Integration: the challenge of the nineties

The start of this decade, the last of the millennium, augurs opportunity and hope. For many, the year 2000 represents a milestone in a steady development towards greater global equality. Others fear that without major political, societal and economic change - including acceptance of international responsibilities - the end of the decade will instead show further polarization between the rich and the poor, between waste and deprivation.

The availability, use and safety of medicines reflects wider cultural and economic issues, aspirations, and change. To what extent can and should developing countries adopt so-called 'scientific' medicine? In practice this would imply a system based on comprehensive legislative and scientific controls, a highly educated cadre of health professionals, and the increasing use of powerful technologies and pharmacological substances. Is it possible for health care systems in developing countries to selectively adopt from Western medicine what is relevant and affordable? Can this be done without in the process destroying traditional therapies, replacing them by a model which cannot work for reasons of economic and cultural development? The work of health development agencies is based on the assumption that it is possible to incorporate, and where necessary adapt, modern medical approaches to meet the needs of societies with different therapeutic traditions.

The drug sector is exceptionally complicated in that it involves a wide range of national and economic interests. If modern drugs are to be used safely and wisely and to be cost-effective in terms of the national health care budget and individual incomes, a number of conditions have to be met. Technical and managerial staff need to be trained, and education on drug use needs to be given to the general public. A comprehensive infrastructure has to be established that includes pharmaceutical legislation, quality assurance, economic priority setting, procurement, logistics and access to objective information. A formidable task indeed, but one which an increasing number of developing countries are now undertaking through a comprehensive national drug policy.

One of the principal objectives of WHO's Action Programme on Essential Drugs is to support Member States in this development. But the Programme is only one actor in this multidisciplinary arena. Other international, bilateral agencies and NGOs are also playing an increasingly active role. The report on the recent French study of pharmaceuticals in Africa, reviewed in this issue, highlights the responsibilities that both governments and industry have towards safe and appropriate drug use. Changing patterns of morbidity, such as the increasingly serious health problem posed by the AIDS pandemic, and the emergence of newly discovered pharmacotherapeutic agents, mean that this involvement will be a dynamic process.

The 1980s have seen the widespread acceptance of the essential drugs concept as a pragmatic means of providing cost-effective pharmacotherapy. However, acceptance of a concept does not necessarily result in its implementation. Concentration on single components of the concept - without the parallel development of a broad supportive infrastructure - may lead to weak links in the chain, whether through unsafe products, inadequate logistics, poor prescribing, or lack of patient compliance.

The challenge of the nineties is therefore one of integration. We should be open to the complementarity of traditional and new medical approaches, and should identify, preserve and promote those elements that have proven adequate in their cultural and economic environment. At the same time the industrialized countries have a responsibility to assist developing countries in creating the infrastructure that is necessary to fully benefit from promising developments in medical science.
Essential Drugs Monitor

RATIONAL USE

Low-cost drug packaging

Jon Vogler* and Martin Long**

Drugs dispensed without packaging often become damaged, wet or dirty.

The sight of drugs being dispensed without packaging is a common one in many developing countries. With ministry budgets stretched to cover even essential drugs, dispensers and patients are left to improvise with old paper, a knot of clothing or whatever else is to hand, and despite these best efforts drugs as a consequence often become damaged, wet or dirty. What’s more, where patients are unable to read the prescription or any label, similar looking pills can become muddled, frustrating both the doctor’s and patient’s best intentions.

In response to a growing realisation of the extent and importance of this problem, the WHO and the British Government have been funding a project to develop drug packaging that is low-cost, appropriate and acceptable. Managed by AHRTAG in the UK, a world-wide survey was undertaken of present methods, problems, and responses, and a number of different approaches were tested in Bangladesh by IBUNING, a health development consultancy. From this work, the project set up trials of two different sets of low-technology machines in Bhutan and Mexico, making use of waste paper and plastic respectively, and will go on to publish a handbook on their construction and use.

The problem

The results of the initial survey indicate a wide range of problems shared by health workers and patients around the world, and some of their responses are recorded below. Pils for instance, even gelatine capsules, may simply be placed in the patient’s hands at the point of issue, or given in a fragile screw of paper. From Zimbabwe:

“I long ago observed a patient standing at the bus-stop in the rain with everything dissolved in his hands”.

IBUNING’s field workers report:

“Patients were found carrying medicines from the centre in small boxes where they also keep betel leaf and tobacco, or they carry them in their hands, or by wrapping in the end of a sari or towel. When they go back they reported keeping the medicines in their trunks of clothes, or in empty tins of milk powder where they store various other things”.

Because many patients cannot read or live in homes that have no proper storage, drugs may be accessible to children, may be taken in the wrong doses or may deteriorate “on the shelf”. Further difficulties are caused by similar looking medicines dispensed in the same packet. Manufacturers usually produce standard small, white powdery tablets that health workers themselves have difficulty differentiating, with one report that once taken out of the bulk container even the pharmacist could not distinguish between the medicines. One doctor’s response was never to give more than three kinds of pills and usually only two to avoid confusion.

Another problem is that medicines can be misused, with an example from the Ivory Coast reporting:

“Father gives five-year old son Notozine because he came home from the fields scratching and since he (the father) had received Notozine “because of itching” he figured it would help his son, whom he poisoned. Big problem!”

There are also positive reasons for packaging drugs. Lepra, an organisation which devotes considerable resources to management of their vast drug dispensing activities, say that “better packaging raises the morale of peripheral workers”.

It was found that people value packaged drugs more highly than those they receive loose and may therefore more readily follow the prescription given by doctor or dispenser. Packaging also aids labelling of course, again improving correct consumption, as well as bringing economies by reducing the risk of overdose or accident. The importance of this was highlighted by an example from Uganda:

“We have instances of misunderstanding as when a little girl, to whom we had given four separate packages of chloroquine and aspirin, went home and carefully unpacked and swallowed all four at once”.

There is widespread belief that “brand name” factory-packaged drugs are more effective than self-packed, generic ones. This can be countered by dispensing the generic drug in a neat package.

What happens at present?

Our survey learned of many imaginative and useful ways of packaging, labelling and administering drugs. By far the most common practice is to wrap drugs in any scrap of paper that can be obtained. ECHO, the Joint Mission Hospital Equipment Board, send overseas very large quantities of resalable polythene film bags. UNICEF also distributed these with essential drugs kits and in some countries they can be purchased locally. Various responses were reported, including cutting the UNICEF bags in half, using film containers or even recycling the boxes used by drug companies for their samples as “the boxes are more use than the samples”. Soft drink bottles are frequently used for liquid medicines, especially where there is already a collection and resale system operating.

How to ensure compliance

Many respondents described methods to ensure the prescription is properly used. From Zaire, it was noted that:

“Patients do take the wrong dose. To avoid it, prescribe only very simple treatment; more than two drugs at once makes errors almost inevitable”.

It was also reported from Thailand that:

“For a family of six, all with TB, I ended up making out a chart with actual samples of the tablets on it”.

This caring approach illustrates a theme that ran through the replies, namely that good medical and pharmaceutical practice can be as effective as physical aids (such as packaging) in ensuring patients get the maximum benefit from drugs at the lowest cost to themselves and the community.

Soft drink bottles are commonly used containers for liquid medicine in developing countries.

*Assistant Medical Officer, UNICEF, New Delhi
**Health Development Consultant, IBUNING

Photo: R. J. M. Bevis
Essential Drugs Monitor

RATIONAL USE

One survey response from Ecuador reported that:

"While the doctor is writing the prescription he or she describes how each thing is to be given. The dispenser makes up the prescription, reading it aloud and, once it is ready, gives the explanation again. Some complain that it is time-consuming but we have more success this way".

Is packaging justified?

Some people told us that money for drugs themselves was too scarce to waste any of it on packaging, and that packaging is seen as rich-world wastefulness. In the light of this the project tried to reduce packaging cost by:

- Developing methods that could use materials wherever possible.
- Searching for equipment with a low capital cost.
- Minimizing skill needed to operate equipment and processes, so these could be done by patients or unskilled employees.
- Avoiding complexity or oversophistication. As a result many of the packages appear basic though those who have money available for something better will find no lack of commercial companies to supply it.

Requirements for packaging

From these replies and our own field studies we compiled a list of what is expected of packaging:

**provide protection...**

- Packaging should protect the contents, but only for the expected duration of the prescription. Different treatments need different packaging; asthma and epilepsy, leprosy and TB need long-term packaging. Patients’ needs differ too: those who walk long distances to the dispensary may need sturdy containers that will resist crushing and moisture, so plastic containers might be suitable for this and for long-term prescriptions, paper for short-term. From Gujarat, India, it was reported that:
  
  "Since most of the drugs are for 3-5 days small paper bags are enough. For patients who require drugs for long periods, e.g. T.B., iron tablets, broncho-dilators, we give them plastic bottles".

- And from Nepal it was found that "whilst envelopes are reasonable for the dry seasons of the year, they are unsatisfactory during the monsoon".

**easy to label...**

- Packaging should be easy to label clearly. It should command respect and help the patient to follow the prescriber’s intentions.

**secure...**

- Some medicines need containers that seal securely. Pottery may be suitable (and cheap) for opiums but tight stoppering is needed for liquids with poisonous or irritating vapour.

**simple...**

- Hospitals and clinics cannot afford time or effort to operate complex processes, so packaging and the equipment to produce it should be simple. Processes that can be operated by disabled people give a double benefit.

**appropriate for quantity...**

- Processors should be appropriate to the size of the clinic: often only a few dozen prescriptions a day in remote villages; perhaps hundreds an hour in large city hospitals.

**Which method to use?**

The project reviewed four different packaging methods, each suitable in particular circumstances:

1. A simple plastic moulding machine to make a pill box with a snap lid from waste plastic. This was popular where sufficient scrap was available.

2. A hand-operated press that could produce:
   - paper blanks to be folded and glued into envelopes. We field tested this in Bhutan. It worked, technically, but was too labour-intensive for a country that suffers from labour shortage.
   - folded card blanks to make rectangular boxes.

3. Relayed paper tubes, suitable for very small scale dispensaries. These look more professional and resist crushing better than screws of paper.

4. Pottery jars with a cork or other form of bung. These were not widely popular, though they have much to commend them.

Finally, where nothing is suitable or available, a government or state health authority can produce, centrally, small self-sealing polythene bags, though it was felt that local production was to be preferred.

Table 1 lists various methods of packaging, with their respective initial and on-going costs and the number of packages that can be made daily. Recurrent costs of course are likely to vary according to local factors.

The choice of method depends on the number of prescriptions being handled each day and where it is decided to produce the packaging: at the district administrative centre or stores, or at the local health centre. To calculate the quantity of packaging needed, work out how much is required for one “essential drugs kit” and multiply this by the number of kits used.

