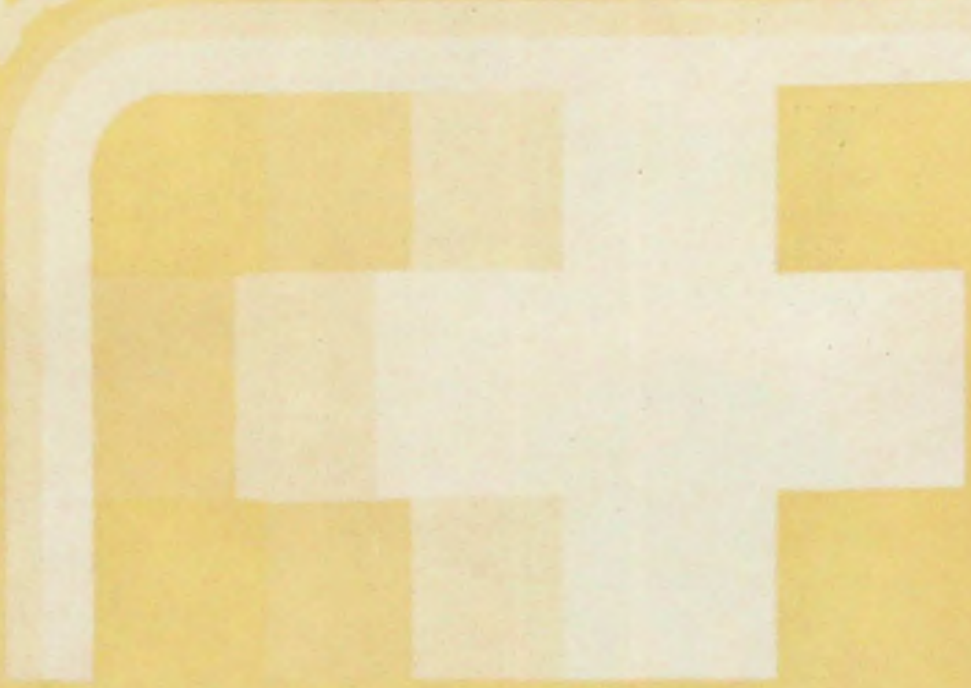


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MEDICAL SERVICE



**Special Convention Issue on
"Towards a People Oriented Drug Policy"**

"Physicians prescribe medicine of which they know little, to cure diseases of which they know less in human beings of which they know nothing".

— Voltaire - 18th century

medical service

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"the love of christ
urges us" 2 cor 5:14

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Guest EDITORIAL

let my people go

An editorial on "a people oriented drug policy"—what should it be ?

It could be an angry outburst

- against the senseless proliferation of inessential brand drugs;
- against the outrageous pricing of these drugs;
- against blatant overproduction of drugs for the well to do and the consequent underproduction of drugs most needed in the country;
- against the unholy collusion between the industry and the profession;
- against the mindless misinformation that pervades the scene ?
- against the heartless dumping of drugs in the Third World Countries.

It could also be a fervent plea

- for the adoption of an essential drugs list;
- for discernment between the essential and the inessential for some kind of social control to ensure satisfactory production of drugs most needed in the country for abolition of brand drugs;
- for adoption of a global marketing code and a boycott of all companies that violate the code;
- for quick exchange of information among consumers, educators and media personnel.

But as I survey the scene and look at the total control the industry has over the profession and the people I can only say with Yahweh of the book of Exodus "Let my people go".

Drugs and the Chai Vision

WE PAY RESPECTFUL HOMAGE TO OUR DEPARTED PRIME MINISTER INDIRAJI



"Even if I die in the service of the nation I will be proud of it. Every drop of my blood will contribute to the growth of this nation and make it strong and dynamic".

- Indira's famous last words, Oct. 30, 1984

Now is the time for every Indian to work together towards the fulfilment of Smt. Indira Gandhi's dream of a **UNITED AND PROSPEROUS INDIA** and to pray to God Almighty for an early fulfilment of it.

Drugs and the Chai Vision

The experience of a group of Social workers in T.B. eradication and rehabilitation programme in one of the slums in Bangalore is an eye opener. Most of the inhabitants of this slum were T.B. patients. After a careful study of the problem and identification of the affected people the social workers started distribution of free medicines in the slum. To their surprise, the situation remained the same, and infact observation proved that, the health condition was deteriorating day by day. Soon they found out that the patients who received the drugs were selling it out to the nearby medical stores for the tiny income that it brought to them in order to meet their basic need for food !

