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REPORT OF AN INFORMAL WORKING GROUP ON
EDUCATIONAL MATERIAL FOR PATIENTS

convened by the WHO Action Programme on Essential Drugs
hosted by the WHO South-East Asia Regional Office, New Delhi
21-25 October 1985



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1. INTRODUCTION

The Working Group on Education Material for Patients was convened by the WHO Action Programme on Essential Drugs and hosted by the WHO South-East Asia Regional Office, New Delhi, 21-25 October 1985. The objectives and agenda of the working group together with a list of participants are outlined in Annex 1.

The five important steps to ensure the proper use of drugs are accurate diagnosis, rational prescription, correct dispensing, suitable packaging and adequate clear instructions to the patient. This informal working group looked into common problems associated with the use of medicines by patients (assuming that the diagnosis, prescription, dispensing and packaging were correct and appropriate) and defined important messages to be communicated in order to overcome these problems. Possible means of illustrating these messages using different types of materials were identified. Finally a basic plan of action to research, develop and test materials was outlined.

2. REVIEW OF EXPERIENCES AND METHODOLOGIES FROM DIFFERENT COUNTRIES IN EDUCATING PATIENTS ON THE CORRECT USE OF DRUGS

2.1 Suggested key elements for developing the appropriate material to improve the use of drugs were presented by Mrs M. Zimmerman, Director, IEC/PATH. A copy of her paper is found in Annex 3.1. First of all, the characteristics of the target groups (the patients or their "caretakers") must be defined. In general in developing countries, they have low literacy rates, little medical knowledge and are from low socio-economic levels. In order to develop appropriate educational materials for them it is important to understand their beliefs about medicines, their attitudes towards illness in general, their life style e.g. eating habits, home remedies and practices and their attitudes towards "hot", "cold" or coloured drugs which will affect drug use. The messages and materials to be developed should not only be based on a solid understanding of these behaviour patterns but also upon experience of visual perception. After reviewing some of the advantages of visual aids, important examples were described of steps to be followed when developing materials, in order to avoid potential difficulties, using illustrations from different countries.

A few suggestions for developing illustrations as support materials follow:

- simplify illustrations and avoid extraneous details which distract the "reader" from the main message,
- use objects, clothing styles and types of buildings which are familiar to the target audience,
- portray people or objects realistically as they occur in day-to-day life,
- be careful in using enlargement of some details or objects for emphasis: this is usually misinterpreted,
- test colour choices and pretest them because colours have different connotations in different cultures,
- ask members of the target group to arrange individual messages in a sequence which seems logical to them; e.g. all people do not "read" from left to right,
- pretest to find out if persons from the target group prefer photos, simple line drawings or shaded line drawings and find out which is easiest for them to recognize/understand.

2.2 A summary of the various activities of the Voluntary Health Association, India (VHAI) in the area of drug use was presented by Dr Mira Shiva (see Annex 3.2). The target groups and activities of the VHAI have been at different levels: background information to promote the essential drugs concept has been prepared for policy makers, health personnel, consumer groups and other organizations and promoted through workshops, seminars and discussions; training to upgrade the diagnostic and therapeutic skills of middle level health workers have been conducted and assistance is given to regional groups to develop region-specific materials for health workers on common problems of drug use. VHAI serves as a clearing house on drug information and provides information about banned, hazardous and dangerous drugs, about essential drugs, sources of essential generic drugs etc.

VHAI has spearheaded an effort to bring various organizations, groups and individuals together as an informal network called the All India Drug Action Network and to coordinate their health and drug activities.

The main target group of VHAI has been prescribers and efforts have been made to upgrade the prescribers' knowledge using illustrated leaflets and booklets. In addition a video film on rational drug policy and rational drug use is being developed. The fact that the best use of drug information can only be made when essential drugs are made available was stressed. The efforts of VHAI in providing important information to different target groups were felt to be increasing awareness about the need for essential drugs and their correct use in India.

2.3 Mr J.O. Branstad, Chief, Department of Hospital Pharmacy and Information, Apoteksbolaget presented the way patient educational materials have been developed in Sweden to improve compliance with treatment (see Annex 3.3). Patient leaflet materials, sometimes with illustrations, cover information on the benefits, risks and proper use of drugs. These leaflets are distributed by pharmacy personnel. They are prepared for specific groups of products. Messages on particular drugs for use in verbal counselling are provided to pharmacy personnel through codes in price lists and by computer produced labels. Evaluation of the appreciation of the public for this system and its effectiveness in improving knowledge about drug use has shown very positive results (see page 34).

In order to reach school children with information and education on drugs, pharmacists give classes each year to approximately 50,000 teenagers on the role, action and use of drugs. Evaluation has shown them to be successful in giving children important basic knowledge about drugs which will hopefully improve the ways they will use drugs later on. Materials for younger school children using pictures and a brief text have also been designed and sent to the teachers.

Illustrated booklets on selfcare, self medication and when to seek a doctor have been prepared because approximately 90% of ill people in Sweden treat themselves.

2.4 Experience from Nepal in the training of drug retailers was described by Mrs M. Casey, UNICEF, Nepal. Retailers are an important medium for educating drug use because 90% of drugs are supplied through the private sector. One of the main objectives of the 50 hour training programme, which is being conducted throughout the country, is that the retailers be able to advise customers on the correct use of their medicines. In order to achieve this, the retailers are taught some basic information, which should be communicated to the customers about commonly used drugs, and how to find this information in a handbook which has been developed for their use. Reference is made to a table containing generic names, trade names, important side effects, contra-indications and advice to be given. They practise filling prescriptions and responding to verbal requests for products and communicating the correct information clearly and simply to the customer using verbal and handwritten instructions. In this way their information retrieval and communication skills are developed together with their knowledge. No materials have been prepared for the retailer to show to the customer in addition to verbal instructions, although a picture story about the reasons for taking a full course of antibiotics, which was developed by the Britain Nepal Medical Trust (BNMT), has been incorporated in the handbook. BNMT have found this leaflet useful and effective for motivating customers to buy a full course of antibiotics. It must be emphasized that the attitudes of the retailer towards serving the customer in this way are critical to the use of such materials.

A formal evaluation of the drug retailer training programme has not been implemented. However, random observation and discussion with trained retailers in their shops has shown that their knowledge has improved but their practices do not always reflect this. This is because there are conflicting influences, e.g. local prescribing practices, information from drug companies, and because of the availability of dangerous/irrational products on the market. The latter problems are being tackled by the Department of Drug Administration (D.D.A.) which is at present preparing an inventory of products marketed in Nepal prior to their evaluation and registration.

3. IDENTIFICATION OF PROBLEMS AND POSSIBLE SOLUTIONS

The working group was very aware that problems exist at all stages of the diagnosis - prescribing - dispensing - administration process. However, it decided to restrict itself to discussing ways of improving the chances that patients take their drugs correctly, assuming that appropriate drugs are prescribed in correct doses.

Four different patients' target groups were defined i.e. caretakers/parents of children, pregnant women, adults, and the elderly. Common problems related to drug use were listed for each of these target groups and messages which should be communicated to prevent these problems were developed (see Table 1). The table includes only a few of the common problems related to drug use; in the activities following this report, some other problems will probably be identified, e.g. malaria is not listed as a problem for pregnant women, yet there are specific malaria prophylactic needs for this target group. The institutional framework e.g. health infrastructure, non-governmental and voluntary organizations, schools and the personnel through whom these messages should be communicated e.g. health personnel, drug retailers, were identified.

It was stressed that educational messages should be developed with the active involvement of the target audience concerned. The group agreed that, in some instances, the use of focus group discussions with consumers, prescribers and dispensers could be a valuable means of gaining insight into the knowledge and behaviour of the people concerned.

Many of the messages can be described as "general principles" and could be channelled through all appropriate institutions to increase awareness of how to use drugs correctly. In addition, specific messages for each drug could be communicated by health personnel and other message communicators, i.e. persons responsible for delivering drugs to patients. The group recognized that different strategies could be adopted, i.e.:

- (a) communication of "general principle" messages through all appropriate institutions using a "campaign" approach,
- (b) communication of specific information for individual drugs through message communicators,
- (c) a combination of both strategies.

It was felt that the different strategies should be tested under comparable conditions at the time of evaluation of materials in order to compare their impact and to decide on the best approach.