The low-cost drug packaging project is supported by the WHO Action Programme on Essential Drugs. For further details write to:

**Appropriate Health Resources and Technology Action Group (AHRTAG)**

1 London Bridge St, London SE1 9SG UK

**UNISO 5/5** Baraboo Mahamper, Ring Road, Shyamoli, Dhaka, Bangladesh

* Jon Vogler is an engineer and development consultant

**Marvin Long is a project officer with AHRTAG**

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**Table 1**

<table>
<thead>
<tr>
<th>Kind of package</th>
<th>Equipment cost</th>
<th>Cost per package in US cents</th>
<th>Daily production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper envelope</td>
<td>280</td>
<td>.15</td>
<td>2000</td>
</tr>
<tr>
<td>Card box</td>
<td>330</td>
<td>.6</td>
<td>500</td>
</tr>
<tr>
<td>Plastic box</td>
<td>400</td>
<td>.9</td>
<td>500</td>
</tr>
<tr>
<td>Paper tube</td>
<td>60</td>
<td>1</td>
<td>150</td>
</tr>
<tr>
<td>Pottery blank</td>
<td>200</td>
<td>1.5</td>
<td>100</td>
</tr>
<tr>
<td>Pottery jar</td>
<td>200</td>
<td>1</td>
<td>150</td>
</tr>
</tbody>
</table>

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The rural dispensary. A mother with small children can be confused by multiple prescriptions.
RATIONAL USE

Helping family doctors to self-regulate their prescribing
(The 13-year Northern Ireland experience)

Hugh McGavock*

The visits of so-called “detail men”, representatives of pharmaceutical companies, have long been a feature in most physicians’ lives. Now health authorities and investigators in different parts of the world are experimenting with “academic detailing”, whereby professional colleagues visit doctors to discuss prescribing issues.

But none of this is new for Northern Ireland’s general practitioners. For over 13 years they have benefited from a unique prescribing feedback system, based on complete computerized records, which have been kept since 1966, of all GP prescriptions. The system provides them with both general and highly specific information about individual and national prescribing patterns, together with an opportunity each year to discuss their prescribing and current developments with a specially trained professional colleague.

The prescribing data is split into three levels: level one provides a summary showing the number of doctors in the partnership, the number of patients, the total costs of prescribing, the number of prescriptions per 100 patients, and the average costs of a prescription compared with the national average. Level two gives a summary of prescribing in a selection of the anatomical and therapeutic groups, the average cost per prescription, and the fraction each therapeutic group comprises of the practice’s total prescribing and drug costs, as compared with the national average. Level three is a comprehensive print-out (55×60 computer pages long) of all chemical entities prescribed in the month of survey, including formulation (tablets, mixtures, inhalers, etc.), strength (250mg, 500mg, quantity ordered and costs per prescription.

How is this information used?

Over the years, it has been found that two things maximize the impact of the prescribing feedback as a stimulant to prescribing self-regulation. First, it needs to be interpreted for each group of doctors (practice). Second, it should be discussed with the doctors at a face-to-face meeting.

Interpreting the prescribing data

This needs to be done before visiting a practice, and takes about one hour.

Level 1 - shows the practice characteristics, particularly whether the costs and frequency of prescribing are average, above or below the norm.

Level 2 - shows whether there is disproportionately high or low frequency of prescribing in one therapeutic group e.g. antibiotics or hypotensive. Table 1 shows the sorts of patterns which an experienced interpreter can find, and which should be discussed during the practice visit.

Level 3 - shows the use of individual drugs. Evidence can be found from Level 3 of uneconomical prescribing (e.g., using a branded drug at up to 20 times the cost of an equally good generic). Controlled drug prescribing (narcotics, etc.), can be checked. Superseded drug usage can be noted. The range of different drugs used by the doctors in each therapeutic group can be counted - an excessively wide range is probably undesirable.

Discussing the data with the doctors

Prescribing liaison visits are always made by a knowledgeable doctor who has studied the practice’s prescribing patterns thoroughly. He or she can therefore determine fairly precisely how the doctors use drugs and what needs to be discussed, for example where cost-effectiveness could be improved, where there are prima facie or relative risks, or where the data show circumstantial evidence that the doctors need to re-examine their present modus operandi. If their prescribing is unremarkable, they should be complimented and the visit used to discuss as many aspects of prescribing science as time permits.

The prescribing visitor’s job is to present the facts as he or she has interpreted them, allowing them to speak for themselves. General practitioners are usually intelligent pragmatists and quick to see the conclusions which should be drawn. Discussion is often vigorous, as the doctors usually wish to defend their prescribing habits. The visitor may have to employ every reserve of clinical pharmacology, logic and tact, in order to convince his or her GP colleagues of the need for modification of their prescribing in the interests of safety, efficacy and economy. The visit usually lasts about an hour, sometimes more, sometimes less. It is always voluntary and cordial, experience having shown that any other approach is counterproductive.

Table 1

<table>
<thead>
<tr>
<th>Example of use of comparative prescribing data feedback to GPs</th>
<th>Discussion topic</th>
<th>Should the GP:</th>
</tr>
</thead>
<tbody>
<tr>
<td>High on particular symptomatic treatments</td>
<td>Review policies re patient’s symptoms?</td>
<td></td>
</tr>
<tr>
<td>Low on insulin prescribing</td>
<td>Screen for glycosuria?</td>
<td></td>
</tr>
<tr>
<td>High on oral hypoglycaemic prescribing</td>
<td>Check whether patients are complying with their non-drug treatment?</td>
<td></td>
</tr>
<tr>
<td>High on NSAID (non-steroid anti-inflammatory drug) prescribing</td>
<td>1. Start practice policy on prescribing (or joint pain)? 2. Check haemoglobin of all on NSAID?</td>
<td></td>
</tr>
<tr>
<td>High on antibiotic prescribing</td>
<td>Audit criteria for antibiotic prescribing?</td>
<td></td>
</tr>
<tr>
<td>Low on antithrombin inhibitor prescribing</td>
<td>Measure peak expiratory flow rate every time he assembles a chest?</td>
<td></td>
</tr>
</tbody>
</table>

(There are many other useful comparisons to encourage rational prescribing through feedback. At present this requires a skilled reader, who could eventually be computerized.)

Table 2

<table>
<thead>
<tr>
<th>Year</th>
<th>Prescribing cost (% above national average)</th>
<th>Prescribing frequency (% above national average)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1984</td>
<td>39%</td>
<td>40%</td>
</tr>
<tr>
<td>1985</td>
<td>31%</td>
<td>29%</td>
</tr>
<tr>
<td>1986</td>
<td>5%</td>
<td>14%</td>
</tr>
</tbody>
</table>

Can this be done elsewhere?

Many part-time prescribing visitors, mostly from Great Britain, have now been taught these techniques during the last eight years and do not seem to have encountered any particular problems applying these principles to their own regions. Two full-time doctors were appointed in 1988 to two English regions, and they are attempting to reproduce the Northern Irish results. Additionally, a pharmaceuticist has been very successful in drug detailing to GPs in Leeds, a large industrial city in Northern England.

continued on page 5
RATIONAL USE

Towards a more rational use of antibiotics in acute respiratory infections in children

The primary objective of the WHO Programme for the Control of Acute Respiratory Infections (ARI) is to reduce the severity of ARI and mortality from these conditions, in particular pneumonia, in children. At present, correct case management is the main strategy to achieve this objective. The technical guidelines for implementation of the case management strategy discourage the indiscriminate use of antibiotics. The indications for antimicrobial treatment are very selective, being limited to children with specific signs of pneumonia (mainly fast breathing or chest indrawing), acute otitis media and suspected streptococcal pharyngitis (white exudate on the throat being a key sign). A non-antibiotics policy is strongly advocated for the great majority of ARI in children. The misuse of these drugs is so generalized that the Programme has adopted the reduction of the inappropriate use of antimicrobials (and also of cough and cold medicines) as an additional objective for the control of ARI in children.

Experience of programme implementation is still very recent, and insufficient to assess the impact on mortality. However, an immediate effect on the use of antibiotics at health facilities can be observed if training and supervision of health staff are undertaken seriously from the beginning of the programme. ARI programmes in two countries of the Western Pacific Region provide the most recent illustration of this kind of achievement.

1. Fiji

The ARI programme was initiated in 1988 in the Western Division of Fiji (population about 300,000). Pneumonia was the first cause of admission of children into the two hospitals of the Division. By September 1988 all staff from health centres and nursing stations had participated in clinical workshops at which the new national guidelines on case management of ARI in children were taught. At the beginning of October 1988 the programme was fully operational.

The data from the routine reporting system allowed a comparison of antibiotic prescription practices before and after the training of health staff. The results are summarized in the table. In the quarter July-September 1988, antibiotics were inappropriately prescribed for 43% of cases of mild ARI (cough and colds). After training this number was reduced to 24%.

Use of antibiotics for coughs and colds before and after the training of health staff in ARI
Case management, Western Division, Fiji

<table>
<thead>
<tr>
<th></th>
<th>Before training</th>
<th>After training</th>
</tr>
</thead>
<tbody>
<tr>
<td>(July-Sept 1988)</td>
<td>(Oct 88-March 89)</td>
<td></td>
</tr>
<tr>
<td>ARI cases &lt; total</td>
<td>3325</td>
<td>4620</td>
</tr>
<tr>
<td>- Number of cases</td>
<td>2827</td>
<td>4012</td>
</tr>
<tr>
<td>- Treated with antibiotics</td>
<td>1225 (43%)</td>
<td>978 (24%)</td>
</tr>
</tbody>
</table>

Although none of these cases should have received antibiotics, the reduction of almost 50% in the number of unwarranted prescriptions demonstrates that the training courses had a positive effect. It also indicates a need for close supervision of the trained personnel and for the training of newly recruited staff to further reduce the inappropriate use of antibiotics for the treatment of coughs and colds.

2. Vanuatu

An ARI programme was initiated in June 1988 in Tanna Island, Southern District (population about 21,000). All nurses, nurse aides and some selected aid-post workers from the peripheral health units and the rural hospital were trained to recognize and treat pneumonia in children at home with co-trimoxazole and to refer severe pneumonia cases to the rural hospital for treatment with injectable antibiotics (benzylpenicillin or chloramphenicol). Prior to 1988 antibiotics were overprescribed for practically all coughs and colds in children; oral penicillin was the most commonly used antibiotic. An important reduction in the use of this drug was observed after programme implementation. According to the pharmacy records at the rural hospital, which distributes the drugs to the peripheral health units, the number of packets of oral penicillin used in the island decreased from 433 000 in 1987 to 84 000 in 1989. On the other hand, the number of co-trimoxazole tablets used increased from 580 000 in 1987 to 980 000 in 1989. Although the antibiotics were used also for other conditions, and in adults, the factor that appeared to have had the most influence on their utilization before and after 1988 was the training and supervision of health staff in the case management of ARI.


(continued from p. 4)

Summary

In general, the role of the prescribing liaison visitor is to ensure that the doctors visited have learned what he or she wished them to learn, viz-a-vis cost-effectiveness, safety and science. It is also essential that this learning process is fulfilling and non-threatening, so that a future visit will be welcome. Finally, the visitor should have obtained a verbal or implied commitment to consider the need for modification, in the light of the facts presented.

For the future

Such is the quality and comprehensiveness of the database accumulated in the process of prescribing liaison scrutiny, that it appears good sense to make it the basis for GP drug utilization studies. This is about to happen in Belfast, at the Department of Therapeutics and Pharmacology, The Queen's University, in a research programme sponsored by the Government of Northern Ireland. The next five years should show how effective this approach can be in improving the rationality and the scientific precision of general practitioner prescribing.