According to reliable sources, there are over 25,000 drug formulations in India, being manufactured by 5000 and odd drug industries. What does this abundance means to the millions of the poor in our country, who struggle in life to make both ends meet ? Can they ever have access to the modern health care system which has become a business today, rather than remaining at the service of the humanity at large. Do they have essential and life saving drugs at their reach with in a price range they can afford ?

Unlike in the past, today, health is understood as the total well-being of individuals, families and communities as a whole and not merely the absence of sickness. But the over all view of the drug situation in our country claims to provide ready-made solutions to all the problems to which the common man is exposed today. These magical solutions suggested by the drug industries through the powerful media displays little analysis of the economic, social, political and cultural forces that are at work in society,

which make people sick and constantly keep them in ill health. For instance, the ordinary man is made to believe that Depsonil can cure his depression, which in fact is caused by various forces at work in the society to which he has fallen prey.

The present medical system is based on western patterns and emphasise more on curative aspect. It constantly generates myths in the common man. Through these process the control of health is expropriated from the individual's hands and today it is in the hands of the drug industrialists and the medical personnel. Thus man is deprived of his basic decision making power which is unique to his species.

In the present situation where the whole medical care has become a profit oriented business, it seems to us that the real answer to the problem is a political one. This would consist of a process in which people are made aware of their rights, duties and responsibilities so that they can get organised for appropriate actions to fulfil their basic needs as human beings. Unless and until this is brought about through grass root level and people based activities, never will they be able to counter act the challenges posed by the drug industries, and participate as people in the nation's movement towards health for all by 2000 A.D.

Health care has become part of the exploitative system in our country. The exploiters are the drug industrialists and the exploited are the masses. The middle man's role is played by the medical personnel, supported by the media. The doctor is encouraged to prescribe a particular brand of drug manufactured by a certain company. Medical

representatives of different pharmaceuticals are lobbying around medical personnel and health institutions, and naturally the more medicines a doctor prescribes, the more lucrative the profession becomes for him. Depending on the stock emptied, the rewards vary from paper weights to motor vehicles. Side by side the media has brain washed the common man to believe that more medicines means faster cure; even though many of the drugs available today are toxic or with harmful side effects.

The dilemma involved in this problem is better illustrated in the following conversation. The patient was asked :

Q. Why do you take so many drugs ?

A. I take them since the doctor has prescribed it.
(Then the doctor was asked)

Q. Why do you prescribe so many different, but similar and expensive drugs ?

A. I have to prescribe them since the patients expect them.

The experience of one of our team members in a community health programme clearly illustrates the interests of our health institutions. The community health workers through an intensive campaign successfully dewormed a village that was adjacent to a hospital. In the following months, the income of the hospital showed a steep downward trend, which was reacted by the hospital authorities. The commotion that followed ended up finally in winding up the community health programme which was initiated and supported by the same hospital.

Who's interest is at stake here ? Who's interests are we serving in our institutions ?

By gone are the days of right prescription at the right time for the right sickness'. The phenomena of over prescription can be better understood today when we realise that the medical industry is a business today, and it has altogether lost its saving and healing characteristics. As in any business enterprise; what counts most is the sale of the commodities and the total turn over. As people interested in the cause of the humanity at large, how long shall we continue to sit with hands folded and mouths shut, and enjoy the fun ? Is it not painful for us to realise that we are also part and parcel of this affair and that we will continue to be so until we rise up to protest vehemently to these dehumanizing situation.

The Indian drug market is always short of life saving and poor man's drugs; because it is not profitable to manufacture it. Of late, the tendency seems to be for commercialising some of the age old and traditional practices of the rural people. This again is a subtle way of taking away from the poor man's hand, what he has already, and this adds to the hosts of myths that we have already around the medical profession.

It is time for us to act. As people involved in institutions based on Gospel values and humanitarian concerns, it is high time that we made a serious reflection on how we respond to the growing misery and wretchedness of our people. The questions that we could ask ourselves will be; should we continue to function the way we are doing today, or should we search for new roles to make our healing ministry more relevant to the needs of the common man around us ?

CHD TEAM

The Drug Industry in India—

What our experts say

The Industry

The total output of the industry increased hundredfold—from Rs. 100 million in 1947 to Rs. 10,500 million in 1978-79. This was due to expanded production, especially of an ever-increasing number of sophisticated drugs, and rising prices...

