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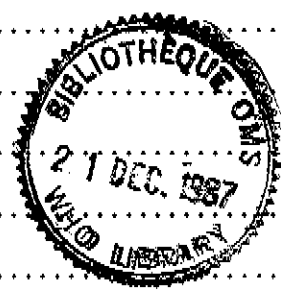
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SUMMARY OF WHO'S INVOLVEMENT IN COUNTRY SUPPORT - EXAMPLES OF MAJOR ACTIVITIES
 ACTION PROGRAMME ON ESSENTIAL DRUGS

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Introduction

Most of the resources of the WHO Action Programme on Essential Drugs are directed towards technical, managerial, training, and when needed or available, financial support to Member States demonstrating political will to improve the supply and rational use of drugs. The programme addresses all the complex issues involved in the development and implementation of national drug policies. The approach is pragmatic and feasible, addressing problems in order of priority.

This summary includes examples of major activities in which the WHO Action Programme on Essential Drugs has been involved, with emphasis on country activities in Africa.

African Region

Algeria

A national list of essential drugs was drawn up in 1984 to improve drug prescription and self-medication. This list, which is regularly updated, contains approximately 500 products. These products are priority supplies and gradually a shift will be made from a large range of drugs to those on the list. A therapeutic guide for doctors has been developed with the assistance of the Action Programme, and drug information sheets are under preparation, based on WHO material. Plans for a national laboratory for drug quality control have been drawn up with the assistance of WHO consultants, and training needs have been assessed.

Angola

An essential drugs programme for the primary care level is supported by the Swedish International Development Agency (SIDA) with long-term advisers and short-term consultants. It involves all aspects of the drug supply system with particular emphasis on improving prescribing practices. The African Development Bank is financing the necessary infrastructure for the implementation of a rational drug policy (new facilities for the production and storage of drugs).

Burundi

A collaborative programme involving the Government, WHO and the Swiss Interpharma group of companies has been in operation since 1980/81.

When a WHO mission visited Burundi to field-test the DAP draft manual on the quantification of drug requirements, a list of essential drugs was drawn up, standard treatment schedules for health centres and dispensaries were established, and estimates were made of their monthly requirements for drugs.

Future programme action includes consolidating the system of supplying drug in kits to peripheral health units and the training of health workers in diagnosis, standard treatment schedules and the concept of essential drugs. A long-term source of finance will be required for the implementation of the proposed programme. An evaluation of the national programme took place in 1987.

Burkina Faso

The Burkina Faso essential drugs programme, which is supported by Italy, WHO and UNICEF, started in 1985. Progress has not been as rapid as was hoped. Basic drugs are, however, being channelled to primary health care posts (postes de santé primaires); the small fee currently charged for the drugs will permit the later purchase of additional drugs when the project has terminated. It is expected that a project adviser will be in place by 1988, at which time the other planned activities can begin. These include the training of prescribers, overseas training on drug information, and improvements to the drug storage and logistics system.

Ethiopia

The national essential drugs programme has been in operation since 1984. In spite of the great difficulties in Ethiopia caused by the drought, good progress has been made. Local production is an important feature of this programme which receives technical and financial support from Italy, WHO and UNICEF. The domestic formulation plant has been modernized and its production of essential drugs expanded. The factory now produces oral rehydration salts and intravenous solutions, and quality control staff have been trained in Kenya.

The Gambia

The essential drugs programme in the Gambia has received support from the Action Programme since 1982, when the pharmaceutical supply system was reviewed and a Medicines Act was drafted. After the act was passed in 1984, WHO assisted in drafting drug regulations and procedures for the licensing of premises, inspection, and the registration of drugs. Further support was given in assessing storage and inventory control and developing a computerized drug information system. In February 1987 the first phase of the Gambia Computerized Drug Information System, GAMDIS, became operational.

With support from the Dutch Department of Technical Cooperation and in collaboration with the World Bank, other scheduled activities include: expansion of computerization; programme evaluation; analysis of morbidity data; drug quantification; establishment of a revolving fund for cost recovery, and a quality control laboratory and equipment.