The group discussed the development of a variety of illustrated materials and other appropriate media for communicating both general and specific messages to prime target audiences in pilot areas (see Table 2). Many of the "general principle" messages (i.e. 1-7), can be combined into leaflets, poster sets, slide/tape shows. In addition other messages should be prepared as individual posters etc. because they deal with widespread examples of drug misuse e.g. overuse of injections and tonics, incorrect storage etc. Materials for communicating specific information on individual drugs were also reviewed (see Table 2). Illustrated envelopes, leaflets and posters or combinations of these were suggested and the group agreed that these would need to be tested and the results of these tests compared to define the most cost effective method.

Table 1

Messages and target groups selected by the Working Group
for development of educational material for patients

Problem	Message	Target Groups				Institutional framework	Message communicator
		Caretakers/ Parents for children	Pregnant Women	Adults	Elderly		
1. Over/under dosage	a) take drugs as prescribed in right quantities, at right times (too much, too little can be useless, even harmful) b) complete the treatment course	X	X	X	X	<ul style="list-style-type: none"> - Ministry of Health infrastructures (hospitals, MCH clinics, Health Cts. dispensaries health posts) - Training institutions for medical and para-medical personnel - private and vol. health infrastructure - Association + organization of drug retailers - NGO and Govt. institutions in charge of non-formal education. 	<ol style="list-style-type: none"> 1. Health personnel, (health workers, dispensers, CHW, HA, nurses, RMH, etc.) in the public and private sectors (voluntary or commercial) 2. Drug retailers (in the public, para-public and private sector) 3. Trainers (formal and non formal education programme trainers) in the public and private sector
2. Unusual reactions/ expected side effects	Drugs can produce side effects e.g. vomiting, nausea, rash, giddiness. If this occurs seek advice of the health worker	X	X	X	X		
3. Use of drugs for other conditions/ patients (sharing of drugs)	Medicines should only be used for the patient and condition for which they are prescribed	X	X	X	X		
4. Incorrect storage	a) store out of reach of children	X	X	X	X		
	b) keep out of direct sunlight and heat	X	X	X	X		
	c) keep each drug in a separate container	X	X	X	X		
	d) throw away drugs if change occurs in colour, smell and taste	X	X	X	X		
	e) most drugs lose their effectiveness after a certain period of time	X	X	X	X		
5. Incorrect preparation and administration	<u>dry syrup</u> - a) reconstitute with clean water as instructed	X					
	b) shake the bottle c) do not use after weeks <u>eye ointment/ drops</u> a) wash your hands b) insert the ointment/drops directly into the eye & close the eye c) put the cap back on the container d) do not use the same tubes/bottles for others <u>liquid</u> a) make sure you understand how much of the liquid you must take each time	X	X	X	X		
		X	X	X	X		

Table 1 (continued)

Messages and target groups selected by the Working Group
for development of educational material for patients

Problem	Message	Target Groups				Institutional framework	Message communicator
		Caretakers/ Parents for children	Pregnant women	Adults	Elderly		
6. Incorrect use of injections	Injections are only for very special illnesses and for immunizations	X	X	X	X		
7. Overuse of tonics	Tonics are not essential drugs Tonics are wrong and they do not make you strong, if you want something good spend your money on food	X	X	X	X		
8. Women taking medicines during pregnancy	Do not take medications during pregnancy unless prescribed by health workers		X				
9. Pregnant women not taking iron for a long enough time	When you are prescribed iron tablets continue for a minimum of 3 months		X				

Table 2 (continued)

Appropriate material for communication/delivery of messages selected by the Working Group for development of educational material for patients

Problem	Message	Booklet	Poster	Leaflet	Slide/ Tape	TV/ video	Radio	Cinema hall	Perfor- mances	Envelope + instruct- ions
6. Incorrect use of injections	Injections are only for very special illnesses and for immunizations	X*	X		X*					
7. Overuse of tonics	Tonics are not essential drugs Tonics are wrong and they do not make you strong, if you want something good spend your money on food	X*	X		X*	X	X	X	X	
8. Women taking medicines during pregnancy	Do not take medications during pregnancy unless prescribed by health workers		X		X					
9. Pregnant women not taking iron for a long enough time	When you are prescribed iron tablets continue for a minimum of 3 months			X						
10.	Specific message for benzyl benzoate		X	X	X					
11.	Specific message for anti infective (oral)			X						X
12.	a) general message for chloroquine b) specific message for chloroquine		X				X	X	X	X
13.	Specific message for eye ointment		X	X						X
14.	Specific message for mebendazole		X	X						X

* This message will be communicated with other messages (1-7)

Priority diseases and drugs to be addressed were defined for the different target groups (see Table 3). As the Expanded Programme on Immunization (EPI) and Diarrhoeal Diseases Control (CDD) have prepared patient education materials, it was decided to focus attention on other diseases and drugs. The group stressed the importance of working in conjunction with other programmes, e.g. tuberculosis and malaria, for the development of patient educational materials on correct drug use.

For four essential drugs, specific messages which should be communicated to the patient were prepared (see Annex 2) as a basis for development of illustrated material. This was done mainly as examples and does not exclude the development of other messages in the future, e.g. in countries where chloroquine is not effective, specific materials need to be prepared for the specific drug in use. It became clear that two important issues should be borne in mind when preparing messages: side effects should only be communicated after careful judgement of the risks of patients not commencing therapy due to knowledge of side effects (this is possibly more important in developing countries); a community oriented approach should be used when developing messages e.g. educating other members of the family and community about the use of benzyl benzoate to treat scabies etc.

The importance of the role of the message communicator in delivering information to patients and hence influencing patient drug use was stressed. In order to advise the patient correctly, this message communicator needs simplified information on what to tell the patient for each drug i.e. the messages developed for specific drugs in Annex 2 need also to be developed for the other essential drugs. The group recognized the fact that this type of simplified information has not been prepared in most developing countries and strongly emphasized the need for its preparation in the near future. This can be done by incorporating such information in existing training materials/manuals for health personnel. There was a difference of opinion as to whether WHO should prepare this information, or whether national authorities should develop it themselves as one of their primary health care activities.

In areas where the patient educational materials will be tested and used there is a need for the message communicators to be trained in message delivery and the use of the materials. Accessory support material should be developed when necessary for the message communicator and he should be oriented to deliver/use the materials correctly.

4. RECOMMENDATIONS

- (1) Collaboration with other WHO programmes e.g. tuberculosis, leprosy, malaria, acute respiratory infections, communicable diseases, expanded programme on immunization, control of diarrhoeal diseases, should take place for the development of patient educational materials on correct drug use.
- (2) Different patient educational materials on correct drug use, together with accompanying training material, when necessary, for the health worker or whoever will communicate the drug-related messages should be developed for specific target groups. These materials should be based upon the messages selected by the working group and tested in a few developing countries and in different environments e.g. urban and rural settings.
- (3) Simplified information on what to tell the patient for each essential drug should be prepared and incorporated into existing manuals, charts, formularies and training programmes for health workers.
- (4) Preparatory operational studies on cultural and sociological behaviour patterns related to the use of medicines should be undertaken.

Table 3

Priority diseases and drugs selected by the Working Group
for development of educational material for patients

Children	Pregnant Women	Adults	Drugs
*Acute Respiratory Infection (ARI) Diarrhoea (CDD Prog.) Diseases preventable by immunization (EPI) Ear (otitis media) Eye infections *Malaria Nutritional deficiencies - Vitamin A def. - Iron def. - Iodine def. (IDD) *Skin diseases/scabies *Tuberculosis (TB) *Worms	Iron/folate deficiencies Toxemia/preeclampsia Vaginal infections	ARI Diarrhoea (CDD Prog.) Ear infections Eye infections *Gastro intestinal disorders other than diarrhoea (e.g. amoebiasis) Hypertension Leprosy *Malaria *Rheumatic fever and rheumatic heart disease *Skin diseases/scabies *Sexually transmitted diseases (STD) *TB *Worms	Antibiotic eye ointment Benzyl benzoate Chloroquine Metronidazole Oral anti-infective Piperazine Mebendazole

* Diseases to focus attention on - other than those in EPI and CDD programmes

5. ACTION PLAN

Activity

- (1) (a) Review messages prepared by working group (by WHO).
- (b) Discuss the development of patient educational materials with other WHO programmes (as outlined in recommendation 1).
- (c) Select countries for development and testing of the patient educational materials.
- (2) Invite and select contractual services for the development and testing of the patient educational materials.
- (3) Conduct qualitative research in the selected countries in order to design messages and materials.
- (4) Design messages and illustrations.
- (5) Review and clearance of the messages (both text and pictures) by WHO prior to testing in the selected countries.
- (6) Initiate pretesting and revision procedures.
- (7) Consultation with WHO to review the material prior to printing and testing.
- (8) Printing of small quantity of material and distribution in the test area.
- (9) Training of message communicators in the use of the material in the test area.
- (10) Monitoring and evaluation of experience gained in the test area.
- (11) Consultation with WHO to review and evaluate data of all testing and operational research.
- (12) Large scale printing and distribution of the selected material.
- (13) Monitoring and evaluation of impact of the use of materials on patient drug use.