* Further information about the Northern Ireland Prescribing Liaison Service may be obtained by writing to: Dr Hugh McCarville, Director, Drug Utilization Research Unit, Department of Therapeutics and Pharmacology, The Queen's University of Belfast, White's Medical Building, 97 Lisburn Road, Belfast BT9 7HL, UK.
GUIDING PRINCIPLES FOR THE IMPLEMENTATION OF BAMAKO-TYPE PROJECTS*

drawn up by participants of workshops at the international Study Conference in Community Financing in Primary Health Care

I. WORKSHOP ON THE POLICY FORMULATION AND IMPLIMENTATION AT THE NATIONAL LEVEL

This workshop was asked to define a number of issues of concern for policy makers when attempting to expand and sustain Bamako Initiative activities, in particular concerning national policy issues from the health sector. They are marked with the annotation (1).

National PHC policies

A published comprehensive national PHC policy is necessary within which health-care indicative policies can be set at the appropriate levels of action.

In this context, health-care indicative policies, if community financing initiatives are introduced, they cannot exist in isolation, but must be fully integrated into the PHC improvement programme.

Government commitment to sustain PHC

Governments should maintain or increase the level of inputs for PHC.

The quest for alternative forms of financing of PHC does not mean that governments should renounce their obligations to continue funding. Community financing schemes can only aggravate the level of government funding and not be a substitute.

National drug policies and essential drugs programmes

Policies

A national drug policy based on the concept of essential drugs should be established to provide a framework in which the role of the various sectors - public, private, local production - can be clearly defined, as will the way by which drugs will be procured, distributed, controlled, and used in the country.

Consensus with national developmental goals, a degree of self-sufficiency in the production of essential drugs should be achieved for sustainability.

Programme

An efficient essential drugs programme is a prerequisite for the implementation of any community financing scheme. Such a programme should include action on selection, distribution, control, and use so that a continuing supply of essential drugs at lowest cost is always available, and its efficiency is ensured.

An essential drugs list should be adopted and controlled in the community.

The government should, on a yearly basis, ensure foreign exchange for the purchase of essential drugs and other essential items (2).

Rational use

The rational use of drugs is a fully advocated, promoted and implemented. All drugs, and important, it should be recognized that they have a limited role in the improvement of health status and are too dangerous to be used irrationally and unnecessarily.

Increased demand for drugs and associated financial gain should not undermine public health goals.

Equity

The government should ensure that in any community financing scheme specific care should be given to the most vulnerable groups.

Women as a target group for PHC should be considered, and all children should be involved in decision-making on health care activities.

Financing

A number of funding initiatives should take into account other options apart from community financing and should be socially equitable, economically viable and sustainable.

Any financing mechanism should incorporate contributions from the sick and the healthy.

There should be community involvement in the determination of what costs should be covered. Policies on pricing and use of community funding should be established.

There should be an efficient use of existing resources at all levels of health care to maximize resources for PHC.

Governments should ensure that sufficient foreign exchange is made available, especially in mechanisms that exist for this purpose.

Decentralisation

Decentralisation of planning, financial, management, and administration is a necessary condition for success of community financing schemes, whereby clear roles of the various administrative levels, both central to local, to be defined.

The national government should respect the autonomy of intermediary levels in the management of revolving funds.

Management

A management system for the implementation and monitoring of PHC should be established in every case.

Communities should participate in the management of PHC.

Monitoring and evaluation

Mechanisms should be introduced for monitoring the overall effectiveness of PHC policies.

Incentive measures for monitoring financial performance to ensure efficiency and effectiveness should be included in monitoring mechanisms.

Special attention to training and supervision should be given in order to monitor actual practices followed.

Coordination

Coordination by the government of programmes and inputs from all partners, including local levels, should be instructed.

Implementation

Step by step implementation should be followed for the introduction of PHC.

There shall be flexibility in setting time-tables, in accordance with local conditions.

Donors

Foreign donors should always respect the local context and reality.

Donors should not attempt to use PHC and community participation as areas of unlimited experimentation (3).

Donors should ensure that sufficient national budget is available for costs of personnel engaged in the implementation of PHC (3).

Objective evaluations should be carried out by the government.

Donors should be prepared to provide assistance for a specific period of time and should not withdraw aid before proper conditions for sustainability are effective (3).

The workshop decided to focus its discussion on community and, therefore, the considerations and proposals given below are mainly related to this level.

a) Community level

There are five main considerations when working with the community to enable a control and monitoring of home prevention and care.

There would be taken and embodying targets or covering large areas too quickly should be avoided.

A follow-up support and supervision system should be developed. This has implications for the composition and role of the community.

A balance between prevention and cure should be maintained with the introduction of drugs delivered until the health committee in fully operational and the community is involved in preventive activities.

The health committee rather than the community health worker should be in charge of the health administration level, central to the community should be defined.

Community health control should be facilitated in a slow and careful manner through a logical sequence of steps. These may include a community study and forming an agreement between committees and government, in programmes which are essentially community programmes or of voluntary organizations and responsibilities.

In addition to these points made in this workshop, there are more general recommendations from the third workshop which are adopted.

Information, education and communication should be taken as factors to promote community participation, and genuine responsibility in the community.

Community health control should be facilitated in a slow and careful manner through a logical sequence of steps. These may include a community study and forming an agreement between committees and government, in programmes which are essentially community programmes or of voluntary organizations and responsibilities.

In addition to these points made in this workshop, there are more general recommendations from the third workshop which are adopted.

b) Planning

Before introducing a community health planning system, the government should consider the feasibility of the whole process. The government should provide incentives, equipment, and infrastructure, and ensure that the initiative is well established.

The feasibility of solving these problems should be evaluated with the help of action drawn up for resolution.

These problems may be categorized according to time-levels at which they may be solved.

Several options of community financing in PHC exist. These include prepaid village contributions, user fees, taxation, insurance and payment in kind. Any or a combination of these methods should be assessed and adopted by individual countries.

It has been recognized that the "Bamako Initiative" will be different in each country. This process has been planned. Discussions on the principles of the initiative, which will allow for the possibility of a generating time-scale and adaptation to national conditions, should continue.

II. WORKSHOP ON THE IMPLEMENTATION OF COMMUNITY LEVEL FINANCING SCHEMES

In addressing the operational problems of community financing schemes, the workshop recognized that there are two angles towards which the initiative could be looked at, namely those at the level of the peripheral health unit and those related to the community itself.

The workshop decided to focus its discussion on the community and, therefore, the considerations and proposals given below are mainly related to this level.

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A follow-up support and supervision system should be developed. This has implications for the composition and role of the community.

A balance between prevention and cure should be maintained with the introduction of drugs delivered until the health committee in fully operational and the community is involved in preventive activities.

The health committee rather than the community health worker should be in charge of the health administration level, central to the community should be defined.

Community health control should be facilitated in a slow and careful manner through a logical sequence of steps. These may include a community study and forming an agreement between committees and government, in programmes which are essentially community programmes or of voluntary organizations and responsibilities.

In addition to these points made in this workshop, there are more general recommendations from the third workshop which are adopted.

Information, education and communication should be taken as factors to promote community participation, and genuine responsibility in the community.

Community health control should be facilitated in a slow and careful manner through a logical sequence of steps. These may include a community study and forming an agreement between committees and government, in programmes which are essentially community programmes or of voluntary organizations and responsibilities.

In addition to these points made in this workshop, there are more general recommendations from the third workshop which are adopted.

b) Planning

Before introducing a community health planning system, the government should consider the feasibility of the whole process. The government should provide incentives, equipment, and infrastructure, and ensure that the initiative is well established.

The feasibility of solving these problems should be evaluated with the help of action drawn up for resolution.

These problems may be categorized according to time-levels at which they may be solved.

Several options of community financing in PHC exist. These include prepaid village contributions, user fees, taxation, insurance and payment in kind. Any or a combination of these methods should be assessed and adopted by individual countries.

It has been recognized that the "Bamako Initiative" will be different in each country. This process has been planned. Discussions on the principles of the initiative, which will allow for the possibility of a generating time-scale and adaptation to national conditions, should continue.

III. WORKSHOP ON THE IMPLEMENTATION OF COMMUNITY LEVEL RECOVERY SCHEMES

This workshop discussed specific considerations in community financing based on essential principles and made a number of concrete recommendations that have been added to those lists in the peripheral health unit and those related to the community itself (see above).

Note

* A number of additional guiding principles, drawn up at an informal NGO consultation, are given in Dr. Nocken's article on page 7.
HOW can Primary Health Care (PHC) be financed? This is a concern of all those responsible for health care, and particularly in many African countries where the economic situation is deteriorating. African Health Ministers meeting in Bamako, Mali, in September 1987, resolved to raise additional resources for PHC through community-managed revolving drug funds. This resolution became known as the "Bamako Initiative" and is supported by UNICEF and WHO. The aim was to improve maternal and child health (MCH) activities in rural areas by supplying to governments essential drugs, which would be sold at a profit. This was seen as a way of providing money for the purchase of more drugs as well as a source of funding for the implementation of PHC activities.

Non-governmental organizations (NGOs) such as the Christian Medical Commission (CMC), OXFAM, and Health Action International (HAI) reacted strongly to some of the implications of the Bamako Initiative, and shared their concerns with UNICEF on different occasions during 1989. The Freetown Study Conference, held in September 1989, was jointly organized by HAI (Europe) and UNICEF (New York) to address some of the key issues of concern in the sustaining of PHC. It brought together over 70 participants, with a variety of experience, ranging from those involved in community programmes to policy makers and academics. The main issues of concern addressed during the conference included:

- What is meant by the Bamako Initiative?
- Equity.
- Alternative forms of financing health care.
- Community participation.
- The necessity for foreign exchange and financial resources.
- The rational use of drugs.

These issues had been addressed in the comprehensive documentation prepared by HAI well in advance of the Conference. Plenary sessions enabled the expression of a variety of opinions on each of the issues. The afternoons were committed to working in groups to consider the following subjects:

a) issues of concern for policy makers;
b) operational problems in implementing community level financing schemes;
c) operational research necessary for those planning and implementing community level financing;
d) operational problems in community financing in Sierra Leone.

Provision was made for the interchange of findings from the groups, and recommendations were presented to the Conference at the final plenary session. However, there was not time to discuss the group work. The outcome of the Conference can best be summarized under the headings of each of the main concerns addressed.

What is meant by the Bamako Initiative?

The concept of the Bamako Initiative has undergone considerable change since 1987. While the original focus was on the sale of drugs to provide financing for PHC, this is no longer the case. According to the Bamako Initiative Management Unit (BIMU) of UNICEF, the Initiative should neither be seen as a cost recovery scheme, nor as an essential drugs programme. The definition is still unclear, as is the level at which it is aimed (community or district) but BIMU acknowledged that there was a need to rethink some of the aspects of the Bamako Initiative, and to modify the scale and the timing of its implementation. Further, it was agreed that UNICEF had no "blueprint" for implementation, but rather the "process" should be adapted to the needs and situation of each country. As far as BIMU is concerned, the Bamako Initiative can be described as a programme to revitalize PHC by encouraging social control and a regular supply of drugs.

Equity

The question as to whether or not the poor could pay for health care was of considerable concern. User charges (paying for treatment) may lead to a disproportionate decrease in the utilization of services by rural or poor communities. They may also cause particular hardship for those with chronic disease, and may result in a financial crisis for the family. Many programmes have exemptions for certain categories in the community, but research preceding the Freetown Conference demonstrated that the actual payment for treatment was only one of the considerations in deciding whether or not to visit a health centre. Hidden costs, such as the loss of wages, travel expenses, costs of "unacceptable" clothing and the expense of providing cooking utensils and food for someone hospitalized, as well as keeping the home kitchen going, all had a significant influence on the decision made. Such problems would be difficult to overcome unless the community leaders were involved in the management of financing PHC.