The drug industry has enjoyed a higher man-average profitability so that investment therein has increased substantially from Rs. 240 million in 1952 to Rs. 4,500 million in 1977.

There are about 125 large and medium factories and nearly 3, 000 small scale sector units engaged in this industry which provides employment to about 100,000 workers.

Pattern of Drug Production

There is now an overproduction of drugs (often very costly) meant for the rich and the well-to-do while the drugs needed by the poor people (and these must be cheap) are not adequately available. This skewed pattern of drug production is in keeping with our inequitable social structure which stresses the production of luxury goods for the rich at the cost of the basic needs of the poor.

Out of a total production of Rs. 700 crores in 1976, 25 percent is taken away by vitamins, tonics, health restoratives and enzyme digestants, mostly consumed by the relatively well-fed urban population. Twenty percent is covered by antibiotics, only 1.3 percent by sulphonamides (a very cheap and useful anti-infective) and 1.4 percent by anti-tuberculosis drugs...

Pattern of Prescribing

One of the most distressing aspects of the present health situation in India is the habit of doctors to over-prescribe glamorous and costly drugs with limited medical potential. It is also unfortunate that the drug producers always try to push doctors into using their products by all means—fair or foul. These basic facts are more responsible for distortions in drug production and consumption than anything else.

Structure of the Industry

The existing drug policy rightly emphasises the attainment of self-sufficiency in the production of drugs, in increasing the share of the Indian producers and in giving a more significant role to public sector.

The foreign companies account for about 40 percent of the total drug production in the country; their share in the production of basic drugs was about 28 percent and that in formulations, 44 percent (1978-79). This is still high.

Price Control

The drug prices are high and continue to rise. In some instances, Indian prices are even higher than the international ones.

Packaging increases the cost of drugs very greatly because the trend is to make it attractive and highly elegant and to add cosmetic embellishments to promote sales...

There may indeed be a glut of applications for the introduction of 'Me-too Drugs' which will not attract new legislation for another five years in regard to price control...

Genuine 'breakthrough' research has declined in recent times.

Existing prices of drugs including those of essential drugs of everyday use is highly inflated. For example, the cost of analgin sold over the counter is 30 times the cost of production.

Prices are often inflated by the use of brand names.

Very often, prolonged controversy over the price of a drug has resulted in stopping its production.

The bill for import of bulk drugs, intermediates, solvents etc., has jumped from Rs. 53.77 crores in 1976-77 to about Rs. 119 crores in 1979-80.

Quality Control

The standards prescribed are unrealistic... are mechanically copied from books... and not uniformly enforced in all parts of the country.

Consumption of Drugs

At present the supplies of drugs to urban and rural institutions within the health care system is very uneven. In an urban hospital, for instance, the drug cost is Rs. 6 per patient

per year while in a Primary Health Centre, it is about 40 paise per patient per year.

An Overview

We recognise the value and significance of drugs in the health care system. We fully support the policy that all the essential drugs should be produced in the country, preferably in the Indian sector, and that they should be made available to the people at reasonable prices. To realize these objectives, it is essential to lay down and vigorously implement a national drug policy which will ensure that the pattern of drug production in the country (barring drugs meant for export) should be geared to its actual needs. While the supply of drugs should be adequate, *eternal vigilance is required to ensure that the health care system does not get medicalized, that the doctor-drug-producer axis does not exploit the people, and that the 'abundance' of drugs does not become a vested interest in ill-health.*

Source :

Health for All—An alternative Strategy : report of a study group set up jointly by the Indian Council of Social Science Research (ICSSR) and the Indian Council of Medical Research (ICMR).

Misuse and overuse of medicines—Why ?

Some Reasons

1. **Big business** The production and marketing of modern medicines is one of the biggest, most profitable business in the world. Drug companies are continually inventing new products to increase their sales and profits. Some of these medicines are useful. But at least 90% of medicine on the market today are unnecessary. Doctors prescribe them and people buy them, because the drug companies spend millions on advertising.
2. **False advertising** Especially in poor countries, much of the advertising, and even the information published in 'pharmaceutical indexes', is misleading or false. Information on dangerous side effects is often not included. Risky medicines are frequently recommended for illnesses less dangerous than the medicines. (For example chloramphenicol has often been advertised as a treatment for minor diarrhoea and respiratory infections).
3. **Dumping** Drug companies in wealthy countries sometimes produce medicines that do not sell well in their homelands. Or the use of certain medicines is restricted or prohibited because they have been proved unsafe. It is a common practice for drug companies to 'dump' these medicines on poor countries—often with a great deal of false advertising. For example, several years ago the U.S. government restricted the use of Lincocin (lincomycin) because

it proved more dangerous, more costly, and generally less effective than penicillin. The following year, thanks to massive advertising, Lincocin became the best selling drug in Mexico!