ANNEX 1

WORKING GROUP OBJECTIVES, AGENDA, PARTICIPANTS AND SELECTED DOCUMENTS

1.1 OBJECTIVES OF THE WORKING GROUP

- To review experiences and methodologies in educating patients on the correct use of drugs and in developing, using and evaluating educational material for patients.
- To determine priority target groups, illnesses and drugs on which to focus education for patients in developing countries.
- To define objectives and general content of material needed to be developed by the WHO Action Programme on Essential Drugs taking into account cultural beliefs and socio-economic conditions.
- To analyse different methods of communicating the content and select those which from experience seem to be most effective.
- To prepare a plan of activities for developing and testing, at different levels of literacy and cultural environment, the content and communication methods agreed upon by the working group.

1.2 AGENDA

Monday, 21 October 1985

Morning:

- Welcome
- Purpose and objectives of working group
- Election of officers
- Adoption of agenda
- Agreement on method of work and time schedule for the working group deliberations

Afternoon:

- Review of experiences from different countries on educating patients on the correct use of drugs; analysis on selection of target groups, types of illness, drugs, content, method of communication, evaluation of results, etc.

Tuesday, 22 October 1985

- Preparatory work (individual and group work) for following day discussions.

Wednesday, 23 October 1985

Morning:

- Discuss and select priority target groups, types of illness and drugs on which to focus for the education of patients in developing countries.

Afternoon:

- Define objectives for material needed to be developed, discuss and outline its general content and methods of presentation (audiovisual, pamphlet, posters, booklets, etc.)

Thursday, 24 October 1985

- Determine suitable places where the material can be developed and tested and prepare an action plan including tasks, timetable, etc.

Friday, 25 October 1985

- Review of report and action plan
- Closing

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Annex 1

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1.4 LIST OF SELECTED DOCUMENTS

- New approaches to health education in primary health care, Technical Report Series 690, World Health Organization, Geneva 1983.
- Report of a working group on essential drugs - Review of training material for supply programmes on essential drugs, Nairobi, Kenya, 12-15 December 1983, World Health Organization - DAP/84.3.
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- Begbie, G.H.: Health messages through folk media - A critical review, World Health Organization - MCH/85.5.
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ANNEX 2

MESSAGES FOR SPECIFIC DRUGS

2.1 BENZYL BENZOATE EMULSION

- (1) This medicine cures and eradicates the disease from individuals, families and communities.
- (2) It will eradicate only when the following instructions are observed:
 - (a) Wash the body all over and dry.
 - (b) Shake the bottle well.
 - (c) Rub the medicine into the affected part, avoiding the face and neck.
 - (d) Continue to apply for 2 consecutive days without taking a bath.
 - (e) Use the same clothes and bedding for all 2 days (do not change it).
 - (f) Take a bath 24 hours after the last application and wash all clothing and bedding and dry them in the hot sun.
 - (g) Treat all members of the family if affected, and members of the community.

2.2 CHLOROQUINE TABLETS

There are two messages which have been defined for this drug : one general message which can be communicated through means of the mass media and one specific message to be given to the patient taking the drug.

(a) General message

When you get fever with chills swallow 4 tablets of chloroquine with water at one time, after taking some food. After that, seek a health worker for a finger prick blood test.

(b) Specific message

- (1) This is the safest drug for you to treat malaria
- (2) When you get fever with chills, swallow 4 tablets at one time (with water) after taking some food, then seek the advice of the health worker.

OR

When you get fever and chills, seek the help of the health worker who will take a finger prick of blood to examine and then give you 4 tablets to swallow at one time followed by 2 tablets 6 hours later, thereafter 2 tablets everyday for the next 3 days. Do not fail to take the drug as prescribed.

Warnings:

If your fever and chills do not get cured with this drug, seek the help of a health worker.

This drug may cause itching and nausea. Do not worry. Do not change the drug without seeking the advice of the health worker.

2.3 ANTI-INFECTIVE EYE OINTMENT
(tetracycline ointment)

(1) This is for your eyes and should only be used by you as instructed by the health worker.

(2) Wash hands.

Gently pull down the lower eyelid with the tip of a finger.

Squeeze about one centimeter of ointment into the pocket behind the lower eyelid.

Close the eye for about half a minute.

Fit the cap back on the tube.

Warning:

Use it only for the patient for whom it is prescribed.

Keep the eye ointment in a shaded or cool place.

2.4 MEBENDAZOLE TABLETS

(1) This drug will cure your child of intestinal worms only if he/she takes this drug as prescribed.

(2) (a) Take one tablet with water morning and evening for 3 consecutive days.

(b) Go back to the health worker after 3 weeks to find out if your child still has worms.

ANNEX 3

3.1 APPROPRIATE USE OF DRUGS: PATH'S EXPERIENCE IN TRANSMITTING INSTRUCTIONAL INFORMATION TO CONSUMERS (PATIENTS)

According to WHO, the following key elements are necessary to ensure good use of drugs:

- Accurate diagnosis
- Rational prescription
- Correct dispensing
- Suitable packaging
- Proper use by patient

We are assuming that the first three elements are being done properly (even though we realize that is not often the actual case), so PATH is interested in suitable packaging and other materials that will assist the patient to use properly whatever drug is prescribed.

Who is the "patient", the target audience?

Children under 5 years of age
Mothers
Pregnant women
Adults
The elderly

How can proper use of drugs be encouraged?

- Fit the drug therapy into the lifestyle. To do this we must learn about country specific beliefs about illness in general and medicine ("hot" and "cold" diseases, cures and colours) and eating habits (e.g. it is useless to tell someone to take medication 3 times a day with meals if he only eats 2 meals a day).
- Design educational support materials which are clear to the patient, your target audience.

Constraints to proper drug use: The following constraints must be considered when planning any educational campaign.

- (1) Availability of many prescription drugs OTC in most LDCs.
- (2) Black market where even loose tablets are sold - no labels, etc.
- (3) Lack of knowledge on part of dispenser and drug store employee.
- (4) Lack of knowledge - and lack of interest often - on part of consumer.
- (5) Trying to sell entire regimen of a particular treatment (i.e. antibiotics) may be economically counterproductive to druggist if he/she knows customer cannot afford to follow it for length of time required (i.e. more than a few days). Because druggist wants to make a sale, he/she may not be concerned if inadequate dosage is sold when insisting on full treatment will discourage customer from buying anything.
- (6) Cultural beliefs, e.g. if medicine is not bitter, then it is not good for worms (from Sierra Leone).
- (7) Patient non-compliance. Specific cases: (a) not understanding value of prophylactic treatment (i.e. contacts of TB cases); (b) discontinuing regimen (i.e. antibiotics) as soon as symptoms disappear; (c) using outdated medicines; (d) using medicines for wrong purpose.

Use of visual aids

The following information on visual perception can be used to guide the health educator/communicator in the development of instructional materials.

Visual aids should be used to capture the attention of the audience, to reinforce information health workers give, and to aid in remembering instructions or information. Clients do not necessarily learn from printed materials alone, but often need the interaction and explanation available from personal contact with a health worker. Visual materials can help, or support, health workers when they educate their clients; thus they are often called "support materials".

Visual aids can affect the way that information is interpreted. Each person's background and experience influence the way he or she understands or perceives the visual aid. We will focus on the variables that affect perception of visual images and offer practical advice in materials' design for diverse low-literate and illiterate audiences. Some basic information on the way people perceive illustrations can help avoid some common mistakes and facilitate the materials' development process. Later, careful pretesting will help assure that the support materials we develop convey the messages that we wish to express.