Alternative forms of financing health care

The original idea behind the Bamako Initiative was that patients would pay for the treatment they received (user charges). While many governments and NGOs programmes have used this system of cost recovery, it has caused considerable concern. One concern is that the time of requiring medical care is often the time when the patient is least able to pay for treatment. A second concern is that where recurrent costs, and particularly salaries, are dependent on treatment fees, the treatments prescribed may not always be rational. They could be exaggerated to increase income. Both of these problems could be overcome by using alternative forms of financing, such as prepayment and community insurance schemes, so that costs are shared between the healthy and the sick.

Community participation

International cooperation which emerged during research prior to the Conference, as well as those expressed at the Conference itself, were very varied. They ranged from the extremely limited view that PHC should be self-financing, to the more radical "health services participating with the community" view that PHC is a form of primary health care. After considerable and animated discussion, it was generally agreed that communities should be involved in the management of funds, and in deciding who should be given payments. It was realized that there was a need for training in accountability and management at the community level, that this would be a slow process.

The necessity for foreign exchange and financial resources

Most countries have problems with the purchase of drugs, because of the necessity of foreign exchange. Apparently, some national UNICEF programmes have exchanged foreign currency destined for other projects, for local currency to enable the health departments to make their drug purchases. Representatives of other donor agencies present made it clear that they would not make an exchange system available since this would provoke increased dependence of governments on external aid. Conference participants were concerned to know if UNICEF would supply drugs on a long-term basis, since a sudden increase in drug supplies will raise demands, which may be beyond the resources of the governments. In many countries the overwhelming problem is that of very high inflation rate with rapid devaluation.

The rational use of drugs

The emphasis put on drugs in the Bamako Initiative (their availability and role in cost recovery) could lead to over-consumption as well as a psychological dependence on and increased demand for drugs. This would go against the objectives of the Initiative - to revitalize PHC. Adequate training was seen to be essential in avoiding incorrect diagnosis and over-prescribing. The situation in Sierra Leone highlights a common problem, that although health professionals may be adhering to an essential drugs list, private pharmacies have many non-generic and non-essential drugs available to the public.
UPDATE Philippines committed to full implementation of the Generics Act

THE national drug policy outlined by President Corazon C. Aquino in 1987 was aimed at improved drug safety, vigorous promotion of national drug use, self-reliance in basic drug production and improved drug procurement.

The announcement of the policy was followed by a number of regulatory steps: President Aquino signed two executive orders amending the legislation, strengthening the functions of the Bureau of Food and Drugs (BFAD) and adopting measures such as banning unsafe drugs. In December 1987 an administrative order was issued covering the advertising of prescription drugs, and prohibiting samples of prescription drugs to the public. The order also required that the generic name appear larger than the size of the brand name on labels. In August 1988, the Senate and the House of Representatives passed the Generics Bill, which was signed into law in September by President Aquino.

The aim of the Generics Act is:

- to promote, regulate and ensure the production of an adequate supply, distribution, use and acceptance of drugs and medicines identified by their generic names;
- to promote, encourage and require the use of generic terminology in the importation, manufacture, distribution, marketing, advertising and promotion, prescription and dispensing of drugs;
- to ensure the adequate supply of drugs with generic names at the lowest possible cost and to ensure that they are available free of charge to indigent patients;
- to encourage the extensive use of drugs with generic names through a national system of procurement and distribution;
- to emphasize the scientific basis for the use of drugs, in order that health professionals may become aware and cognizant of their therapeutic effectiveness and,.
- to promote drug safety by minimizing duplication in medications and/or use of drugs with potentially adverse drug interactions.

As the national drug policy is a major government programme, the Secretary of Health has created an organizational structure headed by an Assistant Secretary who reports directly to him. The Assistant Secretary is assisted by an NDP Management Committee which oversees the implementation of the policy. A Generics Act Implementation Programme Manager is responsible for supervising the number of monitoring units, communicating with the public and raising with the NDO the other relevant bodies of the National Drug Committee, composed of pharmacologists, pharmacists and clinicians. It is responsible for the preparation of the Philippine National Drug Formulary (PNDF) Essential Drugs List and for recommending to the Bureau of Food and Drugs (BFAD) the drugs to be deleted. A number of ad hoc committees and groups, such as the Industry Liaison Group, are also coordinated by the Management Committee.

Drug registration

Revised rules and regulations on the registration of pharmaceutical products have been issued. New criteria are: quality, safety, efficacy or therapeutic value.

An extensive review of all drugs on the market started in 1988. On the recommendation of the National Drug Committee, the Bureau of Food and Drugs has initiated the process of delisting drugs that are banned, withdrawn or severely restricted in other countries but still on sale in the Philippines. Of the 265 identified, it has ordered the withdrawal of 79 products containing oral protoclytic enzymes considered to be ineffective, and dipyrone, which is implicated in some cases of severe and sometimes fatal bone marrow depression. The order has been questioned by court by some companies and while the case is pending, the products are still being marketed. Other companies agreed to withdraw voluntarily 128 products. The problem for the BFAD is that it does not have sufficient power to enforce its decisions. Its administrative orders can be easily contested in court which leads to delays in implementation.

Selection

The National Drug Committee (NDC) has prepared the first volume of the National Drug Formulary. A second volume, containing monographs for all the drugs on the core list and brief write-ups on the complementary drugs, will be issued in 1990. The PNDF Volume I consists of a list of drugs that are of acceptable safety and efficacy, that serve the needs of the country in the prevention, diagnosis, treatment of diseases, and maintenance of health. The Formulary is divided into a core list (297 active ingredients) and a complementary list (263 active ingredients).

The Philippine National Drug Formulary is mandatory for government procurement. It serves as a guide for the private doctors in their prescribing and for the industry in the selection of drugs to manufacture. 36 drugs in the NDF are not yet available in the market.

Educational campaigns on how to use the Formulary took place in 1989, but resources are insufficient to disseminate it widely and to promote its use. It is doubtful whether without intensive training and incentives, private doctors will follow the Formulary. The Drug Association of the Philippines (DAP) has made known its opposition to the extension of the use of the Formulary in the private sector.

Shorter formularies based on the PNDF have also been developed for primary, secondary and tertiary health care levels in the public sector.

Supply

In the Department of Health drug procurement cost-saving measures have resulted in 20% savings, allowing for additional purchases of medicines. Procurement is presently based on the PNDF, and the cost of medications, procurement methods and lead time need to be improved. Distributors and manufacturers will have to find major areas where improvements are needed to increase the coverage of the population, mainly the poor, by essential drugs.

An extensive study was begun in 1988 by the DOH to look into the cooperation of the United Nations Industrial Development Organization (UNIDO) on the development of the pharmaceutical industry. It identified viable lines of pharmaceutical intermediates or active ingredients and how they can be integrated. In-depth feasibility studies on proposals made in the report will be undertaken. Eventually the government and investors will be encouraged to develop and establish production capacity in important product lines. As part of an integrated medical plants research and development programme, five herbal pharmaceutical preparations for common ailments have been prepared in tablet form for bulk production. A licence was issued to a Filipino company to manufacture them for the private sector. The Department of Health has established four pharmaceutical processing plants in different regions for public sector needs.

Quality assurance

The Bureau of Food and Drugs, which is responsible for quality assurance and drug analysis, has been reorganized; new modern facilities and equipment donate by Japan, comparable to those in developed countries, are now in operation. The Bureau consists of a quality control laboratory, an inspection section, and a small drug information unit. The staff has been increased and a training and strengthening programme is underway to upgrade the capabilities of the staff. With the support of JICA (Japanese International Cooperation Agency) and UNDP/WHO (Asian Programme to Control Malaria and Malaria Vectors), new "minimum requirements for license to operate" drug establishments have been issued. In 1989, all the 348 drug manufacturers were inspected by BFD. 22% of the major manufacturers were found with deficiencies in terms of Good Manufacturing Practices (GMP). Furthermore, the operations were suspended pending compliance with requirements.
Essential Drugs Monitor

**National Drug Policy**

Drug use

The Generics Act was developed as the main tool to rationalize the use of drugs in the private and public sectors. The Act contains a number of provisions, and guidelines to implement these have been promulgated and published:

- use of generic terminology in all transactions involving drugs in both public and the private sectors; the level of compliance in the DOH as of December 1989 was around 90%;
- mandatory use of the generic names on labels and advertisements: the deadline was postponed to December 1989. According to surveys from January 1990, the pharmaceutical industry is completing the redesign of product labels. BFAD has approved all new generic labels submitted by companies for single active ingredient products. Some companies have complied completely with the new requirements and it seems that at least 50% of the packages as of January 1989 already meet the new regulations; overlabeling with stickers is allowed in the meantime;
- for health professionals in the private sector, full implementation of the law with sanctions and penalties has just begun (1,1,1990). The new Philippine Medical Association Board has publicly announced its support to the Generics Act but a number of doctors are still opposed to the new law and to the use of generic names, although the brand names can be put into brackets on their prescriptions;

- pharmacists, in this stage of implementation, are favourable to the law but seem to be encountering practical problems with generic dispensing as neither they nor the pharmacy aids arc yet familiar with the system and often do not know the generic equivalents. The DOH cross-referenced index of generic and brand names will be published in April 1990.

In order bring about public understanding of the Generics Act and a change attitude towards drugs, an extensive information and education campaign on generics has been launched using posters and the media. NGOs are assisting in this dissemination of information and training throughout the country, Volunteer consultants (from the main medical disciplines) give workshops and conferences to the public. Although enthusiasm and commitment among trainers are great, it is unrealistic to expect that they can continue to work at this intensity for a long time. The impact of the new policy in terms of availability and accessibility of drugs needs to be quickly seen by the population, otherwise it risks failure through public disillusion and "turn out" by the implementers.

**Prices**

Although people can select cheaper drugs, prices have increased in the private sector by much as 20% in recent months. According to certain observers this resulted from an increase in advertising and promotion in response to the perceived "threat" that the Generics Act represents.

There is no price control, so manufacturers fix the prices according to what the market can bear. Wholesale and pharmacists also fix their own margins, although these appear to be rather constant. The new policy is based on price competition but it is not clear what incentives there are for pharmacists to sell the cheapest product if their profit is based on a fixed margin. A system for monitoring the prices of a selected number of drugs is being implemented in the Department of Health.

An agreement has been reached between the DOH and the drug industry on a price-freeze for three months and a 10% decrease in prices such as the monitoring of the implementation of the Generics Act. This is done through DOH personnel and volunteer monitors from NGOs, consumer groups and public organizations. Compliance of doctors to the municipal level, has been designated and trained, and a Generics Act implementation monitoring manual has been produced.

A system for monitoring drug prices and availability of essential drugs in various outlets nationwide is being developed with WHO support. Quantitative data will be identified in order to assess the impact of the Philippine National Drug Policy, including the Generics Act, on availability, affordability, accessibility and use of drugs.

**In conclusion:**

In less than two years, an impressive number of steps have been taken to develop a comprehensive and rational drug policy. In essence the policy is trying to create a pharmaceutical market similar to the market of other goods, i.e. well informed consumers who are able to choose, a demand oriented market, and a minimum government role in setting rules and regulations. Price regulation on drugs entering the market except quality, safety and efficacy (a new rule clause), as it is assumed that with an informed patient guided by competent professionals, the universal drugs will disappear from sale. There is no price control as it is assumed that price competition will be enough to lower prices.