Gambian experience in drafting, passing and implementing its Medicines Act and drug regulations was shared with health officials from other African countries at a seminar held in 1985.

Ghana

Following WHO missions in mid-1985 and early 1986, support for the improvement of local production capacity was provided by the United Kingdom Overseas Development Agency (ODA). As a result, the supply of essential drugs to the Government from this source is much improved. It is estimated that, if sufficient foreign exchange could be allocated to supply the raw materials to private industry, up to 50% of the Ministry of Health's needs for essential drugs would be met.

Problems remain in logistics and distribution, and proposals to improve them have been made by WHO as well as by the United States International Development Corporation Agency (USAID) missions. Various components of the drugs supply chain, including raw materials, equipment and technical personnel have previously been financed, under bilateral agreements, by the Federal Republic of Germany, the Netherlands and Switzerland.

Guinea Bissau

Guinea-Bissau has implemented an essential drugs programme which has concentrated on strengthening drug supply logistics with assistance from several donors, including SIDA and the Italy/WHO/UNICEF Country Support Programme. A World Bank health project will further strengthen the programme, especially through a cost recovery scheme which is expected to improve the financing of drug supplies and enable the Government to procure drugs using its own funds. The programme will also include prescriber training, improvement of drug procurement and storage, and a public information campaign.

Guinea Conakry

Following two WHO missions in 1985 and 1986, an essential drugs programme has been developed as a key element of the expanded programme on immunization integrated with primary health care. The objective of the programme is to ensure the availability of 30 essential

drugs at the primary health care level through rational selection, efficient procurement and distribution and correct use. The intention of the programme is to regenerate public confidence in the health care system and, through sale of the drugs, to provide an operating budget for the health centres and a revolving fund to replenish essential drug supplies on a regular basis. The Ministry of Health has already carried out a number of activities in collaboration with WHO and UNICEF, such as the selection and quantification of drugs and the preparation of training materials. UNICEF has agreed to provide the drugs for the 72 health centres included in the programme during the first year. Additional funds are being sought by the Ministry of Health with the assistance of WHO and UNICEF.

Kenya

The rural health essential drugs programme (Kits) continues, although financial support from SIDA may be phased out in 1988/89. The programme has recently been extended to outpatient departments of hospitals, beginning with 10 selected district hospitals. Drugs for the programme have been provided by the German Federal Republic Agency for Technical Cooperation (GTZ) and the Netherlands for a pilot phase expected to run until the end of 1988.

A joint Protestant/Catholic medical service essential drugs programme began in January 1987 with the setting-up of a central purchasing unit in Nairobi and the adoption of an essential drugs list for different levels of health care. The main components of the programme are: provision of centrally purchased essential drugs at cost plus a 20 to 25% margin, which should cover overhead costs and repurchase, a new central medical store, trucks, and handling equipment; and a comprehensive health worker retraining programme. Training will be carried out in close cooperation with the Ministry of Health, using MOH permanent tutors, materials, and training centres. The programme is expected to be fully operational by mid-1988, with kits being supplied to health centres and dispensaries. The Kenya drug management unit is expected to qualify soon as a collaborating centre.

Lesotho

In October 1985 the Action Programme carried out a situation analysis in Lesotho and recommended steps, now being implemented, for preparatory work leading to drug legislation. The country is well supplied with essential drugs from its local manufacturing plant, the Lesotho Dispensary Association (LDA), and the distribution unit, the National Drug Stockpile Organization (NDSO). There is, however, an urgent need to develop a computerized system covering forecasting and production, procurement, inventory control, distribution, and financing. The Action Programme, in collaboration with the Swedish Department of Drugs, has carried out feasibility studies for such a comprehensive information system. The collection and review of morbidity data for the quantification of drug needs are another important activity that has received WHO support. DANIDA and the Danish Board of Health continue to assist Lesotho with drug production, quality control and assurance, and training. A video film of LDA and NDSO activities has been produced with support from the Action Programme.