4. **Lack of adequate controls.** Poor countries, especially, have inadequate laws controlling the production and sale of medicines. As a result, many poor countries sell up to 3 times as many different medicines as rich countries do. Most of these medicines are a waste of money. Many are completely unreasonable combinations of drugs, yet they are widely prescribed by doctors. For example, in both Latin America and Asia, a popular injectable medicine is tetracycline combined with chloramphenicol. This is a senseless combination because the two drugs are 'incompatible' and should never be used together.
5. **Bribes and corruption.** Drug companies in rich countries pay millions in bribes to officials in poor countries so that governments will buy their products. (A major US Pharmaceutical company recently admitted to having spent millions of dollars on bribes to advance its products in poor countries).
6. **Sale of prescription medicines without prescriptions** This is common in many countries (partly because poor people cannot afford doctors' fees). Most people who 'self-medicate' try to use the medi-

cines well, so they follow the patterns set by doctors. Unfortunately, this often leads to incorrect use. For example, in Latin America at least 95% of doctors, prescriptions for Vitamin B₁₂ injections are among the most widely used self-prescribed medicines in Latin America—at a cost of millions to a people too poor to eat well!

7. **People not adequately informed.** Neither doctors nor the people are adequately informed about the correct use of medicines. Most doctors rely on the information given in misleading 'blurbs' supplied with sample medicines, while villagers who self-prescribe often receive no information at all. In Mexico, for example, upto 70% of prescription drugs are sold without prescription. Yet the packaging of these medicines generally contains no information about use, dosage, or risks.

8. **Health Workers not adequately informed** In spite of the tremendous amount of self-medication in most countries, many programs still do not teach health workers much about the use—or misuse—of commonly self-prescribed medicines. As a result, many health workers to meet popular demand, secretly purchase and administer a wide range of medicines they know little about.

9. **Use of medicine to gain prestige and power.** Another reason for medicine overuse is that many professionals use their ability to medicate as a sort of magic to make people grateful and dependent. This way they gain special privilege and power. In the same way, health workers may be tempted to give injections or expensive drugs when home remedies or kindly advice would cost less and do more good.

From Helping Health Workers Learn
—David werner and Bill Bower



This rare Himalayan herb will cure your headache. If it doesn't I'll give you a pill prepared by a famous multinational drug house.

Medication as a Substitute for Caring

Perhaps the biggest reason for overuse of medicines, however, is that doctors and health workers often find it easier to hand out medicine than to give the time and personal attention that people need.

About 4 out of 5 illnesses are *self limiting*. This means people get well whether they take medicine or not. **Most health problems can be better managed without medication.** What often will help people most is friendly advice and understanding support.

However, many doctors and health workers get into the habit of giving everyone medicine—for any and every problem they have. The less curable the problem, the more medicines they give!

At the same time, people have come to expect medicine every time they visit a

doctor or health worker. They like to believe that "there is a medicine for everything". They are disappointed if the doctor or health worker does not give them any, even when medicines will do no good and the health worker carefully explains why.

So a 'vicious circle' results in which the doctor always gives medicine because the 'patient' always expects (or demands) it, because the doctor always gives it. **The prescribing of a medicine becomes both the symbol and the substitute for human caring.** This problem especially common in places where doctors, nurses, and health workers are over worked. The result is not only a costly overuse of medicine, but a failure to meet human needs on human terms.

—Helping Health Workers Learn
David Werner and Bill Bower.

"The physician who sets about to treat a disease without knowing anything about it is to be punished even if he is a qualified physician; if he does not give proper treatment, he is to be punished more severely, and if by his treatment the vital functions of the patient are impaired, he must be punished most severely."

—Koutilya Arthashastra

But some are more essential than others!

by Ernst Lauridsen

Essential drugs? But aren't all drugs essential?