The extent to which prescribers, pharmacists and patients will change their behavior, will, therefore, be a key factor of the success of the policy. The majority of brand name products, heavy, although regulated promotion, unchanged margins and price setting mechanisms, remains difficult to assess.

The impact of these policies on drug use will depend on continuous efforts by the Department of Health and dialogue with the pharmaceutical industry. Although implementation has only just begun, progress can already been seen. There has been an increase in the number of drug issues by prescribers, health professionals and the public in general. There has been opposition to the new policy and the room for manoeuvre of the Department of Health is very limited.

In the public sector, much remains to be done to rationalize drug supplies and use. Although financial resources are scarce, more savings can be achieved along the chain from manufacturer to consumer. An integrated approach or increased coordination among the units involved with drugs in the Department of Health and in the Regional Health Offices needs to be further developed. This will be a major undertaking for the Government of the Philippines as the public sector caters to at least 50% of the population, those who have no other access to drugs due to lack of financial resources.

In the next two years, the WHO Action Programme on Essential Drugs will support the Government of the Philippines in the implementation of activities covering selection, production, drug use, prices and monitoring. Training and operational research in economics (drug price monitoring), policy (impact of the new policy) and supply (implementation of the drug requirements) are also important components of the proposed plan.
TANZANIA: Government considers national drug policy

DRAWING UP THE POLICY

A national drug policy for Tanzania has been under consideration and development for a number of years. Its legislative base to date has been the Pharmaceuticals and Poisons Act, 1978 (a revised version is awaiting formal approval). In addition a national list of essential drugs was adopted in 1981. After several years of extensive consultations this has just been updated.

Many other critical elements of a national drug policy have been developed over the last ten years, some within the context of the national essential drugs programme. The Tanzanian Government therefore decided that the time was right to begin work on a comprehensive national drug policy. Accordingly, a group of senior Ministry of Health staff, assisted by a small team of experts from DANDIDA and WHO, began the initial process of formulating proposals for a national drug policy in mid-1989.

In August 1989 they were joined by some 30 experts representing all aspects of the drug sector — in a three day intensive workshop to review the national drug sector, and discuss problems, constraints and future strategies. The essence of their deliberations and conclusions was then incorporated into a draft policy document now under consideration by the Government.

The overall goal of the new policy is to make available to Tanzanians at all times the "essential pharmaceutical products which are of quality, proven effectiveness and acceptable safety at a price that the individual and the community can afford". In addition, the policy aims at "securing the use of essential products, through better information, prescription and compliance"; "developing and supporting the national pharmaceutical industries"; and "using the potential of traditional medicines of acceptable safety with this aid to and lopaphyllic medicines, when such treatment is acceptable to the individual".

DRUG AVAILABILITY

Selection

The policy calls for careful selection, procurement, distribution and quality assurance. Selection will be in accordance with the concept of essential drugs and will be based on specific criteria, such as disease pattern; safety, efficacy and quality; cost and therapeutic advantage. Drugs will be selected and distributed as generic products. All registered drugs will bear their generic name (NN) even when available under brand name only. The policy aims at keeping the number of drugs on the market reasonably small and will allow for a maximum of two brand name products for each drug on the national drug list. The pharmaceutical legislation and regulations will reflect the national drug policy.

Procurement

The procurement policy aims at securing both the necessary quantity and quality of pharmaceutical products, according to the national drug list, which will meet the medical needs of the majority of the population. Essential drugs will be given priority in procurement planning.

Priority will be given to local manufacturers and, where feasible, to regional manufacturers before considering overseas suppliers. The policy aims at coordinating and consolidating national procurement for both the public and the private sector and at keeping the prices for imports of both raw materials and finished goods at the lowest level of international price levels. The long-term objective is to achieve optimal self-reliance through a shift from importation to local production.

Distribution

The aim is to ensure that essential drugs are always available to those who need them and are distributed in a cost-effective manner. The sale in pharmacies of essential drugs under generic name at low cost will be promoted. Storage, inventory control and quality surveillance facilities will be modernised to meet the requirements of an effective distribution system.

Quality assurance

The aim is to ensure that drugs reaching the patient are safe, effective and of high quality. The quality assurance system will cover managerial, technical and legal aspects, and will include a drug inspection system and sample testing in national drug control laboratories.

RATIONAL DRUG USE

Education and training

The education and training of health workers will be a major strategy to achieve rational drug use. The essential drugs concept and its practical application will be included in the curriculum of all health workers, while continuing education will emphasise the importance of rational drug use. Standard treatment regimens for common diseases will be prepared for use by all health workers. Training in drug research, evaluation, control and distribution, and drug policy management will also be emphasised.

Drug information

The aim of the policy is to ensure that unbiased information about the correct handling and use of drugs is available to health workers at all levels and to the end user. Independent and reliable, scientifically based literature aiming at rational prescribing and dispensing will be disseminated to health workers and units at all levels, including hospital pharmaceutical and superintendents. A national formulary will be developed to provide information on essential drugs and standard treatment schedules. Information about drugs, appropriate drug use, and alternatives to drug use will be disseminated to the public and to the individual end user.

Control of misuse

Hospital pharmaceutical and supplies committees will be made operational in all hospitals and will be responsible for estimating drug requirements, the drug budget, monitoring standard treatment schedules and all matters relating to the rational use of pharmaceuticals.

Advertising and promotion

Ethical criteria for drug advertising and promotion will be established and be legally binding.

NATIONAL PHARMACEUTICAL PRODUCTION

The aim is to promote the national pharmaceutical industry, in the short term so that it becomes self-sufficient in the production of all essential raw materials. The policy also aims at increasing national capability in packaging, bottling, labelling and production of all pharmaceuticals. The long-term policy is to support the gradual development of self-sufficiency in the production of intermediaries and raw materials.

National production will aim to produce essential drugs in sufficient quantities to meet the national demand, without unnecessary competition and using the most economical methods. Prior to achieving self-sufficiency for all the essential drugs needed, local pharmaceutical industries will use their capacity to produce a limited number of vital drugs to satisfy demand.

A pricing policy for locally produced drugs will aim at keeping prices as low as possible and at levels which individuals or institutions can afford. Price discrimination in favour of vital and essential drugs from the national drug industry will be permitted.

TRADITIONAL MEDICINES

The goal is to promote the use of traditional medicines in organized health care along the lines of primary health care. Medically and economically justified medicines will be given priority in research and production. The long-term aim of research will primarily focus on the identification of traditional remedies, the screening of effective preparations and assessing product safety. The long-term objective is to assess the efficacy of the drugs and to develop appropriate methodology and technology for industrial production.
African Regional Seminar on National Drug Policies

THE implementation of a comprehensive national drug policy, favouring the use of essential drugs by generic name, the adoption of standardized treatment schedules, and the establishment of local production capacity, was the main priority to improve pharmacetical availability, concluded participants at an African regional workshop on national drug policies.

The workshop - organized in Benin by WHO's Regional Office for Africa - gave decision-makers and senior managers from Benin, Burkina-Faso, Burundi, Cameroon, Congo, Guinea, Niger, Togo and Zaire, the opportunity to interact and to work together with WHO trainers. Participants used training modules developed by the Action Programme on Essential Drugs to examine the various components of a drug policy: supply system organization; drug selection; procurement strategies and planning; drug requirements; financing and systematic cost-reduction; quality assurance, and proper drug use.

Each session was structured to meet the group's needs, combining presentations, practical work and discussions. Participants were helped to analyze the pharmaceutical sector in the countries represented, and provided with a systematic view of the various components of a national drug policy, based on primary health care and the essential drugs concept. In addition to the technical instruction a major aim was to share experience and indicate useful approaches to creating and implementing drug policies appropriate to each country situation.

Was the exercise worth the time and travel? Emphatically yes, enthused the group at the closing session, with the qualification that the time available (four days) was too short to cover so much technical ground. A future workshop should be at least a full week, they recommended.

Indonesia opts for generics

All health professionals in government health facilities must now prescribe generic drugs for both in- and out-patients, under a new ministerial regulation (OES Men.Kes/Per/ 1/1994). At the hospital level, the hospital director with the help of a pharmaceutical and therapeutic committee, controls generic prescribing, while at the health centre level, the head of the provincial health office has responsibility.

Price control

The generic drugs provided are based on the National Essential Drug List, with price decided and controlled by the Government. Improvements in generic drug production and distribution are being made to ensure the availability of the drugs at every level.

Generic labelling

Under the new regulation the generic name (GIN) must appear on the drug label, together with specific generic logo. In other respects labels of generic drugs follow the general rules valid for all registered pharmaceutical products.

Generic dispensing

Under a decree issued by the Director General for Drug and Food Control, all pharmacies in the country shall provide the generic drugs stated in their service pharmacy list, also based on the National Essential Drug List.
NEWSDESK

New International Network for Rational Use of Drugs

The International Network for the Rational Use of Drugs (INRUD) is a new cooperative organization of health professionals, administrators and researchers who develop countries with whom to undertake innovative programmes to improve the use of pharmaceuticals. INRUD's goal is to provide a way to communicate, exchange information and ideas, coordinate research projects, develop human resources, and link projects with interested donors.

Some characteristics of the INRUD approach are:

- interdisciplinary focus, linking clinical and social sciences;
- cooperation among ministries of health, universities, voluntary organizations and other health care providers;
- activities initiated from within developing countries;
- strong emphasis on the behavioural aspects of proper health care;
- an active orientation, emphasizing interventions in existing health settings;

a commitment to building local capability for research.

The Network is composed of individual country groups and a central support group staffed by representatives of the World Health Organization, the United Nations Children's Fund, and the Rockefeller Foundation.

A Regional centre is planned at a later stage. Each country group is a small team of four to eight people, representing multiple professional disciplines and organizations, who share common interests in promoting rational drug use.

Because of funding limitations membership is limited to the first two years. The Network will be expanded as funds become available. The program is currently being evaluated to assess its effectiveness and efficiency.

Opening a course on the management of drug supply in Kumasi on 30 October 1989, the WHO's Richard Laing, noted that drugs are a substantial part of health programmes, yet the use of drugs is not well understood. Proper drug use and storage is critical to the effectiveness of health programmes.

The WHO Action Programme on Essential Drugs Major impact for carrying out the first two years' activities has been given by the Non Charitable Trusts, with additional seed support offered by SIDA. A variety of funding mechanisms will be sought to support individual activities and country-based programmes.

For additional information about the Network contact: Dr Richard Laing, Network Coordinator, INRUD, 65 Allandale Road, Boston, Mass. 02130, USA.

Ghana's Secretary for Health attacks drug wastage

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Switzerland: call for drug export control

The groups called on Swiss authorities to control the export of drugs stating that nearly one-third of Swiss drugs sold in the Swiss market come from the third world. The survey revealed that 38% of all Swiss drugs sold in the Swiss market come from the third world. The survey also revealed that some health care providers are already making efforts to supply a responsible assortment of drugs to the Third World.
Drug Quantification: Interregional Training Course

Many countries will require drug needs estimation in 1990 as a basis for budgeting and procurement at the start of their national essential drugs programmes, to provide estimates for possible donor funding, to encourage thinking about standard drug treatments, or to promote cost-consciousness in the health-care system. Clearly establishing the quantitative basis for estimating drug requirements and delineating the likely benefits to the health-care system, strengthens the justification for allocation of the economic resources needed to provide essential drugs.