Advantages of visual aids

Visual aids:

- make it easier for people to learn and remember
- help people to see things they normally cannot see (like internal anatomy or microscopic germs)
- facilitate comparisons between objects and ideas
- show steps in a procedure clearly
- illustrate action and consequence
- review information, reinforce learning, and test understanding
- attract, interest, and entertain
- provide the basis for discussion
- demonstrate the process of growth/change.

Materials' development objectives

When designing support materials, always keep in mind the objectives of the materials. The following questions are useful to consider:

- For whom are we designing the materials?
- What do we want them to understand?
- How can we appropriately communicate the information with pictures and words?

Guide for Materials' Developers

A recent study has shown that, on average, only 20% of what someone hears is remembered. If people hear the information, and see visual aids, they remember twice as much (40%). The most effective teaching methods use explanation with visual aids, followed by personal experience. In this way an average of 80% of the information is retained.¹

The following suggestions have resulted from PATH's field experience in materials' development. Because each material has different purposes and target audiences, it is impossible to generate hard and fast rules for materials' design. However, understanding where potential difficulties may lie will help us look for clearer ways of illustrating messages and to plan more effective pretesting.

1. Simplify the illustration and avoid extraneous details. When possible, present only one message per page.

Notes:

Though photographs can give us very realistic images, they often include many extraneous details which can be distracting. Sometimes artists or photographers are able to "erase" unnecessary details, as in this photo from a booklet developed in Botswana. Since the background was erased, the reader is not distracted from the central message which shows a health worker explaining how to use contraceptive pills.

(1)

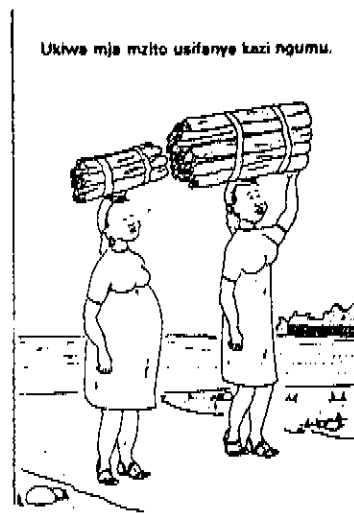


2. Expressions, activities, clothing, buildings and other objects which are familiar to the audience help to communicate messages more effectively. People are attracted to pictures with which they can identify.

Notes:

The dress, shoes, scarves, background, and chores shown in these two drawings are those appropriate to the habits of the respective countries, Pakistan and Kenya.

(2)

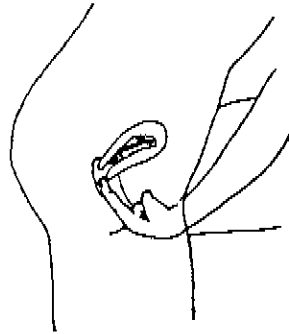


3. Drawings that realistically portray people or objects as they occur in day-to-day life are often the easiest to recognize. Drawings that do not look like things that people normally see are harder to understand (e.g., anatomical drawings, cut-away drawings, enlargements, parts of things or people, schematic diagrams, maps, etc.) However, sometimes such drawings are necessary.

Notes:

The anatomical drawing on the left, which shows a part of a woman separated from the rest of her body, might be unclear to some audiences.

The picture on the right also uses an anatomical drawing, but shows more of the woman's body in order to increase comprehension.



(3)



4. Avoid unusual angles and drawings with too much perspective.

Notes:

The drawing on the left was meant to show a family in their home. It could be misunderstood because of the use of perspective. Some viewers might misinterpret the relative ages of the family members because the figures in the background appear so much smaller than those in front (the seated baby in the foreground is bigger than an older brother walking in the back).

The booklet on the right illustrates a family grouping clearly because the relative size of family members is realistic.



(4)



Go nwa diatitil ke mokgwaga o o siemang wa g
rulaganyetisa lolwapa, mo baseding ba e
farologanyeng.

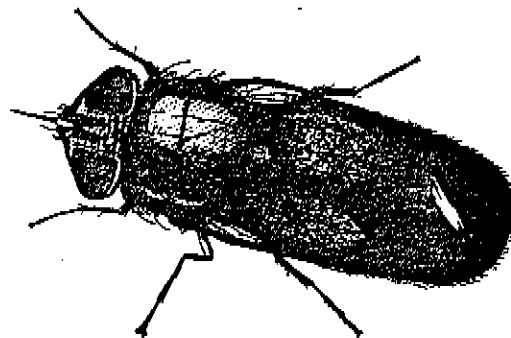
5. In general, objects should be in scale and in context. Enlargement of detail may have a negative effect on understanding of the message.

Note:

In picture no.5, attempting to teach about nutrition and the need for different types of foods, the ear of corn and the bananas are almost as big as the goat. Some audiences might have difficulty understanding these objects.



There is a well-known story about materials' developers who designed a poster on the tse-tse fly, whose bite causes sleeping sickness in parts of Africa. The poster showed a large, ugly, menacing fly; the text warned of the danger it represented. When the developers pretested the design, villagers agreed that the fly looked evil. They said that if a fly that big ever came to the village, they would be sure to hide!²



6. Some kinds of pictures are easier to recognize than others. For example, photos and shaded line drawings can be clearer to target audiences than simple line drawings although this may vary depending on the group. The more stylized a drawing is, the less success it is likely to have. (However, even a crude drawing can be useful as a reminder of a message already conveyed by person-to-person contact.)

Notes:

In a survey conducted in Nepal, respondents were asked to identify the following drawings. The percentage of respondents who were able to correctly identify the drawings is indicated below the illustration, as are some of their comments. The illustration most often correctly identified is the photograph without background (62%), followed by the shaded line drawing (51%).³

(6)



recognized by 38%



recognized by 47%



recognized by 51%

Answers counted as recognition: Man (or person) digging (or working, or holding digging tool)



recognized by 49%



recognized by 47%



recognized by 47%

Other answers given (in order of frequency):
 Person and weapon
 Don't know
 Person
 Person ploughing
 Person and non-digging tool
 Person holding something
 Devil

7. People scan, or look at, pages in different ways, especially people who are not used to reading. People who learn to read from right-to-left will probably "read" pictures on a page that way, too.

It often proves helpful, as messages are being tested, to ask several members of the target audience to arrange the individual messages in a sequence that seems most logical to them.

Notes:

Variations of this drawing were carefully tested in the Sudan by the materials' developers. This drawing, read both vertically and horizontally, shows that the mother in the middle is happy because since she mixed the oral rehydration solution with the correct amount of water, her child is well.

(7)



8. Be sure that colors are carefully tested with audiences, as they have different connotations in different cultures.

Notes:

In many Asian countries, red is a symbol of happiness, while in Southern Africa it is a symbol of death. Thus, a depiction of an infant wrapped in red in Asia would be well received, while in Africa the message would probably be perceived as negative.

9. Symbols must be used with caution. Crosses, arrows, check marks, inserts and balloons that represent conversations and thoughts are not usually understood by people who have not been taught what they mean. Such symbols, when used, must be very carefully tested.

Notes:

Communicating "negative" messages (ones telling people that something is bad or should not be done) is difficult. Often materials' developers think that the only way to do this is by using abstract symbols (an X, the international "circle and slash" sign, the skull and crossbones on a bottle of poison). However, with some imagination, more easily understood images can often be developed.

This shows a nurse telling her client not to eat foaming contraceptive tablets (they must be inserted into the vagina). The use of familiar gestures is more easily understood than abstract symbols.

(9)



10. Whenever possible, use a positive approach, as a negative message may be alienating or discouraging, rather than motivating.

Notes:

The poster on the left shows female goiter victims and warns about the disease. This material created a negative image and offended traditional Islamic ideas of female modesty. The posters were ripped off of walls and destroyed.

(10)



The materials' developers tried a different approach by showing a healthy young man who had used iodized salt to protect himself from goiter. This poster elicited a much better response.⁴

11. Cartoon figures may not be well understood by some audiences.

Notes:

The cartoon characters shown are popular figures in the U.S. and other countries. However, readers unfamiliar with them might perceive them in many different ways. Only careful pretesting with the target audience will tell us whether or not the images are understood.

(11)



12. Pictures should be large enough for people to see. The print should be clear and simple so that people not accustomed to reading can decipher it without difficulty.
13. When designing a booklet or flipchart, limit the number of concepts per material to 16-20 messages (or pages). If there are too many messages, readers may become restless or bored, or find them hard to remember.