If a doctor in New York or New Delhi, in Dhaka or Dongola, writes a prescription for a patient, isn't that drug absolutely essential for the patient's health? Aren't the newest drugs better than the older ones? Aren't a lot of different drugs better than a few drugs?

Not exactly, says the World Health Organisation.

In 1977 WHO started a peaceful revolution in international public health. It asked a group of experts which drugs were really necessary to take care of most health problems. This WHO Expert Committee came to the surprising conclusion that about 200 drugs and vaccines could be considered essential in good medical practice. Most of them were of proven efficacy, with well-known therapeutic properties. Most were no longer protected by patent rights and could be mass-produced at a reasonable cost to patients.

The WHO Model List of Essential Drugs was met with surprise, indignation and opposition in some quarters, although it offered a ray of hope in others. Many physicians, used to choosing among thousands of brand-name items, felt that their freedom to prescribe "their" drug of choice was threatened. The research and technology-based pharmaceutical industry feared that limitations in national lists of drugs and price competition from manufacturers of generic drugs would not only reduce profits but also make it difficult, if not impossible, for it to invest in research and development of new pharmaceutical products (see page 10).

The Model List of Essential Drugs has, however, stood the test of time. Though revised twice since 1977, it has needed only minor adjustments and is still limited to about 220 essential drugs and vaccines. More than 80 countries in the Third World have adapted the model list to their requirements.

Today, we know from country experience that using a limited number of essential drugs in the national formulary poses no threat to public health. On the contrary, there are numerous advantages, as this issue of *World Health* illustrates.

During the second half of the 1970s, much information came to light concerning the disastrous drug supply and drug use situation in developing countries. Many have been spending 20-30 per cent of their meagre national health budgets on pharmaceutical imports, and still the larger proportion of the population cannot get the most needed drugs.

The drug supply situation is often an imitation of the industrialized world. City pharmacies stock a huge variety of the latest antibiotics, combinations of vitamins with antibiotics, and anti-allergic or hormone preparations. Tranquillizers and tonics figure prominently, as do a plethora of anti-diarrhoeal drugs. Some of these are effective, many have no proven therapeutic effect, and numerous drugs sold are downright dangerous, particularly when used without proper medical supervision.

Governments face difficulties in procuring drugs and vaccines at reasonable prices. Storage and distribution pose major problems for the public sector. Most developing coun-

tries have found themselves in a paradoxical situation where those with money often over-consume, whereas the rural population has to go virtually without access to both old and new medicines, "wonder-drugs" and vaccines.

In response to these problems, country application of the philosophy of essential drugs has become the centrepiece of a global programme designed to make sure that a limited number of essential drugs of good quality are available at prices that poorer patients can afford. A strategy drawn towards the end of the 1970s eventually became the Action Programme on Essential Drugs and Vaccines.

This programme addresses the complexity of the world of pharmaceutical products and their utilization. In line with WHO's social goals, it focuses on essential drug availability in primary health care. If a limited number of essential drugs cannot be delivered on a regular basis to rural areas and the poorer sections of cities, the whole strategy of Health for all by the year 2000 will face partial or even total failure.

It is not that drugs are the only important element in health care, but drugs make the health service credible because they can cure disease and alleviate symptoms. Once patients are assured that their symptoms and diseases can be taken care of, they have confidence in the health staff and in the preventive and promotive elements of primary health care.

Country Support

The Action Programme on Essential Drugs and Vaccines is becoming a world-wide effort, with many partners involved.

Countries, of course, decide for themselves on the pharmaceutical policy they

want to pursue. Many of them have chosen an essential drug policy and some have accelerated their programmes with external technical and financial collaboration. UNICEF and WHO work together particularly closely, supporting countries in analysis of the pharmaceutical sector, formulation of national drug policies, selection of essential drugs, procurement, quality control; storage, distribution and training of health staff. UNCTAD and UNIDO support the transfer of pharmaceutical technology and the development of national capacity of formulate or produce a range of essential drugs.

The mighty pharmaceutical companies of the North are important partners in the improvement of drug supplies to the Third World.

The industry's decisions on research and development determine which drugs we shall have in the future. Its product marketing and promotion exert a considerable influence on drug consumption. Its pricing policy determines to a very large extent how far essential drugs and vaccines will become available to ever larger segments of the world's population.

The pharmaceutical industry is in a unique position. It has amassed huge resources which allow it to undertake the lion's share of pharmaceutical research and development. This concentration of power carries with it a special responsibility to support the developing countries in their drive to make essential drugs and vaccines available to their people.