Malawi

Malawi is well advanced in the implementation of its essential drugs programme. A list of essential drugs has been drawn up and is used for public sector purchasing and as a guide to the priority allocation of foreign exchange for private sector drug imports. Strengthening the essential drugs programme will be begun this year with financial help from WHO through a grant from the Netherlands in conjunction with a second World Bank-financed health project.

While the main emphasis of the programme is on prescriber training, other activities will include the renovation and equipment of drug depots, the provision of quality control equipment and technical assistance, improvement of local formulation techniques, and computerization of the central medical stores inventory and stock control system. Short-term overseas training will be provided in drug inspection and administration, quality control, and drug formulation.

Mali

Implementation of the pharmaceutical reform supported by the World Bank and WHO has been slow, but some progress is apparent and coordination between the Ministry of Health and institutions has greatly improved. The list of essential drugs and pharmaceutical legislation has been reviewed with the assistance of the Action Programme. An open tender for 50 essential drugs took place in July 1986. Comparison of prices obtained in the tender with those normally paid by the Pharmacie populaire du Mali (PPM) showed a reduction of 40%. The essential drugs supplied through the tender are sold in three pilot pharmacies in Bamako and it is hoped to extend this initiative, which has attracted much public and professional interest, to the whole country. A national drug policy workshop to identify problems and constraints in the implementation of reform and define a future plan of action was held in January 1987 with WHO support.

Mauritania

Mauritania continues to suffer the after-effects of drought, with many of the population still displaced and living in camps on the outskirts of the capital. A WHO mission visited the country to brief government officials on the basic concept and advantages of an essential drugs programme, especially for emergency situations. WHO assistance will be provided to draw up a health plan, and it is hoped that a pilot essential drugs programme can be started in one area of the country and subsequently extended. Donor financing is being sought for this purpose.

Mozambique

Mozambique was one of the first African countries to formulate and implement an essential drugs policy. Its national list, adopted in 1977, in fact preceded the WHO model list of essential drugs. Mozambique has made great efforts to ensure a regular and equitable supply of drugs to the whole country and to train health workers in their proper use. Since it depends on imported drugs, a quality control laboratory has been established with support from Switzerland. The local industry is in its infancy, but has started production of oral rehydration salts. The Government has received financial and technical support from UNICEF/WHO through a grant from Italy, and SIDA is also providing support for drug supplies.

The national programme was reviewed in February 1986. Solid progress was reported notwithstanding very difficult operational conditions. However, the foreign exchange situation is such that the Ministry of Health will be forced to rely increasingly on outside support for most of its national drug needs. The Italian Government has committed substantial sums for supplies of essential drugs through a UNICEF/WHO support programme.

Nigeria

A national workshop on essential drugs took place in December 1986, all participating states making commitments to implement an essential drugs programme, and essential drugs lists have now been drawn up. WHO led several consultant teams to Sokoto, Imo, Kano and Benin States and the Federal Ministry of Health in support of preparatory work for a national essential drugs programme. Negotiations continue between the Federal Government and the World Bank regarding a loan for programme implementation. WHO coordinated project preparation activities, and a comprehensive programme covering consultancy missions, training, and workshops started 1987.

Rwanda

A number of recommendations of the 1982 national workshop on drug policies have now been implemented. A director of pharmaceutical services was appointed; drug legislation was drafted, a new central medical store was built; a national drug committee was established; and the director of pharmacy has been in France on a six-month WHO fellowship in drug

management. The Action Programme assisted in review of the draft drug legislation, and also supported a team that proposed alternative mechanisms for restructuring OPHAR, the public sector procurement agency so as to make it a semi-private organization. However, no suitable mechanism has yet been agreed upon and problems still remain, owing in part to the absence of a policy striking a balance between the need in the public sector for essential drugs and the demand in the rapidly increasing private sector.