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2. McBean, G., N. Kaggwa, J. Bugembe, Illustrations for Development, UNICEF, 1980, p. 4.
3. Fussell, D., A. Haaland, Communicating with Pictures in Nepal, UNICEF, 1976, pp. 15-16.
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3.2 VHAI'S EXPERIENCE IN DRUG EDUCATION

1. Background of the Voluntary Health Association of India (VHAI)

VHAI was formed in the late sixties in order, mainly, to promote the concept of Community Health primarily in the voluntary health sector.

It is a federation of over 3,500 non-profit non-governmental health institutions and it represents a significant percentage of the voluntary health sector.

Its focus was and is on community needs oriented education and training, and publication and dissemination of low cost health education material. Several innovative courses in Community Health, Health Care Management, etc. were organized by VHAI which over a decade has become the biggest distributor of health education material in the Third World.

Through workshops, seminars, printed material, booklets, flashcards, slide sets etc. for literates, neoliterates and material for trainers, VHAI has been deeply involved in the process of health education and participatory training.

2. Mass mailing

VHAI has collaborated with UNICEF in an "ORT Project" to obtain from more than 20,000 doctors information on their attitudes and behaviour regarding diarrhoea care and to supply them with educational kits related to national diarrhoea care.

Our efforts in Infant Nutrition Information Service (a UNICEF Collaboration) was to respond to queries raised by counter advertisements in the magazines related to baby foods vs breast feeding.

The above two mass mailing efforts have yielded good results but it is being felt that closer interaction with the individuals adds to the impact.

3. Drug education

Earlier this was mostly done as a part of training programmes for upgrading of diagnostic and therapeutic skills of middle level health workers.

We rapidly realized that important over use and misuse of costly, irrational and hazardous drugs was taking place, even in the voluntary health institutions. This was done very often in good faith.

Our first drug education efforts started with the objective of helping voluntary health institutions and their health personnel to select, prescribe and dispense drugs more rationally and economically, keeping the quality of the product in mind. While some changes did take place in some of the institutions, the continuous misuse of drugs in the entire society clearly showed the uselessness of trying to create these little islands of rational drug use.

There was no doubt that to change the drug market scene, and deal with the intense yet subtle market pressures which tend to manipulate the prescribing practices, greater efforts had to be made and different levels, besides the health personnel, had to be reached. After an analysis of the situation, two needs became apparent:

- i) The formulation of a rational drug policy through increased awareness of the policy makers.
- ii) The creation of a greater consumer drug awareness.

These conclusions led to an intensification of the drug educational activities for these two groups.

A systematic effort to understand and monitor our national drug policy was undertaken and educational material related to the concept of essential drugs is prepared and distributed from time to time to key persons in the Chemicals and Fertilizers Ministry, Health Ministry and Drug Consultative Committee.

We have attempted to promote the concept of essential drugs to the lay people through existing health and consumer organizations already concerned about the issue. Most of these organizations have long experience in educational and organization work.

We have put much effort into building this network which serves as an alternative drug information channel. 10 organizations most actively involved in drug education and drug action constitute the Coordinating Committee of AIDAN (The All India Drug Action Network); several human rights groups, health groups, peoples' science movements etc. academicians, chemists, etc. have now joined the network.

We have tried to involve in this network those who will take on long term consistent responsibility for drug education and action. Therefore, efforts have been made to involve medical colleges, nursing schools, social work institutes, those involved in science policy, new consumer groups, academic bodies (e.g. Indian Academy of Paediatrics).

We see also dispensers/retailers of medicines besides health personnel as key individuals in this process of drug education. It is known that a large percent of patients go directly to the chemist shop or drug outlets to buy drugs without prescriptions. The figure for the twin city of Hyderabad and Secunderabad was found to be over 46% in a study conducted by the National Institute of Nutrition last year. Based on another 3 month study on drug utilization, in India, it was found that over 60% of the drugs are bought over the counter without any doctor's prescription. These retailers do not always know very well the drugs they dispense and have sometimes no interest in selling the most essential and less costly drugs.

Aware of the lacunae in health and drug delivery systems, aware of the ignorance, illiteracy of our people and diversity of languages in different states, we chose to deal with the drugs issue along with the health issue through different categories of EXISTING potential drug educators e.g. social workers, teachers, Mahila Mandals (women's groups), nongovernment organizations involved in people's issues, including rotarians, journalists etc.

While VHAI plays the major role in obtaining, compiling, analyzing and making relevant drug information available to the target groups - it is left to the regional groups to modify, translate, improve and use the material in their own language according to their cultural norms. Very often material developed by a regional group is adapted and used by others.

Direct patient education for specific drugs was considered a lower priority as compared to consumer education about general principles regarding rational drug use, since it is much more cost effective to approach a larger group, than individual patients - whose situation of illness makes them less receptive to messages because of the state of anxiety.

Education of health personnel in this field is obviously pivotal - as also the education of chemists and druggists.

As a strategy we feel that every effort has to be made to promote the concept of essential drugs within the above 2 groups (policy makers and consumers), besides the health personnel.

Indeed, for us, much more important than individual drug information is the need to get the concept of essential drugs across to the public. Simplification of this concept in regional languages and highlighting the direct relevance of the concept for the consumers and patients, would be the backbone of the rational drug use programme. Drawing up of guidelines of a graded essential drugs list would be of direct help to health institutions and health programme about selection of their drugs. Provision of unbiased drug information about these drugs would also be very helpful.

But information about the known hazardous and therapeutically irrational products should also be made available to the patients.

In a situation like India, any attempt to prepare only drug education material for the patient would have a limited role but it would lead to more awareness about the patients' right to receive correct medicine and correct drug information. This would certainly act as a counter check on increasing drug misuse and overuse of irrational and hazardous drugs.

4. Objectives of drug education for VHAI

The objectives of the drug education should be:

- to clarify and educate about the restricted role of drugs in health care;
- to educate about the existence of good and bad medicines with scope of even good medicines being misused;
- to educate the people about their right to basic health care and basic essential drugs;
- to educate people about the need and the content of a good drug policy;
- to educate consumers about known hazardous and irrational drugs and how they should avoid being exposed to them;
- to educate patients about the need for them to report adverse drug reactions and the need for developing good monitoring mechanisms;
- to educate consumers about some basic principles on the use of drugs and some specific information about commonly used drugs:
 - specially those bought over the counter
 - or drugs having potentially serious side effects and toxicity
 - drugs requiring strict patient compliance.

Since the discussion will focus on patient education, the target selected should be:

- those groups that are most vulnerable
- constitute a large percentage of the population
- require greater health inputs
(children under 5, pregnant women, the elderly).

If only a few patient drug education materials are being planned, they should be related to those diseases which are:

- common
- serious
- infectious
- require long treatment
- require strict patient compliance
- involve a problem of emerging drug resistance
- have a danger of spread of drug resistant infection
- are part of national programmes or schemes which could easily incorporate the drug information bit.

But any attempt at providing drug information in the absence of health education about the diseases will be a waste, specifically when preventive measures, nutritional advice, etc. are involved.

The educational material for specific drugs should involve details of:

- when to use the drug
- why to use it
- how to use it
- for how long to use it
- what to avoid
- what to look out for
- what the known misuses are.

The material prepared by WHO/National Government/NGOs could be very easily incorporated in the National Programmes, drug education dimension form an important part of these programmes.

Each country should produce its own need based material - with WHO giving broad guidelines and support by facilitating exchange of existing material e.g. manual for rural health workers Nairobi, Tanzania, India, Nepal etc.

3.3 PATIENT EDUCATION AND COMPLIANCE WITH TREATMENT - SWEDISH EXPERIENCES

A summary of the submission by Mr J.O. Branstad.

We all see the need for good and thoroughly prepared patient education because it is not enough to have the right drug prescribed in the right dose and handed out to the right person. It is also necessary to have the correct use of the drug by the patient.

Since 1 January 1971, the National Corporation of Swedish Pharmacies (Apoteksbolaget) has held the exclusive right to the public distribution of drugs in our country. The County Councils have the right to operate their own hospital pharmacies, but in 25 of the County Councils the directors have given Apoteksbolaget the responsibility for coordinating the drug supply for the inpatient care also. The guidelines for the activities of the Company were laid down in an agreement made between the Government and the Company.

The Company was required, among other things to:

- provide information and statistics, independent of producer influence, about drugs,
- make sure that the personnel engaged in drug distribution meet all safety requirements.

