab Province**

Dr. Abdul Qadir, Director General, Health Services, Lahore

Dr. Farrakh Hussain Tirmizy, Additional Secretary (Technical) Health Department, Lahore

Dr. Mohammad Athar, Officer In-Charge, Provincial Medical Stores Depot, Health Department, Lahore

Dr. Rauf Beg Mirza, Project Director, Provincial Pakistan Child Survival Project, Health Directorate, Lahore

**Sindh Province**

Dr. Ghulam Safdar, Director (Technical/Development), Health Department, Karachi

Dr. M. Sajjan Memon, Director General Health Services, Health Department, Hyderabad

Dr. Arif Memon, Officer In-Charge, Provincial Medical Stores Depot, Karachi

Dr. Hussain Bukhsh Memon, Section Officer-IV, Health Department, Karachi

Dr. Nisar Ahmad Siddiqui, Project Director, Basic Health Services Cell, Karachi

#### **The Network Association for Rational Use of Medication**

Dr. Zafar Mirza, Network Coordinator, Islamabad

#### **The Pakistan Child Survival Project**

Dr. Duane Smith, Chief of Party

Dr. Youssef Tawfik, Drugs and Logistics Advisor

Dr. Theo Lippeveld, Health Information System Advisor

Dr. M. Zafar Ahmad, Consultant, Drugs and Logistics

Dr. Walter L. Straus, Communicable Disease Control Consultant

Dr. M. Saleh Lashari, Provincial Chief, Sindh

Dr. S.M. Mursalin, Provincial Chief, Punjab

Dr. Akhtar Hameed Khan, Provincial Chief, Balochistan

Mr. Zamin Gul, Provincial Chief, North West Frontier Province

#### **The Pakistan Medical Association**

Dr. M.A. Kaleem Butt, Secretary General

Dr. Jameelur Rahman, President, Pakistan Medical Association, North West Frontier Province Branch; Assistant Professor, Biochemistry, Khyber Medical College, Peshawar

#### **The Pakistan Paediatric Association**

Professor Afroze Ramzan, Secretary General, Pakistan Paediatric Association, Karachi

Professor Tariq I. Bhutta, President Elect, Pakistan Paediatric Association,  
Professor of Paediatrics, King Edward Medical College and Mayo Hospital,  
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**The United Nations Children's Fund**

Dr. Suleman Daud, Project Officer, Child, United Nations Children's Fund,  
Islamabad

**The United States Agency for International Development**

Dr. Lois Bradshaw, Pakistan Child Survival Project Officer, Islamabad

Dr. Rushna Ravji, Project Management Specialist, Islamabad

**The World Health Organization**

Dr. Ahmad Abdul Latif, World Health Organization Representative, Pakistan

Dr. Abdel Aziz Saleh, Regional Advisor, Eastern Mediterranean Regional Office,  
the World Health Organization