Seychelles

WHO assisted the Government of the Seychelles in drawing up an essential drugs list, rationalizing procurement functions and local production, and preparing standard treatment schedules/therapeutic guidelines based on the new essential drugs list. Further assistance was provided in 1986 in preparing a training programme and curriculum for the upgrading of nurses to nurse-practitioners. Implementation of the national essential drugs programme began early in 1987, and a national workshop on essential drugs took place in July 1987, with WHO technical input and resource material.

Sierra Leone

The World Bank-supported essential drugs programme began early in 1987, with the procurement of essential drugs through UNIPAC and the setting-up of a treatment charge revolving fund. This programme covers the needs of three of the country's nine districts. A further US \$ 250 000 is due to be allocated from funds from the Netherlands to implement an essential drugs programme in an additional three districts. The Federal Republic of Germany continues to provide assistance for the health workers' training centre at Bo and WHO has provided consultant assistance in drawing up estimates of drug needs and training materials. It is estimated that approximately US \$ 500000 will be needed to achieve national coverage with essential drugs.

Tanzania

The essential drugs programme supported by DANIDA and implemented by UNICEF has been very effective in the procurement and distribution of drugs to rural areas. Through international tenders UNIPAC has been able to provide drugs at approximately 50% of cost. Direct transportation to the zonal stores has ensured safe and regular distribution, with the result that essential drugs are now available at all rural health facilities.

At the national level the essential drugs list has been revised. WHO-supported workshops on the rational use of drugs have been attended by regional medical officers and specialists from the main hospitals, and the administration of the central medical stores has improved. Despite these advances a comprehensive national drug strategy covering all health institutions has not yet been established, and the planned training of health workers is behind schedule.

Uganda

The national essential drugs programme began early in 1986, with assistance from a Danish Red Cross team financed by DANIDA. Drugs were supplied both in kits for rural areas and in bulk for hospitals, with purchases made partly through UNIPAC and private organizations in Denmark. The church organizations in Uganda are cooperating fully in this programme, buying their essential drugs through the project. A major health worker re-training programme is being assisted by the Red Cross. The Ministry of Health held a national workshop on essential drugs in 1987, WHO providing assistance in preparing the agenda and resources. WHO has also helped with the inclusion of essential drug elements in the new drug policies legislation. A draft national essential drugs policy is under final consideration.

Zambia

The national essential drugs programme started in 1986 with support from SIDA. Although the first drug supplies came from UNIPAC, further supplies were obtained from a private procurement agency in the United Kingdom after selective tenders. The programme is expected to continue till the end of 1988 with a range of basic essential drugs supplied in kits to rural health facilities. Hospital supplies will remain the responsibility of the Ministry of Health. There are reports of acute shortages because of financial constraints resulting from the limited availability of foreign exchange.

Zimbabwe

The Zimbabwe essential drugs action programme (ZEDAP) was officially started in January 1987. A DANIDA-supported team of advisers is assisting the Ministry, and a first WHO mission to estimate drug needs for the country was completed in February 1987. A national workshop on essential drugs took place in April 1987. Funding for management support and training activities is assured for three years by DANIDA and WHO, drug supplies being funded by the Ministry of Health. However, supplies have been seriously compromised in the past year by difficulties with foreign exchange allocations, but it is hoped that the new rationalization measures suggested by the WHO mission will improve the situation.

The Americas

PAHO, the WHO Regional Office for the Americas, increased its technical cooperation in 1986 and 1987 with Central America within the framework of a plan for priority health needs in Central America and Panama that has successfully mobilized funds for national drug policies, essential drugs production, supply systems, quality control, and joint procurement schemes. The Central American revolving fund for essential drugs (FORMED) completed its first purchasing cycle, having achieved significant savings (60% on average) for the participating countries. The fund, not unexpectedly, encountered problems with local administrative procedures, delivery times and, occasionally, product quality. These problems are being tackled as the programme develops.