The pharmaceutical industry is often criticized for being part of the problem. There are indications, however, that the industry would prefer to become part of the solution.

An increasing number of development agencies also support essential drug programmes, in partnership with countries that

some of the technical and financial resources to draw up and execute national drug programmes.

Prescribers and Consumers

Physicians and other health workers who prescribe, and dispensing pharmacists, are obvious partners for the Action Programme. The individual physician's prescribing pattern carries consequences not only for the patient's but for the nation's health.

Superficial diagnosis and examination followed by a shotgun drug approach are unfortunately too common. Many explanations are offered for this, and it is not hard to understand that a busy physician will resort to polypharmacy in the hope that one of the drugs may be the right one. But this is of little comfort to the patient for the patient's purse.

New information and training have to be provided for students of medicine, pharmacy and pharmacology before we can expect an improvement in the fine art of prescribing medicine. When drugs are prescribed only when absolutely necessary, and with due attention to the patient's understanding of how to use them, we are within the confines of good medical practice.

Patients, supported by better information and follow-up, should also take more responsibility for their own use of drugs. Frequently they travel long distances to a health centre, wait for hours, go with their prescription to a local pharmacy, return home—and take only part of the treatment. This phenomenon is certainly not restricted to developing countries, compliance or taking medicine as instructed, is often as poor in industrialized countries as elsewhere, in curious contrast to the ever-increasing demand for drugs.

Consumer unions can play an important part in education of the public in the correct use of pharmaceutical products. Useful in-

formation is being made available to lay people in some countries and has aroused considerable interest on the part of patients.

There is some basis today for cautious optimism: progress has been made in the last few years. Many countries have adopted essential drug policies or are already on the way to having effective programmes. The WHO policy and strategy on essential drugs have been demonstrated to be fundamentally sound and feasible. The money to buy sufficient quantities of essential drugs and vaccines is available—if not always allocated to drug procurement—in most countries, although some may require limited external cooperation. Less than a dollar per year, it seems, meets the cost per person for the drugs most needed in primary health care.

Many problems, however, remain to be identified and overcome. The world is a long way from making essential drugs available to all its citizens. And would that be desirable? Is it the ultimate medicalization of humanity? Will "availability" pave the way for an avalanche of drugs, so that we imagine that there is a drug for every human ill? Will drugs mask the real problems of poverty and unequal distribution of the world's resources?

Will the pharmaceutical companies mass-produce drugs for ever-increasing populations at affordable prices?

Will there be enough money to invest in research and development to drugs against tropical diseases, cancer and other conditions for which there is today no satisfactory treatment?

These and many other questions have to be addressed during the next few years.

WHO is doing its best to contribute to the goals set by its governing bodies. It will continue to work with all partners who share these goals.

Drug misuse in our Hospitals

G. D. Ravindran

Drugs are one of the most powerful tools which we have, to alleviate the physical pain and suffering of humanity. Unintentionally, we sometimes misuse these drugs. We hope that they will alleviate suffering, whereas they actually harm the patient. In India, consumer awareness is low and the number of malpractice suits filed against drug misuse are negligible. Hence, we tend to be complacent and go on misusing drugs.

Causes

The causes for misuse of drugs may be due to :

- a) lack of knowledge of the pharmacology of drugs ;
- b) lack of understanding of the aetiopathogenesis of the disease ;
- c) tendency to experiment with new drugs and combinations ;
- d) wrong techniques used to administer drugs ;
- e) aggressive salesmanship by drug companies.

To illustrate the above, I have chosen examples of drugs which are typically misused in general practice and in small hospitals. I will not include vitamins and tonics as enough has been written about them.

(a) Lack of pharmacological knowledge

One of the drugs frequently misused under this category is Oxytocin (syntocinon). Oxytocin is mainly used to (i) initiate labour ; (ii) accelerate labour ;

(iii) control atonic variety of postpartum haemorrhage (PPH). Except in severe PPH where it is not possible to set up an IV line or PPH occurring in domiciliary practice, it is not justified to give intramuscularly. It should always be given intravenously and the dose should be titrated against the severity of uterine contractions. However, in practice sometimes 20-30 units of syntocin are given intramuscularly to initiate or accelerate labour. It has been given to multipara with fully dilated cervix when there is failure of the secondary powers of labour. I have seen it being injected intrauterine or into the vagina. These types of misuse leads to disastrous results for the woman. The patient goes into uterine tetany, needing a caesarian section. There have even been cases where uterine rupture has occurred followed misuse of the drug. This misuse often occurs because the pharmacological knowledge of ANM's nurses and sometimes even doctors is poor. The drug is also freely available in the market without any restrictions. If this drug was controlled like the opiates then the incidence of misuse may reduce.