In the light of these needs the WHO has established a training course on drug quantification methodologies in March 1990. Its goal is to assist national authorities in training pharmacists who will form focal points in the practical development of drug needs estimation on a country-by-country basis in their own countries. Participants from Bangladesh, Indonesia, Myanmar, Nepal, Philippines, Sri Lanka, Thailand, and Viet Nam met in Bangkok to spend five days exchanging experience, working with different methodologies and tools, and gaining hands-on computer experience, using their own country morbidity and drug consumption data.

The Action Programme’s Manual on Estimating Drug Requirements (see EDM-7), now available in English, French and Spanish, provided the practical and theoretical framework for the workshop. Experience gained from this and future courses will be incorporated into a second edition of the Manual planned for 1991.

WHO’s Model List Revised

The WHO Expert Committee on the Use of Essential Drugs, with members from Australia, Colombia, China, Nigeria, Thailand, USA and USSR, met in Geneva from 27 November to 2 December 1989. The full report of the meeting, containing the sixth revision of the model list, will appear shortly in the WHO Technical Report Series. A revised model list of essential drugs the Committee made the following changes:
• Opioids: tramadol, dexamfetamine,
• Narcotics: ephedrine, hydrocortisone, metronidazole, loratadine, oral ampicillin.
• Additional: potassium ferric hexacyanoferrate (FeH3O8) (Prussian blue), albendazole, amoxicillin, rifampicin + isoniazid, diethylamino, diacarbazine, pegylated, captopril, sodium sulfide, mulpirin, benzyol peroxide, metformin, paraaminobenzenic acid, SPP T, benzophenone, lidocaine, hydrogen peroxide, measeat-mumps-rubella vaccine, iodinated oil.

British National Formulary Joint Scholarship

The 1990 Scholarship has been awarded to Ms Rose Shija, who is currently Drug Information Officer for the Tanzania Pharmacy Board. The Scholarship is offered jointly by the British Medical Association and the Royal Pharmaceutical Society of Great Britain, the publishers of the British National Formulary. The student will be given a 6 month period of work experience as an integrated member of the editorial staff of the BNF at the headquarters of the Royal Pharmaceutical Society, commenced in February 1990. The Scholarship also carries a grant of £4500 towards travel and subsistence costs.

In making the award the Adjudicating Panel took into account the contribution that the applicant could be expected to make in the development of a national formulary and, hence, applicants were required to furnish appropriate evidence of support from their governments. As a condition of her scholarship Ms Shija will be working on a revision of the existing Tanzania formulary, will be engaged in reviews of subsequent editions, will liaise with neighbouring countries and exchange views on the formulary, and will continue to disseminate information on the formulary drugs within Tanzania.
Top level PTA meetings in Nairobi

HARMONIZING regulatory systems, fiscal reform, infrastructure and the bulk purchase of raw materials - all aimed at improving drug availability - were subjects high on the agenda of two milestone PTA meetings in Nairobi. Experts from 16 PTA member countries from 27 to 29 October 1995 to review experience and prepare recommendations that a subsequent meeting of ministers of health and finance policymakers used as the basis for a far-reaching plan of action.

PTA EXPERTS LEARNING FROM THE PAST, PLANNING FOR THE FUTURE

"Pharmaceuticals can be likened to products such as food," said Mr Mwaikibaki, Kenya's Minister of Health in his opening address. "They have to be made available at affordable prices for the population." Support was needed to meet the PTA objectives of self-reliance and self-sufficiency. The pharmaceutical industry in the PTA was capable of supplying over 70% of Member States' requirements but it was currently working at below 60% capacity. Although supply-demand studies for the PTA pharmaceutical trade potential of US$100 million, this was hampered by national policies that restricted free flow trade. The pharmaceutical action plan developed by the PTA in 1994 had given priority to the restructuring of industry, facilitation of trade, production of essential drugs, and cooperation in technology and know-how. It was now time, said Mr Mwaikibaki, to examine together how to achieve these aims.

The discussions which followed focused on five main areas:

• procurement;
• tariff and non-tariff barriers;
• the role of the donor agencies;
• quality and regulatory control;
• production and technology transfer.

Procurement

Local producers were currently supplying only a small part of PTA essential drugs needs, emphasised speakers. Even when sufficient local capacity and technical know-how existed, most drugs were still purchased from overseas suppliers. Price was often the deciding factor but quality and reliability, for example, also needed to be considered. Lack of information among members about pharmaceutical products produced within the PTA was of major concern. There was also an erroneous belief in some quarters that PTA-produced pharmaceuticals were inferior to imported products. Many local producers were hampered by delays in obtaining import licences for raw materials. Now that they have to pay import duties on raw materials when finished products were duty-free. Participants recommended a number of ways in which these problems could be tackled. Information exchange could be improved using a channel the PTA Secretariat in collaboration with WHO. Specifically the Secretariat should provide a directory of PTA supply sources with comprehensive data on product range, capacities, prices and training programmes for procurement officers. WHO, UNICEF, and other international agencies were asked to provide PTA members with lists of reliable generic producers who should be encouraged to buy from local manufacturers and that this should be written into national donor agreements. Public confidence in locally produced drugs could be enhanced by the WHO certification scheme which should be implemented by all PTA countries. This would help ensure good quality and dispel any doubts that national and international buying agencies and institutions might have concerning PTA-produced drugs.

Tariff and non-tariff barriers

Indiscriminate imports of finished pharmaceutical products, coupled with tariff and non-tariff barriers against local producers, were common problems throughout the PTA region. Despite the availability of locally produced products, were common problems throughout the PTA region, despite the availability of locally produced products of equal quality. As a result local manufacturers operated at relatively low capacity levels and this created high unit costs. Such constraints on local pharmaceutical production adversely affected national economies, and entailed unnecessarily high foreign exchange expenditure which could be cut by using local products for essential items that are unobtainable locally.

The meeting recommended that urgent steps be taken by Member States to negotiate and ratify the PTA agreement. Pharmaceutical raw materials used in the manufacture of essential drugs should not be allowed to be traded within the region and this has created high unit costs. Such constraints on local pharmaceutical production adversely affected national economies, and entailed unnecessarily high foreign exchange expenditure which could be cut by using local products for essential items that are unobtainable locally.

Further information about the PTA may be obtained by writing to: PTA Secretariat, Ndeke House, Naivasha, P.O. Box 4027, Nairobi, Kenya. Tel: 021 220 7272, 220 7273; Telex PTAZA 04027. Telegram PTAZA.

Role of donor agencies

Donor agencies had provided substantial support for essential drugs - often procured in the form of kits - but had indicated that they might begin to phase this out in the early nineties. Countries should then take over a good part of the programme themselves, a process which Zambia had already started by distributing Medical Stores Ltd. kits alongside the SIDA and Dutch-supplied kits. Participants pointed out that all the donor agencies/governments normally procured from European pharmaceutical manufacturers, although Kenya, Zimbabwe and Lesotho had the technical know-how and the capacity to supply some of the kits.

Three main recommendations emerged from the discussions: aid agencies and donor governments could assist in establishing national kit-packaging facilities; they could provide aid either in the form of appropriate raw materials or as funds to buy raw materials for local manufacture; and they could purchase local finished pharmaceutical products, thereby helping to sustain and develop local production capacity.

Quality assurance and drug regulation

Participants highlighted the importance of impeccable production practices and quality control. These necessitated adequate premises and equipment, staff training, and good industrial hygiene. With these goals, the meeting recommended that each Member State adopt a national drug policy. A harmonized drug regulatory and registration system would facilitate movement of locally produced essential drugs among members and ensure availability about what was produced. A medium sized company might not have the marketing resources or budget to promote its products outside its own country. For intercountry trade more exchange of market information was required. Producers needed to have a better idea of buyers' needs and what competition they were facing.

In order to improve the situation it was recommended that producers should coordinate their purchase of raw materials and rationalize their product range to take advantage of economies of scale. Close dialogue between health officials, policy makers and the pharmaceutical producers was also needed. Information on the pharmaceutical industry in PTA Member States should be collected and published. This material could also serve as a trade information base for products and services available in the member countries. In addition, WHO was requested to supply indications of raw material prices for disinfection by the Secretariat.

Rationalizing production

At the present time PTA manufacturers buy their raw materials independently, whereas combined orders could probably reduce prices by some 20%. Participants pointed out that in some countries several companies produced the same product range. For example in Kenya there are 15 companies producing the same 5000 essential drugs. It might be possible for companies to join together in apportioning different products to different firms thus improving their individual market share and effecting economies of scale.

One of the reasons the Member States did not buy much from each other, said participants, was lack of information about what was produced. The PTA Secretariat should be organized by the PTA Secretariat, and Member States could consider mutual recognition of each other's registrations. Quality control laboratories would also need to be set up or strengthened. In the meantime, those without laboratories should work with Member States which had the capacity, so that external independent checks could be performed.

Good Manufacturing Practices (GMP) should be supported through strengthening and training of effective drug production inspectors and the implementation of WHO's Certification Scheme on the Quality of Pharmaceutical Products moving in International Commerce. Another practical recommendation was the establishment of a regional drug inspection team, based at the PTA Secretariat, to handle GMP audit and assist Member States in working out methodologies and standards.

The importance of traditional medicine was stressed in view of the large number of people who depended upon its use. There was a need to encourage cooperation between research institutions and traditional healers.

Technology transfer

Improved technology and know-how were considered essential to create mutual trust in the quality and acceptability of locally manufactured products. Many suggestions to facilitate technology transfer were made: for example, know-how could be directly purchased; contract manufacturing for multinational companies or equity participation could lead to technology transfer; staff could be sent for training to more advanced facilities; and countries in the developed world could be asked for assistance.

MINISTERS OF HEALTH PREPARE OPERATIONAL PLAN

The expert discussions were followed by a PTA health ministers' summit meeting from 1-2 October. Ministers and delegates from Burundi, Comoros, Djibouti, Ethiopia, Kenya, Lesotho, Malawi, Mozambique, Rwanda, Somalia, Swaziland, Tanzania, Uganda, Zambia and Zimbabwe, together with representatives of bilateral and international health and development agencies, reviewed the recommendations of the earlier meeting and in wide-ranging discussions determined how these could be translated into viable operational programmes.

PTA Secretary-General, Mr Bas Ntovete, commenting on the timeliness of the meeting, said: "It is becoming imperative to establish rationalized and harmonized PTA drug policies and a self-generating and competitive PTA pharmaceutical industrial complex if we are to maintain acceptable health standards for our people and save billions of foreign exchange. In the current international economic environment", he continued, "characterized by the downward trend in the overall performance of our economies, we cannot afford this massive outflow of resources. We can and should change the situation. And we have the capacity and scope to transform the production, management and utilization of essential drugs and pharmaceuticals for the betterment of the health standards of the people of Eastern and Southern Africa".

HEADS OF STATE RATIFY AGREEMENT

A meeting of Heads of State of the PTA countries in November 1989 ratified all the recommendations made and agreed by the Ministers of Health.