PAHO is promoting another subregional initiative in the Andean countries which, at the health ministers' request, also includes essential drugs as a priority area. Action has been taken to develop joint working plans benefiting from the experience acquired in Central America.

Eastern Mediterranean Region

Several countries in the WHO Eastern Mediterranean Region now have comprehensive programmes covering most components of the Drug Action Programme. Others have activities restricted to certain components, selected according to national priorities. Among countries with no collaborative programme on drugs, collaboration has been planned and will be initiated in Kuwait, Qatar, and the United Arab Emirates in the next two years.

The problems encountered in the implementation of the comprehensive drug programme include failure to grasp the concept of essential drugs among certain groups in the health professions, lack of motivation of government officials in some countries, and shortage of funds.

The national drug policy in Democratic Yemen has engendered one of the strong essential drugs programmes in the Region and now covers all aspects of a comprehensive programme. Its success is mainly due to a motivated management unit at the country level. WHO during this biennium has provided technical advice and supervision and extrabudgetary support to the extent of US \$ 350 000 from the Director-General's development fund.

An intercountry meeting on drug policies and management was held in Damascus in October 1987 and priorities were set for the regional programme.

Training in the rational use of drugs has been one of the major activities in this biennium. Seven national workshops were organized, bringing together policy-makers in the field of drugs, pharmacologists, clinicians, and pharmacists. Interesting and constructive discussions took place on the various aspects of drug policy, the focus being on recognized areas of abuse and misuse of drugs. In some cases the workshops were followed by formulation of revision of the national list of essential drugs or the list of drugs for use at the primary health care level. These workshops have been instrumental in propagating the essential drugs concept and stimulating local action.

In Cyprus, Democratic Yemen, Lebanon, and Sudan, computerized systems for drug registration are being introduced, with the assistance of WHO.

In the biennium attention was paid for the first time to the important role of the pharmacist in the implementation of the essential drugs programme. A consultation with regional and international experts was held in the WHO Regional Office in February 1986, the objective being to discuss the present status of pharmacists in the Region and their role in implementing health for all by the year 2000 through the primary health care approach. Action based on the recommendations of this consultation has already been initiated in some areas. It is also hoped, as a follow-up to the consultation, to organize a meeting of experts on curricular planning during the next biennium.

Somalia

The national essential drugs programme is an integral part of the primary health care strategy of Somalia. UNICEF is supporting the programme and attempting to coordinate the various donor inputs for drug procurement into a revolving fund for primary health care. The programme has made advances in drug procurement, storage, and distribution and in the training of health workers, and an evaluation is planned for 1987. Progress is also being made in manufacturing; a domestic formulation plant was completed in 1985 with EEC financing. The Istituto Farmaceutico Somalo, which is receiving technical support from an Italian company, is expected shortly to produce a limited range of essential drugs.

Sudan

An essential drugs programme will be launched in Nile Province, one of the largest provinces of the Sudan, with assistance from WHO on a grant from the Netherlands Government. The programme will later be extended to other provinces. The Nile Province project will include: purchase of drugs and medical supplies; training of health personnel; health education; operational research into health status and drug resistance; and monitoring and evaluation. The Netherlands Government earlier helped Sudan to improve the central medical stores operation and logistics.

South East Asia Region

Several countries in the South East Asia Region have examined their drug policies in the context of changed emphasis on health development. Bangladesh has evolved a policy that aims at rationalizing its drug supply system and attaining self-sufficiency in the local production of essential drugs. Indonesia has re-examined its drug policy and strengthened the infrastructure for ensuring drug supplies. Thailand has prepared a drug policy document for improving the drug supply system. Bhutan has convened a national conference to explore drug policy and management. India has reassessed its policy and formulated a new policy laying emphasis on the production of essential drugs. WHO collaborated with several of these countries by providing appropriate technical inputs for evaluating and formulating drug policies, keeping in view the health for all strategies adopted by the governments.