(b) Lack of understanding of the aetiopathogenesis of a disease

(i) Time and again I have come across the *misuse of antibiotics* in the treatment of fever. More than 2 or 3 antibiotics are given without making an aetiological diagnosis. Frequently when the fever does not touch normal, antibiotics are changed 'midstream' from one group to another without the full course being administered. Often inadequate or micro-doses of antibiotics are prescribed.

In larger hospitals, the tendency is to use the latest antibiotics that are available in the market, irrespective of cost or necessity.

Misuse of antibiotics leads to the development of resistant strains of the organisms and sometimes to the development of idiosyncratic reactions.

(ii) *Protein Energy Malnutrition*

This common condition in India is commonly mismanaged. I have seen uncomplicated cases of kwaoshiorkar being treated with Frusemide (Lasix), (with the mistaken idea of reducing oedema) followed by disastrous results.

(iii) *Psychiatric conditions*

Psychiatric drugs are another class of drugs which are brazenly misused. The average knowledge of a general practitioner in psychiatry is very poor. Instances of major tranquilizers e.g. largactil being prescribed for neurotic conditions and of anxiolytics e.g. calmpose being prescribed for psychotic conditions are quite common. There are instances when palpitation due to anxiety neurosis has been treated with digoxin.

(c) *Experimentation with new drugs*

Medical Science is progressing at a very fast pace. New and powerful drugs are entering the market everyday. A busy general practitioner has very limited time for reading. He depends mainly on promotional literature supplied by the medical representatives for his continuing education on drugs. These highlight only the beneficial effects of the drugs and in Third World countries the side effects and adverse reactions are usually glossed over: e.g. Rifampicin is rated as a wonder drug in the treatment of tuberculosis. It is freely available in the market and is cheaper than streptomycin. Hence there is a lot of scope for its misuse. It is given in

inadequate doses for varying periods in various combinations and for various conditions. In our country it is not included in the District TB Control Programme as a primary drug in the treatment of TB—trials are still being conducted; there are reports of resistant strains being produced. Till such time that it is included in the DTC schedule, we should refrain from using it indiscriminately.

(d) *Wrong techniques for administration of drugs*

Eg: (1) wrong techniques used for giving injections

—intramuscular injections given subcutaneously

—oily injections given in the arm

(2) using ordinary syringes to give insulin, tuberculin etc. The dose that is delivered will be lower than the specified amount due to dead space in the syringe.



(e) Salesmanship of drug companies

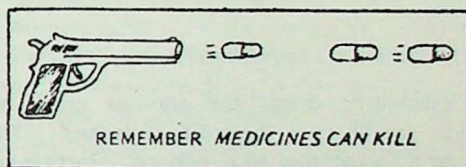
As has been mentioned earlier, aggressive selling techniques are a major cause for misuse of drugs. Salesmen are interested only in selling their products—often misinforming and misleading practitioners. I remember how a medical representative tried to convince me to buy amidopyrine because the government may soon ban the drug!

The pride of place for being the most misused drug in medicine should go to the steroid group. Steroids are used as a panacea to treat all ills. All the causes for misuse of drugs can be exemplified in their use.

- a. poor pharmacology—used indiscriminately for allergies of all types, fevers etc.
- b. aetiopathogenesis—most commonly seen in dermatology
- c. experimentation—in neurological disorders
- d. wrong technique—aerosol form of steroids

How do we protect ourselves against misuse of drugs? We should constantly

endeavour to keep abreast of newer developments in rational therapeutics. There are a number of bulletins/journals dealing with this subject. CHAI has taken a lead in establishing a drugs column in Medical Service—People, Pills and Prescriptions. If we have doubts, we could get them cleared through this column. Always insist that medical representative give product information and not merely promotional literature. Regional CHAI Units could organise Workshops in their respective regions on rational therapeutics.



Most importantly, we should educate patients regarding their rights. Let me end by quoting Sir Robert Hutchinson *"From making the cure of the disease more grievous than its endurance, good Lord deliver us"*.