THE ROLE OF WHO

Who has been invited by the PTA to continue its technical assistance, particularly in areas such as Good Manufacturing Practice (GMP), quality assurance, good procurement principles, market information on raw materials and drug supply management. WHO has set up an informal group of experts in production and quality assurance. Their first priority is to assist PTA efforts to become more self-sufficient in basic essential drugs. By the year 2000 it is not beyond the bounds of possibility that PTA states will be supplying members with up to 90% of their needs of 40-50 basic essential drugs through domestic production.

This book provides a wide-ranging analysis of what can be done to reduce the misuse of psychoactive drugs without compromising appreciation for their therapeutic and medicolegal uses. It is based on the need to give physicians guidelines for deciding to whom, what to prescribe, how much, and for how long.


The latest in a series of MSF publications aimed at providing doctors, nurses and health auxiliaries working in the field with practical guidance in prescribing and medicine for adults and children. The second part covers the organization and management of a pharmacy, with a particularly helpful chapter on rational prescribing, reducing drug costs and enhancing compliance. A final chapter describes the contents and use of the New Emergency Health Kit.

This publication is a model of its kind: well laid out, easy to use, a convenient size and a mine of useful practical information. Other recent publications issued by MSF include: Gestes Medico-chirurgicaux en Situation d'Isolation et Techniques chirurgicales de base. A second edition of the Clinical Guidelines: Diagnostic and Treatment Manual (EDM-4) has also just been published. Available in English, French and Spanish from Médecins sans Frontières, 8 rue Saint-Sabin, 75011 Paris, France.


This training manual is the result of a two-year effort to provide training material for prescribers, both medical and paramedical, in Sudan. The book provides detailed prescribing information for all frequent diagnoses and complaints, and is based on the WHO Essential Drugs Approach. It contains sections on the national drug policy, the concept of essential drugs, registration of drugs, general principles of rational prescribing, management of health facilities, the health information system, health education and public information. The section on rational prescribing includes very useful tables on the use of drugs in pregnancy and lactation, paediatric dosages, prescribing for the elderly and patients with liver or renal disease, and on frequent drug interactions. Annexes include the national list of essential drugs per level of care and information on drug prices.

The book contains a wealth of information and is very useful to become a valuable source of reference for all prescribers in Sudan. It will serve as the basis for training programs in rational prescribing in the Nile Province and the rest of the country. A simplified version prepared in Arabic for use by rural health workers; the full text will be available for the 1990 Sudan National Formulary.

Available from: Ministry of Health, Sudan.


A report of a WHO Working Group and recommendations of a meeting convened by the WHO Regional Office for Europe, Madrid, 29 November - 1 December 1988 (see EDM-8). For centuries the pharmacist was the maker and compounding of medicines; in the present century that task has passed almost completely to the pharmaceutical industry. What then should the pharmacist's main task be now and in the future? Working together with pharmacists from many countries and representing many different traditions, WHO's Regional Office for Europe has taken a close look at the way in which the pharmacist currently works, his or her relationship to the doctor and the patient, and the way in which the profession can and must contribute to the community's health, now and beyond the year 2000. The result is the readily overivew which contains firm recommendations, supplemented by specialised papers.


Another in the excellent series of pocket-size prescribing guides prepared by the Victorian Drug Usage Advisory Committee. The two earlier volumes covered antibiotics and analgesics. This latest guide is intended to be a practical reference to assist in day-to-day use of psychotropic drugs. To this end it begins with a description of a group of psychiatric syndromes stressing the importance of a comprehensive psychiatric and mental and physical state examination. A description is then given of each of the major groups of psychotropic drugs relevant to the conditions under consideration, followed, where possible, by details of individual drugs. Other chapters consider specific circumstances where psychotropic drugs are used and which may cause problems.

The original purpose of the guide, says its publishers, was to improve the use of psychotropic drugs in hospital but its final form makes it equally relevant to practice in a wider community setting.


Pour une politique nationale du médicament : Outils de réflexion et d'action, Ministère de la Coopération et du Développement, France, 1989, 84p.

In the beginning of the eighties, the French Ministry of Cooperation and Development promoted the establishment of networks interested in different health issues. One of these, "Network on Pharmaceuticals and Adapted Biomedical Technologies" with members from universities, the pharmaceutical industry, the public sector, and NGO's, has been looking into the problem of pharmaceuticals and developing countries. The result is a recently published booklet entitled "For a national drug policy".

The publication deals with drug management and policy in developing countries including regulation and financing. It provides guidelines to evaluate the pharmaceutical situation at the country level and attempts to propose realistic solutions within the economic, socio-cultural and geographical context of the various countries. A bibliography and a list of institutions involved in drug issues is also included.

This booklet can be a useful tool to popularise among francophone readers the concepts and strategies which have been the foundation of the Action Programme on Essential Drugs. Available only from: Ministère de la Coopération et du Développement, 20 rue Monsieur, F-75007 Paris.
Essential Drugs Monitor

PUBLISHED LATELY


Based on the results of a three-year study by Frères des Hommes, the French third world development agency, into the marketing practices by pharmaceutical companies in the French-speaking countries of Central Africa. The report, published in association with Medicus Mundi, the French Institute for Economic Research and Development Planning, and a number of pharmaceutical companies, says that the interests of African patients are often abused by "unsuitable drugs and misleading promotion". It opens with the observation that "these abuses, which are numerous enough to warrant classification, owe their perennial nature to indifference and a lack of information." It says that there are three main criticisms of the pharmaceutical sector in these countries - "too many unsuitable drugs, too much misleading promotion, and too much laissez-faire."

In absolute terms, it says, Africans spend far less than the French on their medicines, but these costs represent over half of all health care expenditure; the situation is aggravated by cuts in health spending resulting from economic crises in many African countries. The distribution of free drugs in public health centres has fallen dramatically and patients now find themselves having to pay much more money. For both health and moral reasons, African governments should purchase only the drugs they really need, and at the lowest price, Frères des Hommes says.

Many drugs sold in Africa are combination products with no therapeutic justification and costing too much, and many are presented in excessively expensive dosage forms such as "drinkable ampoules", allowing the manufacturer to make extra profit but with no improvement in medical care, it asserts.

A major problem is that despite the existence of a number of wholesalers supplying the African markets, there is relatively little price competition, allegedly because drugs tend to be known by their brand name. French-made drugs are often sold at higher prices than in France. Although central purchasing and international tenders are effective ways of keeping costs under control over drug prices in third world countries they are not always effective, the report remarks, giving number of examples of countries where "individual financial interests impair the rationalisation, both in public and private health care and finance of pharmaceutical consumption."

One section of the report is devoted to the subject of misleading promotion by pharmaceutical companies. It notes that there are no controls on promotional activities in these countries of Africa and states that companies tend to exaggerate the benefits of their products or play down the risks. The report concludes with a series of recommendations to the African and French governments and to pharmaceutical companies encouraging them to do all they can to curb misleading promotion and the prescribing of ineffective and dangerous drugs in the area.


This book sets out to provide consensus advice for the correct and safe prescribing of essential drugs used in anaesthesia. The information has general applicability but is particularly relevant to developing countries, where limited availability imposes great problems, and the skills must be considered when recommending safe practice. The book, which was prepared by WHO in collaboration with the World Federation of Societies of Anaesthesiologists, is the first in a series of handbooks intended to provide up-to-date and objective information on the correct prescribing of essential drugs.

The book opens with a concise introduction to the do's, don'ts, musts, and nevers of drug use in anaesthesia. Though reliance is placed firmly on WHO's Model List of Essential Drugs, other opinions are discussed where these have particular relevance. Procedures that are absolutely contraindicated when certain essential skills and equipment are not available are not discussed.

The main part of the book consists of model information sheets for 31 drugs presented in the following categories: premedication, general and local anaesthetics, non-opioid analgesics, opioid analgesics and antagonists, muscle relaxants and cholinesterase inhibitors, blood substitutes, and solutions for correcting water and electrolyte imbalance. For each drug, general information on properties and uses is followed by details of dosage and administration, contraindications, precautions, use of pregnancy, adverse effects, drug interactions, the signs and treatments of overdose, and storage requirements. Information on drugs used to induce general anaesthesia is especially detailed, including advice on each drug's advantages and disadvantages as well as details on its use according to different techniques.

The book should prove useful in the development of national drug formulae, data sheets, and teaching materials and stands as a useful guide to the appropriate use of anaesthetic agents.


Illustration from the foyer for le Médicament au Maghreb et en Afrique noire francophone.


Little is known about the ways that local people in Third World communities perceive and use Western pharmaceuticals. This book is a first attempt to remedy that situation; eighteen studies reveal how Western medicines are circulated and understood in the cities and rural areas of Africa, Asia and Latin America.

The first section of the book deals with medicines as commodities that are produced, sold and consumed. The roles of the drug company salesmen, pharmacists, street vendors and "traditional" practitioners are elucidated. Detailed descriptions show how potentially dangerous drugs are exchanged and used outside professional control. The second section examines the meaning of medicines. Western pharmaceuticals are understood in terms of local medical cultures. Their foreign allure and "high-tech" modes of packaging and application (capsules, injections) imbue them with special power and efficacy.


Making today's child health knowledge available to all parents and communities is one of the greatest communication challenges of the late twentieth century. This companion volume to Facts for Life is about how this challenge can be met by using an alliance of communicators from a broad cross-section of society: teachers and educators, mass media, religious leaders, health officials, employers and workers, employers and workers, employers and workers, government and community leaders, artists and entertainers, nongovernment organizations, and workers. Illustrated with many practical examples.


Every week 25,000 children die in the developing world. Many of the deaths occur because parents do not have sufficient knowledge about child health care. Facts for Life is a new manual aimed at giving them this information. It contains basic child health information related to birth spacing, safe motherhood, breastfeeding, weaning and child growth, immunization, diarrhoeal diseases, respiratory infections, domestic hygiene, malaria and AIDS. It is intended primarily for the developing world.


THE CONTEXT OF MEDICINES IN DEVELOPING COUNTRIES

Schoen S.H. van der Geest, ed. S. Reynolds Whyte

The book maps out a new approach to the study of pharmaceuticals. Its findings have practical implications for health care in developing countries and they raise fresh analytical issues for students of medicine and society.

Appropriate use of blood and blood products

W.N. Gibbs*

Safe injections with versatile portable sterilizer

THE portable steam sterilizer, so popular for use within the Expanded Programme on Immunization, is not only for use with the needles and syringes used with vaccines. The inserts that fit into the sterilizer have been designed to accommodate the 2 ml and 5 ml syringes used with many other essential health care functions. With the different modular equipment, sterilization can be achieved for nearly all invasive instruments. There are cassette racks designated for dental/chiruropy, eye surgery, suture containers for general practi- tioner instruments including IUD instruments and various buckets and racks for other equipment.

What are the alternatives to blood transfusion?

Surgeons in different parts of the world have shown that blood is commonly used in circumstances when alternative therapy is available. For example:

... to “top up” patients with nutritional anemia - iron deficiency anemia and anemia to tolerate deficiency. Nutritional anemias respond readily to the appropriate hematological - iron or folate acid and red cells are required only if cardiac failure is established or imminent.

... acute hemorrhage. The initial urgency requirement for bleeding patients is blood volume replacement. This can be accomplished with plasma substitute, that is, crystalloids and synthetic colloids, which are cheaper and safer than blood. Ideally, crystalloids should be available in all treatment facilities and can be used, for example, for resuscitating a patient and during transport of the patient to another institution. Colloids such as dextran or gelatins should be available at least at the intermediate hospital level. Plasma should never be the first consideration for restoring the blood volume in patients with acute hemorrhage because of the risks already outlined above.