Most countries in the region have established national lists of essential drugs. While some, such as Bangladesh, Bhutan and the Maldives, have made their lists applicable to both

the private and the public sector, most have been using the national list for the public sector. The drug programmes in the South East Asia Region were reviewed in a consultative meeting on action programmes on essential drugs held in New Delhi on 24-28 August 1987, when the development of clinical pharmacology in the Region was also discussed. The following are examples of activities in the South East Asia Region.

Bangladesh

Bangladesh's controversial drug policy of 1982 is now bearing fruit. The Government has stood firm on its essential drugs policy and drugs are now available to more people than before. The policy has changed the local manufacturing scene: in 1986 64% of the drug industry's total production capacity was used for essential drugs, as compared with 30% in 1981, and imports of finished drugs decreased from 16% in 1981 to 10% in 1985. The industry's earlier opposition has been replaced by strong support from the Bangladesh Association of Pharmaceutical Industries. The Government has taken many steps to improve its quality control laboratories and manufacturing practices. Many national companies now manufacture to international standards.

Large scale pilot projects are now being carried out with support from DANIDA, SIDA, and WHO to map out strategies for the better distribution of drugs and better therapy. UNICEF is also providing support for national efforts.

Bhutan

Bhutan embarked on an essential drugs programme in 1985 that covered all the major components and followed a plan of action prepared by a WHO mission in 1984. The programme receives financial support from WHO, the Finnish and United Kingdom aid agencies and WHO and technical and managerial help from WHO, which reviewed progress in August 1987. Much has been accomplished in two and a half years. National drug policy has been approved, drug procurement is being streamlined, drug distribution and stores are being improved, storekeepers and prescribers are being trained and the country's first pharmacy students are being educated in India. All external WHO aid is used for programme development and training. The country pays for its own drugs in spite of a sharp increase in the drug budget after needs had been quantified.

Burma

Burma received WHO support in 1986 for an assessment of the drug supply situation. Foreign exchange is the chief problem in obtaining the drugs needed and the raw materials for local production. The pharmaceutical industry is negotiating with the World Bank for improvements in equipment and the central medical stores depot is being reorganized and its facilities improved through a loan from the Asian Development Bank.

An essential drugs project was developed in 1987, with support from a WHO mission. Preparatory activities started in anticipation of external funding for 1988 and onwards.

Indonesia

Through a ministerial decree Indonesia formulated a national drug policy in 1983. About 95% in value of the drugs marketed are formulated locally and some pharmaceutical raw materials are also produced locally. Production capacity for, e.g., ampicillin, amoxycillin, paracetamol and ethambutol has met national demand. Government manufacturers are instructed to produce essential drugs, supply essential drugs to the public sector, produce essential raw materials, and foster technology development in pharmaceuticals. The coverage of the rural population with essential drugs is still a problem. To help in its solution, the Ministry of Health initiated a social marketing programme in 1986 enabling low income people to buy low-cost high quality essential drugs in the private sector. Commitment to distribute, prescribe, and dispense these drugs, which are produced by government factories, was sought from pharmaceutical associations, pharmacists, physicians and dentists.

WHO experts have assisted Indonesia in the development of: drug evaluation and registration; the monitoring of adverse drug reactions; drug utilization studies; the implementation of good manufacturing practices; quality control laboratories; drug inspection; the establishment of essential drug lists; the production of essential drugs. The Federal Republic of Germany and Japan helped greatly in the development of the national drug and food quality control laboratories. A modern biological and microbiological laboratory was built with technical and financial support from Japan that included the training of laboratory staff in Japan and assistance from Japanese experts in biological and microbiological analysis.

In the ASEAN TCDC Pharmaceutical Project, Indonesia is the coordinator for the development of guidelines for good manufacturing practices and is responsible for the ASEAN training centre for such practices, its training programmes, and manuals for drug inspection and good manufacturing practices.