As patient education must influence both knowledge and attitudes, it is often impossible to achieve good drug compliance only by giving information on the drug treatment in connection with illness. This information must be conveyed already at an early age. Therefore it is important to reach schoolchildren with information and education on drugs and the role of drugs in the treatment of diseases. The pharmacies in Sweden have during the last few years taken a very active part in the instruction of schoolchildren. During the school year 1982/83, pharmacists gave lessons in about 40% of all classes in grade 9. This means education of approximately 50,000 teenagers. During two hours they are given a description of:

- the role of drugs in the treatment of illness
- how the drug acts in the body
- practical advice for the use of drugs.

This education has been evaluated both as to attitudes and knowledge. A few examples: in one attitude inquiry 175 schoolchildren were included. About 70% thought that drug education at school is important and that the educational material was easy to understand. When asked how much they felt they had learned during this education period, 6% answered many new things, 78% some new things and 16% nothing new. In an inquiry on the influence on knowledge, 150 pupils participated. One question was the following: "You have received a drug on prescription. On the label it says: 1 tablet 3 times daily. You take the first tablet at eight o'clock in the morning. When shall you take the second and the third tablets and when shall you take the first one the next day?" The replies were considered correct only if all three parts of the question had been correctly answered. Before training, 18% answered correctly but after training 75%.

We have compiled educational material for the youngest school-children. The material comprises a number of pictures that can easily be transformed into overheads, with a brief text. It describes how to prevent, alleviate and cure infectious diseases. This is an area well-known to all children. The idea is that the teacher shall use this material when the children in his class have been vaccinated against some infectious disease, when one of the children has been affected with pneumonia or a similar disease or in connection with epidemic flu.

The public can be reached in several different ways: through patient organizations, pensioners' associations, etc.

An important goal is to make the patient so well-informed that he dares to ask the doctor about the medication which he shall later handle by himself. We have made a video-film intended to be shown in medical wards called "Ask about your medication". In this film, three people - two elderly persons and one young man - put questions to the nurse and to the doctor. The questions raised are such as everyone should ask before starting a medication. In the film is also shown different preparation forms and how to use them as well as simple aids to remember when to take the medicine. Both patients and medical-care personnel have been very enthusiastic.

In one inquiry we asked about 50 inpatients about this film. 75% found that it raises a subject which is important; 45% said the film had given them something to think about and 95% thought that one should continue to show the film on the ward.

Even if there are several different ways to reach the public outside the pharmacies with patient education, our most important opportunities to give information come when the drugs are delivered at the pharmacy. Having access to the drug package that the patient shall later use and to the supplementary written information, if any, provide us with a unique opportunity for rational and individually adapted information.

By analysing the sales in pharmacies, it appears that there is not always a clear connection between what is best sold to alleviate temporary illness and the knowledge we have of what is best documented. In order to bridge the gap, we have developed a booklet describing in a simple way the characteristics of each illness and giving instructions for self-care in the best way and when it is advisable to seek a doctor. These written recommendations can then be read at home. The evaluations made have also shown that this information has given very good results.

Some examples: With the exception of colds, people had in 30% of the cases changed from the earlier treatment of mild disorders to the recommended treatment. Furthermore another 30% stated that they already applied the recommended therapy but considered it an advantage to know that this treatment in fact agreed with the one recommended by medical care. If the sales statistics are studied, it is clear that there has been a considerable shift towards recommended drugs.

Without exception, the most important role of the pharmacies when it comes to education and information appears in connection with the sale of prescription drugs. That is the last chance of influencing the patient towards a correct drug treatment in order to regain health and to avoid side effects.

In a systematic study of all Swedish drugs, were selected in the first place drugs that at each transaction should be accompanied by oral and written information. With this as a basis a computerized system has been developed which gives, inter alia, a number of informative messages repeating the information of the doctor about the effects of the drug, for example:

- Reactions may be temporarily slowed (for instance in driving).
- May cause dryness of the mouth, etc.

In total about 20 such informative messages are at present included in the system. Furthermore approximately 30 informative messages on practical use and for instance how to store drugs are included. These are for example "must be swallowed whole", "to be kept in a refrigerator", "to be applied thinly", etc. At present a total of about 40% of all prescription drugs are covered but the system will certainly be enlarged. For some informative messages there are also supplementary pamphlets, for example for drugs causing dryness of the mouth.

The introduction of this system has been followed by evaluations of patient attitudes and influence on patient knowledge. Some examples:

"How would you prefer to be informed about drugs at the pharmacy?"

- | | |
|--------------------------------|---------------|
| - Oral information | 32% preferred |
| - Written information | 42% preferred |
| - Oral and written information | 24% |
| - I do not know | 2% |

After this, an example of the influence on knowledge:

"Which drugs should not be taken together with tetracyclines?"

The alternatives were:	<u>Control group</u>	<u>Test group</u>
- Iron and headache powders with caffeine	2%	0%
- Iron and preparations for constipation	4%	4%
- Iron and antacids	10% answered the correct alt.	76% answered the correct alt.
- Iron and large doses of vitamin C	2%	1%
- Iron and certain cardiac remedies	2%	2%
- I do not know	80% answered	17% answered

The control group got no information at the pharmacy, which gives an indication of how much the patients remember of the information given by the doctor. The test group, on the other hand, was given information at the pharmacy, among other things that one should not take iron preparations and tetracyclines or antacids simultaneously. The interviews were made by telephone a few days after the day the drugs had been handed out at the pharmacy.

It is a demanding task to try to enter into the needs and wishes of the patient concerned when it comes to drug information.

Among the Swedish public there is a large group of people who want more information on drug treatment; a discussion concerning the introduction of informative package inserts has been going on for many years. Very soon we will have produced about 60 information sheets covering most prescription drugs in Sweden. This work has been carried out in the following way: our Information Department has compiled a preliminary text following a certain pattern. This text has then been checked by medical experts and the drug industries concerned. The written information repeats and supplements the doctor's information. If anything in this information is not clear, the patient is requested to ask the pharmacist, but if the patient has other questions concerning the treatment, these questions should be put to the doctor.

Under the heading "How does the medicine work?" an explanation is given in simple language how the drug should influence the disease in question.

Under the heading "How shall I take the medicine" the brief dosage instructions transferred from the prescription on to the pharmacy's label are elucidated. Here is also stated if the drug should be taken in special relation to meals and if the preparation form requires special attention or use.

Under the heading "Can I get side effects?" such side effects are listed that the patient can notice himself.

Under the heading "Who should avoid taking this medicine?" mainly those medicines that should not be used during pregnancy or breast-feeding are listed.

Under the heading "How shall I keep the medicine" the patient receives in writing the same information that is also given orally when the drug is delivered at the pharmacy.

A study of patient attitudes to this written information comprised about 200 patients who were interviewed twice: once at the pharmacy counter and once by telephone, 3 to 7 days after the visit to the pharmacy. The rate of reply was very high, 96%. The patients find the information on the information sheets very important or important. No significant change takes place between the interview at the pharmacy and the one by telephone. 92% of the patients think that the information is easy or very easy to understand.

None of these studies has tried to measure compliance. So far we have not got any good studies of this type. Naturally we are trying to fill this gap as soon as possible. But everyone who has thought about and read compliance studies knows that these are very complicated indeed. What we will try to analyse are the cases when the patient uses his drug incorrectly due to ignorance or misunderstanding.

It was said at the beginning that mass media and above all weekly magazines and journals have influenced attitudes towards drugs in such a direction that many people have misunderstood the role of drugs in the treatment of diseases. Four years ago we started publishing a customer journal called "Apoteket" (The Pharmacy). This journal is published four times a year and is given free of charge to pharmacy customers. The journal shall also spread general knowledge about common diseases and their treatment as well as information and advice in the field of self-care.

In recent years Sweden has become a popular tourist country. Also, Sweden has a large number of immigrants. Tourists and immigrants often speak a language which is not understood by the pharmacy personnel. Therefore we have compiled the oral and written information which the pharmacy shall give in ten different languages. A complicating fact is that the pharmacy personnel cannot know from where the person not speaking Swedish comes. To cope with this, we have turned it all around; on the counter in Swedish pharmacies there is a board with ten flags. On this we ask the customer not speaking Swedish to point out the flag of his country so that he can get the dosage instructions in the right language.