... to treat patients with chronic anemia secondary to infection. In many cases the anemia responds to satisfactory treatment of the underlying disorder. For example, blood transfusion is often given unnecessarily to patients whose anemia is due to uncomplicated malaria. Anti-malarials are indicated, and red cell transfusion is necessary only if cardiac failure is established or imminent.

... for patients with haemoglobinopathies. Red cell transfusion is unnecessary for these patients in whom the haemoglobin concentration (Hb) is stable. Apart from specially designed transfusion programmes (for example for patients with thalassaemia major) red cell transfusion is necessary only if the anaemia is complicated by incipient or established cardiac failure, and/or an acute life threatening fall in the Hb.

... before surgery to “top up” patients to an arbitrarily determined Hb. In many cases this is unnecessary. Each case must be carefully considered to assess the risk of anaemia during or after surgery and its possible effect on the outcome.

Additional examples are outlined in the documents cited below. Even when it is clear that blood transfusion will be necessary, the possibility of using autologous blood rather than homologous blood should be considered. This may be accomplished by the patient’s donating blood preoperatively, which is available for transfusion during or after the operation; or by transfusing blood salvaged during the operation.

More detailed information on this subject is contained in WHO documents “Use of plasma substitutes and plasma in developing countries” WHO/LAB/89.9, and “Guidelines for the appropriate use of blood” WHO/LAB/89.10, available on request from Health Laboratory Technology and Blood Safety Unit, World Health Organization, 1211 Geneva 27, Switzerland.

* Dr W.N. Gibbs is Chief Medical Officer, Health Laboratory Technology and Blood Safety, WHO, Geneva.
**RATIONAL USE**

**Introduction**

It is now generally accepted that selection of a limited number of essential drugs by a country promotes their rational use. It also allows more effective spending of the often meagre national health budget—a disproportionately large amount of which is spent on drugs. A large part of this expenditure goes on unnecessary, ineffective and often dangerous preparations, indiscriminately selected and irrationally used.

The concept of the use of Essential Drugs was conceived by the World Health Organization more than a decade ago and since then the Organization has published and updated biannually a Model List of Essential Drugs. Some of the criteria used for the selection of drugs were efficacy, safety, quality, stability, ease of storage, price and availability. A scoring system based on these criteria was used to select drugs for primary health care in Kenya (Helling-Bords 1983). Such a scoring system has great potential if it is applied with flexibility to suit each country’s individual needs and economic considerations.

**Methods**

A system incorporating flexible scoring with additional features, such as compliance, is proposed and illustrated with two examples. An important feature of this approach is that it allows for different weighting of factors for different countries.

The suggested scoring system is as follows:

<table>
<thead>
<tr>
<th>Factors</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Efficacy</td>
<td>5</td>
</tr>
<tr>
<td>2. Safety</td>
<td>5</td>
</tr>
<tr>
<td>3. Cost of a course of therapy</td>
<td>3</td>
</tr>
<tr>
<td>4. Compliance</td>
<td>3</td>
</tr>
<tr>
<td>5. Multiple usage</td>
<td></td>
</tr>
<tr>
<td>6. SEOLA (Storage, ease of administration and local availability)</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
</tr>
</tbody>
</table>

**Table 1 Scoring criteria for selection of non-steroidal anti-inflammatory drugs.**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Maximum Score</th>
<th>Aspirin</th>
<th>Ibuprofen</th>
<th>Phenylbutazone</th>
<th>Indomethacin</th>
<th>Piroxicam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficacy</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Safety</td>
<td>5</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Cost of a course of therapy</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2.5</td>
<td>1.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Compliance</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2.5</td>
</tr>
<tr>
<td>Multiple usage</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>SEOLA*</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>16</strong></td>
<td><strong>13.5</strong></td>
<td><strong>12</strong></td>
<td><strong>13</strong></td>
<td><strong>11</strong></td>
</tr>
</tbody>
</table>

*Storage, ease of administration and local availability

**Table 2 Scoring criteria for selection of an antimicrobial for streptococcal pharyngitis in children.**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Maximum score</th>
<th>Penicillin</th>
<th>Cephalaxin</th>
<th>Erythromycin</th>
<th>Vancomycin</th>
<th>Cotrimoxazole</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficacy</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>0.5</td>
</tr>
<tr>
<td>Safety</td>
<td>4*</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Cost of a course of therapy</td>
<td>3</td>
<td>3</td>
<td>1.5</td>
<td>1</td>
<td>0.5</td>
<td>1.5</td>
</tr>
<tr>
<td>Compliance</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Multiple usage</td>
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<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>SEOLA*</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>17.5</strong></td>
<td><strong>13</strong></td>
<td><strong>13</strong></td>
<td><strong>11</strong></td>
<td><strong>10</strong></td>
</tr>
</tbody>
</table>

*If not hypersensitive, incidence of anaphylactic reaction 0.04 to 0.2 %

**Delivering essential drug kits to rural health centers in Kenya.**

The information on efficacy and safety has been obtained from reputable text books such as The Pharmacological Basis of Therapeutics (Goodman-Gilman et al. 1985) and Drug Treatment (Avery 1989).

The cost of a course of therapy has been determined by the relative prices included in the British National Formulary (1986) which categorizes drugs from A to J. A denotes those drugs where the basic cost is up to 20 pence, and J over 1200 pence.

In order to restrict the list, another criterion “multiple usage” has been chosen. Aspirin is analgesic, anti-inflammatory and prevents platelet hyperaggregability. Therefore, when it is compared to the other non-steroidal anti-inflammatory drugs such as ibuprofen and piroxicam, aspirin gets a better score. The criterion “compliance” is self-explanatory and SEOLA has already been defined.

The relative importance of the selection criteria may vary widely from country to country and even at different levels of health care, particularly those of cost, compliance, multiple usage and SEOLA, which would be given much greater weighting in a very poor country.

**Discussion**

This system could also be used for selection of a specific drug for treatment in a particular patient especially if all the information is computerized. Drug information sheets would provide the necessary data base and the doctors would give their own scores based on the assessment of the clinical situation.

**References**


1 Division of Human Function, College of Medicine and Medical Sciences, Ahmadu Bello University, P.O. Box 22678, Zaria
2 WHO Representative, P.O. Box 14, Nairobi, Kenya
3 University of West Indies, Bridgetown, Barbados, West Indies
A Survey on Morbidity Patterns and Drug Requirements at Primary Health Care Level, Sri Lanka

George Fernando

Sri Lanka, a developing country with limited resources, provides medical care to the entire population through a network of over 1000 institutions scattered throughout the country. These range in size from a hospital with over 2500 beds to Intermediate and smaller institutions, such as health centres and PHC posts. Ensuring their supply with a hundred or more essential drugs is no mean task. Information is needed on many areas to formulate and plan such a supply system that will attain even a reasonable level of efficiency. Some of the questions that need to be asked are: What are the age, sex and morbidity patterns in the patient populations? What quantity and range of drugs are required to treat a given number of patients? What is the treatment cost? Can the treatment prescribed for different morbidities in the hospitals and health centres be rationally standardized? Is standard treatment of patients acceptable to doctors and patients? In order to answer these and other questions, a survey on morbidity patterns under the WHO Action Programme on Essential Drugs and Vaccines began in 1987.

Study methodology

Of the 22 health regions in Sri Lanka, three were selected as representative of the morbidity patterns throughout the country. In each region, two primary health care (PHC) institutions, treating only out-patients, and two other PHC institutions, treating both out- and in-patients, were selected. Standard treatments for common disease conditions seen at the out-patient level were prescribed by senior consultants. These were then discussed in depth with the prescribers in the selected institutions. The next step was a visit by the study team to explain the project and motivate other staff in the institution. This was followed by a two-week pilot study to pre-test the questionnaires and other procedures. The results of the pilot study were then discussed with the prescribers, problems were identified and necessary adjustments made.

The final study took place over a period of six months. Classification was made by age, sex, and first visit. Morbidity, whether standard treatment was given, severity of condition, treatment mode, drugs issued (dose, formulations and quantity) and cost of drugs. A total of 170,942 out-patient and 9162 in-patient episodes were studied and computer analysed.

Results

The study showed that one half of out-patient morbidities consisted of six leading conditions, namely, acute bronchitis, fever, hookworm and other helminth infestations, malaria, muscular pain, and boils and abscesses. Another significant characteristic was that nearly one half of out-patient conditions could have been self-managed at home with better health care awareness, or were communicable illnesses which could have been avoided by appropriate preventive measures. In-patient morbidity was dominated by malaria, acute bronchitis and fever, while urinary tract infection and bacillary dysentery also played an important role.

The morbidity pattern changed gradually with age from that of early childhood, dominated by a few problems that were mainly infective and parasitic in nature to a more numerous and varied pattern including mainly chronic conditions and deficiency diseases.

The gender differences in morbidity lay primarily in the greater prevalence among men of malaria, acute bronchitis, fever, skin infection and minor cuts-abrasions, and among women of hookworm and other helminth infestations, muscular pain, iron deficiency anaemia, toothache, chronic arthritis and urinary tract infection. A very large proportion of the out-patients the main morbid conditions that could have been treated at home. Hence an unnecessary waste of time, money and health care resources could be avoided in many cases.

Practical advantages of standard treatments

The study also enabled the cost of treating a patient at PHC level both as an outpatient and inpatient to be determined, thus providing a basis on which to request and allocate funds for drugs at the local and central government level. Since a very large percentage of patients could be treated by simple, local treatment and 80% of the patients could have been treated at home, the PHC staff required to treat 1000 patients would form a basis for drugs indenting and also help prevent pilferage. It is interesting to note that when a private organization was required to treat 14,000 patients, the list of drugs requested by them included 2.6 million doses of antibiotics. The study results enable the Ministry of Health to convince such organizations of their real pharmaceutical requirements. Furthermore, the survey also determined that many drugs per out-patient forms an index for curbing over-prescribing.

Prescriber and patient attitudes

Following the survey, it was undertaken to evaluate prescriber attitudes to standard treatments. On a decreasing scale of 1-4, of the 19 prescribers, scores 1 were given to the remaining 12 scored 2 in response to the question, "Do they satisfy using standard treatments in the outpatient department?" They also reported that 10% of the patients were satisfied with standard treatments.

Prescribers did raise some problems, pointing out that patients were not always satisfied if prescribed only one drug, hence the need for public education is apparent. Some prescribers highlighted the need in certain cases to provide the standard treatments, and others found the generic names difficult to use, as a result of lack of the professionals this time. The inclusion of a placebo injection would be useful, said some, while others wished to see the use of a limited number of drugs was “boring”.

Conclusion

The study shows that standard treatment schedules can provide high quality health care and be acceptable to both prescriber and patient. The practical advantages are many: they aid rational prescribing, simulation easily implemented in the context of health care while saving costs; they lead to more accurate estimation of drug needs; the limited number of drugs facilitates the logistics/storage/management process, reducing the risk of stockpiling; and finally, they provide solid data with which to justify drug demands by government services can evaluate supply requests.

A complete report of the study entitled "A Survey on Morbidity Patterns and Drug Requirements at the Primary Health Care Level, Sri Lanka, 1987" can be obtained by writing to Dr George Fernando, Deputy Director of Health Services, Ministry of Health, P.O. Box 513, Colombo, Sri Lanka.