Nepal

Following a workshop on national drug policies and management in 1985, the Drug Consultative Council endorsed the proposed drug policy, but government approval is still pending. WHO supported workshops and training seminars on estimating drug requirements, developing of standard treatment schedules in relation to the rational use of drugs, and in 1987 introducing the essential drugs concept in workshops and training institutions. Support was also given to implementing the Drugs Act of 1978 and the training of drug retailers. The grossly insufficient budget allocation for drug supplies to health posts in Nepal remains a major problem; the supplies are inadequate and last for only about a third of the year. Royal Drug Limited, operated by the Government of Nepal, produces tablets and capsules and meets about 12% of the country's needs.

Sri Lanka

In January 1985 a national seminar on drug policies and management was held under the auspices of WHO. At this seminar the essential drugs list was revised and modified for use in hospitals and other institutions. As well as promoting the concept of essential drugs and rational therapeutics, the Ministry of Health and the medical schools are making efforts to educate practitioners and update knowledge of drug therapy in common conditions. Standard regimens for the management and treatment of common illnesses have been drawn up by a committee of senior medical specialists from government hospitals, the health services, and a clinical pharmacologist. The use of these to afford a more realistic estimate of drug requirements is being studied in selected hospitals and outpatient clinics in three provinces with support from the Action Programme on Essential Drugs. Early results from the study are favourable, and wider application of standard treatment regimens in the Sri Lankan Health Service is planned.

The Government of Norway has assisted Sri Lanka in upgrading its drug quality control laboratory and system. The Government of Japan has helped to modernize drug storage and distribution and the buildings concerned.

Thailand

Thailand has pursued its 1981 national drug policy aim to supply safe and good quality drugs at a reasonable price, reduce loss and wastage, strengthen quality assurance, foster self-reliance in essential drugs production by using indigenous raw materials, and promote the use of safe and efficacious herbal medicines. A WHO essential drugs review team in 1986 was impressed by what had been achieved in five years through the combined efforts of government departments, especially the Food and Drug Administration. The team proposed a few key indicators to measure further progress.

The majority of Thailand's 50 000 villages now have funds for provision of primary health care drugs. The national essential drugs list now has to be used in all government institutions. Provincial and hospital drug therapeutics committees have been set up, a central drug information centre and an adverse drug reaction monitoring service have started, and a prescriber's journal and data sheets on essential drugs are sent out to health professionals. WHO has given technical and financial support in planning and implementing the various activities under the national drug policy. Much emphasis has been placed on improving quality assurance and the Government is helping local manufacturers to upgrade their procedures for manufacturing and quality control. A WHO collaborating centre for the production and utilization of regional standard and reference substances has been established. Irrational drug use remains a major problem in the complex Thai market with its many different products, and the Government is now concentrating on regulatory control, enforcement of the drug law and promotion of rational drug use.

Western Pacific Region

Most developing countries in the Western Pacific Region are heavily dependent on imported drugs for the delivery of health care, including primary health care. The general lack of clearly defined national drug policies within an overall national health development programme and the absence of adequate facilities and trained personnel for drug production and procurement, quality assurance, drug evaluation, and drug control have posed serious problems in drug management.

The main emphasis in collaboration with governments has been directed towards improving the procurement systems for selected drugs and vaccines of good quality and at affordable prices. This includes promotional activities to encourage wide acceptance of a standard, national or subregional list of essential drugs. Consultants were provided to assist governments to formulate rational drug policies and revise the infrastructure of drug production and distribution systems. Training courses, fellowships, and study tours were arranged to promote the development of national expertise in the management, quality assurance and distribution of drugs and vaccines.

There was cooperation with China in relation to vaccine production and drug quality control. Between 1985 and 1986 technical advice was provided by various consultants, who recommended China's essential paediatric drugs, identified means of developing its pharmaceutical technology and explored China's capacity to produce antibiotics. As a result, WHO is now engaged in various activities in relation to pharmaceutical technology development and antibiotic production, under two WHO/UNDP projects.