3.4 EXPERIENCE FROM NEPAL: THE TRAINING OF DRUG RETAILERS

1. Background

A. The training programme for drug retailers and wholesalers

It was estimated in 1983 that the private sector accounted for about 87% of pharmaceutical consumption in Nepal. Thus the majority of pharmaceuticals in Nepal are distributed to the general public by untrained businessmen through an estimated 1,500 drug shops.

In an endeavour to protect the general public from the dangers of this uncontrolled system, the Department of Drug Administration (D.D.A.), HMG of Nepal initiated a 50 hour training programme for the untrained businessmen and to date 1,600 have been trained - approximately 40% of the country's retailers. The training is in accordance with section 17 of the Nepal Drug Act 1978 which requires the presence of a pharmacist or "professionalist" during the sale of certain categories of drugs. Drug retailers who have been educated up to class 8 standard (i.e. should be able to read and write basic Nepali and English) are accepted as trainees. In practice the educational background varies from graduates in Kathmandu to those who can barely read English from interior parts of the country. Although Nepali is used for the teaching medium, there are sometimes language difficulties as some trainees speak Maithali or Bhojpuri etc. as their first language. On successful completion of the programme and after a specified period of work experience, the retailers are recognized by the Department of Drug Administration as "professionalists" and are registered as such.

B. Objectives of the training programme

It is aimed that on completion, the retailers should be able to:

- (1) care for and store drugs in a way which will preserve the quality of those drugs;
- (2) accurately interpret and dispense prescriptions written by doctors;
- (3) give appropriate advice to customers about the correct use of commonly used drugs, and where necessary advice about suitable precautions;
- (4) apply the relevant clauses of the current Nepal Drug Act rules and regulations to the daily work in an ethical manner.

Objective (3) is of particular interest to this working group, and means of achieving it will be briefly described. It is felt that this formal government run programme offers a very useful entry point for improving the advisory role of drug retailers and hence improved drug use by patients.

2. Common examples of incorrect drug usage which are partially/totally caused by drug retailers' lack of knowledge/communication to customers

In order to gather an impression of some of the common examples of incorrect drug use caused partly by the retailers' lack of knowledge and communication with customers, it was necessary to visit different shops to observe customers' queries/complaints, retailers' advice, drugs sold and to interview the retailers. This has been done regularly to remind the D.D.A. trainers of the most common problems which their training programme is attempting to solve. It may be useful to do a more scientific study in order to convince higher authorities of the extent of these problems. The following list of examples have been covered by the training programmes:

- Incomplete courses of antibiotics (both oral and injectable forms).
- Use of topical corticosteroids for all types of skin disorders (both infective and non-infective).
- Use of chloramphenicol or chloramphenicol/streptomycin combinations for all aches, fevers etc (usually a maximum of 5 capsules). In certain areas of Nepal there is even a Nepali word for chloramphenicol-streptomycin.
- Injection of streptomycin/penicillin combination for cough, fever etc. (There is widespread belief that the streptomycin reduces the incidence of penicillin sensitivity reactions).
- Use of antidiarrhoeals, antibacterials for diarrhoea in children with inadequate trust in ORS.
- Incorrect preparation of ORS (e.g. emptying a small quantity of packet into a teaglass and mixing with water).
- Use of glucose or non-WHO formula rehydration solution for diarrhoea in children.
- Use of noramidopyrine (dipyrene) for all fevers, aches, pains etc. both alone and in combination with oxyphenbutazone.
- Use of inadequate courses of anti-TB drugs, anti-malarials, anti-leprosy drugs.
- Use of tonics, vitamins for all types of disorders.
- Incorrect preparation and use of antibiotic syrups (e.g. adding boiled water, inadequate volume of water etc.).
- Use of tetracyclines in children/pregnant women.

When looking at solutions to these problems, it is clear that a five-fold approach is necessary:

- (1) Control the availability of certain products (e.g. chloramphenicol-streptomycin) through product registration. The D.D.A. is in the initial stages of implementing the legislation and is at present making an inventory of marketed products for the purpose of evaluation and registration.
- (2) Control the drug information supplied to all health professionals and drug retailers on marketed products.
- (3) Give refresher training to all levels of prescribers so that they understand why certain products should not be prescribed etc.

- (4) Improve the knowledge of drug retailers.
- (5) Improve the knowledge of consumers by different means e.g. by improving the retailers' ability to communicate information on drugs effectively.

The training programme deals with approaches (4) and (5).

3. Content of educational materials and teaching methods used

In order for the retailer to be able to give appropriate advice to customers he needs to have some basic knowledge about the drugs he is selling and also be skilled in communicating this information to customers. He also needs the right attitudes of motivation, interest in the customers being able to take the medicine correctly etc. In order to develop this knowledge, skills and attitudes, lesson plans have been developed for the programme using the following pattern:

- (1) The facts and information are presented using visual aids in some cases.
- (2) Activities are set so that the retailers can use the facts they have just learnt e.g.:
 - by asking them to find the facts in the Appendix of the "Handbook for drug retailers and wholesalers" in order to answer questions (problem solving exercises);
 - by asking a few of the retailers to explain the facts.
- (3) Emphasis is given to developing their ability to find facts rather than memorize them. The way to communicate information is described and demonstrated using role play in order to illustrate why effective communication is important.
- (4) Practice sessions are arranged so that retailers can practice finding information and communicating it verbally to customers. Of the 50 hour course, approximately 15 hours are devoted to teaching pharmacology and communication of information.

The content of the programme and some visual aids used to illustrate important points are found in the handbook for drug retailers and wholesalers which is at present being revised. To date no illustrated materials have been prepared for the retailer to use when explaining things to customers although they have been observed to use pictures from the handbook for this purpose. The pictures have not been pretested on consumers - only on retailers. It is expected that they would have to be adapted for this purpose - given that the majority of customers are illiterate or semi-literate.

The Hill Drug Scheme run by the Britain Nepal Medical Trust (BNMT) developed a small picture story for their drug retailers to use in convincing their customers of the need for a full course of antibiotics and anti-TB drugs. An adapted version has been included in the handbook. The BNMT did not formally evaluate the effectiveness of the picture story, but the retailers (who are generally more highly service-oriented than the average drug retailer) found the story useful and very often effective. The adapted version has been briefly tested and now needs to be revised so that each picture is on a different page (the sequence was difficult to follow).

4. Problems encountered in using educational materials and teaching methods for retailers

The lesson plans, visual aids and handbook are being revised regularly with more teaching experience and hopefully will be translated into Nepali very soon. The main problems encountered in using the materials and methods to improve the knowledge and communication skills of the retailers have been as follows:

- (1) The fact that a Nepali version of the Handbook has not yet been produced.
- (2) The ability to find information from the Handbook on the correct advice to the customer depends upon the retailer's ability to read the generic name on the product label and then find it in the text. Even when drug names are written in Nepali script in the book, the difficulty in reading English generic names on labels will remain.
- (3) The programme to date has not catered enough for individual learning needs. This is very important given that there is such a wide variation of educational backgrounds, languages, ages, and learning abilities among the trainees.

Information and visual aids illustrating toxic effects, the need for a full course of antibiotics etc. are not convincing enough to many of the retailers. This is because:

- The retailers have usually not experienced for themselves the dangers of the drugs (e.g. chloramphenicol toxicity, etc).
 - The Bangladesh Drug Policy film was effective because it showed actual examples of drug toxicity (e.g. anabolic steroids, noramidopyrine etc).
 - The practices of physicians in the local community (or even sometimes in the back of the drug shops) and information from pharmaceutical companies often conflict with the information given to the retailers in the training programme. They then have to decide whether the physician (who usually has a very high status), the glossy information sheet or the trainer is correct.
- (4) The effectiveness of the materials obviously depends also upon the teaching skills of the trainers. As most have not had formal teacher training they are learning from experience. Brief workshops have been conducted to improve their knowledge and skills. At present they are participating in a teacher training course at the WHO Regional Teacher Training Centre for Health Personnel (RTTC), Sri Lanka.

5. Evaluation of the educational materials and teaching methods

Their effectiveness, as mentioned above, is dependent upon the attitudes and teaching skills of the DDA trainers which have been and are being upgraded. Observations of teaching sessions and discussions with the retailers has shown that the visual aids are generally understood by all when the trainer has explained the content in Nepali. Exercises, teaching the use of the Handbook, problem solving and role play have all significantly improved the knowledge of the retailers and their communication skills. For this reason, the use of these methods should be increased in the training programme which can be implemented after the attitudes and skills of the trainers have been further upgraded.