Among the South Pacific countries, Samoa was furnished with medical supplies at the end of 1986 to meet its severe shortage of essential medical supplies. Support for the improvement of drug storage and distribution was given in 1986 to the Trust Territory of the Pacific Islands and Vanuatu and manpower development was strengthened in the Cook Islands, Kiribati, the Solomon Islands, the Trust Territory of the Pacific Islands, and Tonga. In Papua New Guinea seven microcomputers were procured for the pharmaceutical supply system of the Department of Health to improve the management and distribution of essential drugs.

Vietnam

In Vietnam support was provided for the strengthening of pharmaceutical factories. Raw materials were purchased for the production of essential drugs. Training of personnel in various aspects of essential drugs programmes was given high priority. An action plan for the Vietnamese essential drugs programme has been prepared and close collaboration established between Swedish bilateral aid, UNICEF, and WHO in implementing it. Several national and provincial seminars on the policies and organization of the essential drugs programme in Vietnam took place in 1986 and 1987. Essential drugs lists for various levels of care were agreed upon. Twenty thousand copies of a new therapeutic manual were distributed, and a manual for diagnosis and treatment in primary health care is being tested. Training in rational drug use and prescribing is much emphasized in the new plan of action which also emphasizes the cultivation and use of medicinal plants in primary health care.

Grave financial constraints and obsolete buildings and equipment for drug production and storage are major problems in Vietnam. External funds are needed to improve the situation.

Papua New Guinea

Papua New Guinea is a pioneer in the selection of a limited number of essential drugs, in devising lists according to the skills of workers, and in enforcing a system of standard treatment schedules.

Its pharmaceutical supply system was examined by a WHO team in 1986. The team concluded that it had achieved impressive results in terms of coverage and use of drugs. Consolidated procurement has enabled the country to provide the most essential drugs at a cost of about US\$1.00 per person per year.

The country's drug supply system is well suited for training personnel from other countries in the Region. It is planned that it should become one of the regional collaborating centres on essential drugs.

ASEAN technical cooperation among developing countries

Technical cooperation among ASEAN countries in pharmaceuticals was supported by UNDP in Phase I (1982-1983) and Phase II (1984-1986). The following activities were funded by UNDP, WHO being responsible for overall coordination, planning and review:

- (a) the development of practical guidelines for the implementation of good manufacturing practices
- (b) exchange of information on drugs, including information on essential drugs lists
- (c) development of adequate quality control laboratories
- (d) drug evaluation and control
- (e) training and exchange of expertise in drug supply and management
- (f) production and utilization of regional standards and reference substances.

In a terminal tripartite review carried out in Brunei in December 1986 the project activities under Phase I and Phase II were officially considered as completed. Specific results were:

- (1) adoption of guidelines for good manufacturing practices by the participating countries and practical implementation of the guidelines in the inspection of manufacturing facilities
- (2) improved exchange of information on pharmaceuticals using common hardware and software
- (3) establishment of a quality registration system in Malaysia and collaboration between WHO and Indonesia and Thailand in the regional network for monitoring adverse drug reactions
- (4) simpler and more effective systems for drug evaluation and control in the five participating countries, a shorter time for the evaluation and registration of manufacturers in Indonesia, and an adverse drug reaction monitoring system established in Thailand
- (5) improved procurement and distribution of drugs at the central level in the five participating countries.

The new project activities for 1987-1991 have already been launched and cover 10 areas, namely:

- (1) the development of hospital pharmacy management
- (2) a training programme for drug management at the peripheral level
- (3) the strengthening of communication, information and education on drugs in the community
- (4) standardization, quality control, and utilization of herbal medicine in ASEAN countries
- (5) preparation of an essential drug information manual
- (6) establishment of a regional training centre for good manufacturing practices
- (7) establishment of a regional training centre for drug information;
- (8) establishment of a regional training centre for drug evaluation;
- (9) establishment of a regional training centre for laboratory quality control
- (10) establishment of a regional training centre for the production and utilization of regional standards and reference substances.

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