Discussions with trained retailers in their shops 6 months - 1 year post training and observation of their work has shown that:

- their knowledge of basic facts about drugs is present but they often do not keep the Handbook in the shop for reference because it is too valuable;
- even though they know the facts they often do not apply them to their work. This is probably because:
 - the facts are not a reality for them,
 - customers demand items e.g. a few antibiotic capsules, and the retailers cannot refuse because they are afraid to lose customers,
 - of the influence of pharmaceutical representatives, advertising from pharmaceutical companies and practices of local prescribers.

6. Suggestions for improvement

- (1) Study the practices, behaviour of drug retailers and patients more carefully in order to have more detailed understanding of the problems and dangers involved and to give further direction to the training programme and other educational inputs for patients.
- (2) Expand the drug retailer training programme to provide more time for active learning.
- (3) Use real life examples of drug toxicity to make retailers more convinced of the dangers involved in their work.
- (4) Prepare educational materials for patients to be distributed/demonstrated in retail pharmacies, and through other channels e.g. local cinema halls inter alia etc. The feasibility of this approach will depend upon initial research described in 6.1.

ANNEX 4

Excerpts of comments from other WHO units asked to give their views on the draft report. These excerpts do not include the technical comments which have already been incorporated in the report.

4.1 Division of Communicable Diseases

Leprosy (LEP)

"With reference to DAP's memorandum of 30 January 1986, we have not developed any patient educational material on the use of drugs against leprosy but would be interested in doing so. However, we are at present finalizing the next edition of "A Guide to Leprosy Control" which has a section on the use of drugs for health workers (copies enclosed). It may be possible to develop patient education material from the information included in this section."

Programme for the Prevention of Blindness (PBL)

"The approach used in this report is interesting and well worth following up." "We should be interested in discussing this further with DAP"

Programme of Sexually Transmitted Diseases (VDT)

"The problem of patient compliance is particularly pronounced in the field of STD (sexually transmitted diseases) therapies; these need often to be applied at dosages which are close to the limit of human tolerance. Aware of this problem including the behavioural pattern of STD patients preferred therapies are single session regimens which can be applied by health care workers. In general, shorter or simpler treatment regimens (e.g. doxycycline 100 mg, b.d.) may be regarded as more cost effective than a difficult regimen to follow (e.g. tetracycline HCl 500 mg, q i d, "between meals"). Counselling of STD patients as part of health education by health centre staff, etc. includes the explanation of the prescribed therapy in order to increase patient compliance.

With the aim to improve prescription practices the programme stresses the need for formulation of standard treatment regimens and their wide dissemination in the public and private health sectors.

In our opinion, public education may not offset the deleterious affect of the uncontrolled availability of drug preparations particularly in the case of STD patients which often meet with prejudicial attitudes of health care providers."

Veterinary Public Health (VPH)

"Prior to testing of the patient educational materials it would be necessary to conduct research on health behaviour of the people, their needs, knowledge about drugs, availability of essential drugs in that area."

4.2 Cardiovascular Diseases (CVD)

"One part of the WHO Intensified Programme for Cardiovascular Diseases is the Rheumatic Fever/Rheumatic Heart Disease (RF/RHD) Prevention Programme. The recommended drug for secondary prevention of RF/RHD is benzathine penicillin, but, under certain circumstances, erythromycin and sulphonamides are sometimes used. The health education message related to the need for regular prophylaxis and the importance of patient compliance is given to patients and their parents, as well as the general public. The methods used are developed locally and there are no prepared materials available in CVD"

4.3 Malaria Action Programme (MAP)

"We have reviewed the report with great interest. The subject is of direct relevance to strengthening diagnostic and treatment services, which is of the highest priority in developing malaria control in the context of primary health care. Although the question of health education for malaria control has received some attention, the specific concern with patient and provider of educational material has not been addressed. DAP's initiative in this regard is most welcome."

"Malaria drugs are often provided to the public primarily or largely by providers working outside of the public health services. They are a group that may require educational messages."

"It is difficult to comment on the soundness of the messages defined (Tables 1 and 2) since the importance of the individual messages will differ from drug to drug and situation to situation, and the material to be used will need to be adapted to the specific education approaches presently in use. As regards Annex 2, page 18, and its general message; all depends on whether diagnostic facilities are within easy reach. If so, the person should go to have a blood sample taken and be treated according to the test result. If not, and malaria responds well to chloroquine in the given area, they should rather take a full course of chloroquine as is mentioned in the second opinion of the specific message. If diagnostic facilities are within easy reach, it would be wrong to let the patient swallow the tablets prior to blood sampling (the patient may not even go to the health worker if his condition improves, or may delay going which would render microscopic diagnosis difficult or useless)."

"We would be interested in collaborating with DAP in this activity."

4.4 Expanded Programme on Immunization (EPI)

"In terms of the message to parents or "caretakers", EPI differs from Essential Drugs in that the message is very simple - "attend for vaccination" i.e. is motivational, whereas Essential Drugs has some complex messages about activities such as frequency of drug taking. But we see the basic requirements of good communication as being the same, and found the paper useful."

"Moving from the specific to the general, had your group thought of creating a simple manual on producing effective health education material for developing countries?"

4.5 Educational Planning, Methodology and Evaluation (EPM)

"The document on "working group on educational material for patients" has been reviewed. It is well oriented towards action, its objectives are explicit. The group was concerned with "materials" but it seems that all the "messages" can also be conveyed orally. It was not clear why TV/Video is only considered to convey messages about "Tonics" and TV, radio, cinema and theatre only again for tonics and chloroquine."

4.6 Diarrhoeal Diseases Control (CDD)

"We were interested in the report of the discussions and recommendations of the working group, which touched on a number of subjects of particular interest to CDD."

"As you know, we have placed considerable emphasis on the training of managers, supervisors, physicians and nurses. We have encouraged countries to develop material for peripheral level staff, including paramedical workers. We are concerned that we have not done enough specifically for pharmacists, and thus the attention which the working group paid to this particular group is of interest to us. Recently we have with PHA (Unit of Pharmaceuticals) initiated a project with the International Pharmaceutical Federation in an attempt to influence what we recognize to be an important target audience, particularly for ORS. We would also welcome collaboration with DAP in this area.

Another activity which is related to the subject of the working group is a manual we are preparing on "Communications", which will include a number of the concepts discussed in the Annexes of your report. The audience for this manual will be CDD Programme Managers, and it will provide guidelines on understanding and using consumer oriented approaches to oral rehydration therapy, including message design, testing and monitoring. We expect that this manual will be field tested this summer."

"We would welcome any further initiative in this area which you may wish to suggest."

4.7 Oral Health (ORH)

"ORH has found the material most interesting and relevant, as well as urgently needed. Recent studies (e.g. Dr H. Murtonaa, University of Helsinki, Finland) reveal that most dental health educational material produced in Finland is too complicated and sophisticated to be correctly understood by patients and other target groups of health education.

WHO/ORH has made attempts to produce and encourage other producers of health education materials to prepare patient educational material that would be accurate, relevant and easily understood by the patients."

ORH has found Annex 3 particularly useful for further use in developing patient educational material for oral health care, especially for self-care."

4.8 WHO Regional Office for Africa (AFRO)

"The Working Group has covered most of the areas high-lighting some difficulties encountered in various parts of the developing countries. On our part in AFRO we realize that a large number of our patients or consumers are illiterate and therefore the rational way^s of propagating information is by i) verbal communication e.g. directly or by radio and ii) visual e.g. pictures, television or cinema.

We therefore place much emphasis on those two in addition to written instructions. Scarcity of packaging materials often makes it difficult to write instruction for the patient e.g. our recent visit to two Health Centres in Kenya revealed that the patients received their tablets in folded old newspapers on which it was impossible to write instructions. Any directives were given to patients verbally."

4.9 WHO Regional Office for the Western Pacific (WPRO)

"There has been no activity in this field. However, it is proposed that "Strengthening of Communication, Information and Education on Medicines to the Community" be included in the ASEAN (Association of South East Asian Nations) pharmaceuticals project."

"The usefulness and importance of developing such patient educational materials cannot be overemphasized. However, in doing so, special care must be taken so that materials, such as Tables 1, 2 and 3 of your report are adapted to the culture and behavioural patterns of the particular target group."