One West African study showed that more appropriate prescribing could cut the drug bill by 70 percent. Most of this money could be spent on generic drugs, but this is resisted by the international drug companies who recruit leading doctors to their cause with little difficulty. These specialists, heavily involved in private practice, unite with the pharmaceutical companies under a banner of 'clinical freedom'

—David Morley, Professor of Tropical Child Health,
University of London

Medical Ethics Forum-36

Fr. George Lobo sj

Ethical Problems of Drug Prescription

Drugs are supposed to be prescribed for healing or beneficent purpose. But the harm done to the patient by the increasing over-pricing, over-prescribing and misprescribing of drugs is becoming manifest. The purpose of this short paper is to uncover the reasons behind this unfortunate situation so that effective remedies may be found to tackle it.

1) Modern life is being increasingly regulated by the *technological model*¹. Instead of technology being at the service of man, man is being ruled by technology. The technical order, in the first flush of its success, is entering into every nook and cranny of our life and seems to brook no inherent limitations. Thus human existence seems to be moving from qualitative progress to mere quantitative development which has little use for basic human values that cannot be measured on the quantitative scale of external results.

2) This has an effect on the understanding of health, disease and healing. *Instantaneous cure of the symptoms* is becoming the goal of medical procedures. The search is for wonder drugs which can provide quick relief, but leaving the underlying cause of the disease untouched or even aggravating it. The apparent efficacy of drugs leaves behind a host of what are called 'side effects' when often they become the malignant 'main effects'. Thus we have an increasing number of 'iatrogenetic' (doctor induced) diseases.²

3) The personal model of healing is being replaced by the *manipulation of the patients*³. Instead of personal dialogue concerning the deeper cause of the distress, trust is placed on the efficacy of bio-chemistry. The concentration is on artificial labels of sickness to be treated by mechanical means. The value-free or value-neutral model of science derived from physics and chemistry is quite appropriate when it strictly confines itself to these disciplines. But it acquires a dangerous tone when the manipulation freely extends to the sphere of human life. Man the manipulator ultimately ends up being man the manipulated. Human intervention, instead of serving the true interests of man, tends the violation of basic human values and rights.

4) The primitive witch doctor sought to create an air of mystification by his magical incantations. The modern therapist creates a similar effect by prescribing exotic drugs with esoteric names and whose action he himself scarcely understands.

5) Modern life tends to reduce the capacity of man to cope with pain and other forms of distress. Hence the *desire for quick relief*. The patient looks for magical results and seeks out those who will provide them. The physician is tempted to yield to this irrational urge without paying sufficient attention to the long term consequences. There is thus a vicious circle of mutual manipulation which diminishes the humanity of the patient as well as the medical practitioner.

6) The *capitalist system* with its insistence on the 'profit motive' and 'free enterprise' leads the multinationals and local big firms to exploit the consumer without caring for his true interests. While the pharmaceutical industry is meant to cater to the health needs of the people, the people become means of easy enrichment. Human persons become a means instead of being an end.

7) *The deep rooted cultural alienation*, which is an aftermath of colonialism and one of the more pernicious manifestations of neocolonialism, produces a glamour for everything that is foreign. The educated and even the neoliterate regard with awe the modern system of medicine because of its aline origin and with diffidence, if not contempt, at systems that are indigenous. Hence the uncritical acceptance of potent allopathic drugs and the equally uncritical rejection of local remedies. Superficial fascination for modern life enables drug companies to push their products by cosmetic embellishment and elegant packing for which the poor consumer has to pay heavily.

8) *The dependent status of developing countries* enables the multinationals to put undue pressure on the local authorities to permit their nefarious activities. The multinationals find a ready ally in local big firms even when their commercial interests may to a certain extent clash. Thereby, drugs that are unproved in the country of origin or even those that have been proved dangerous or ineffective can be pushed with impunity. The whole matter can be mystified by false claims like of special 'bio-availability'. Any attempt at regulating the distribution and use of drugs or of banning dangerous ones can be countered by visible and invisible pressures with the connivance of alienated specialists. The present craze for uncritical opposition to all governmental policies contributes to governmental inaction.

9) One of the consequences of mechanization of health care is that *initiative in drug development* has passed from the medical profession to the pharmaceutical industry. Traditionally pharmacy was subordinate to the physician. Now the physician is constrained to perform the pharmacological task assigned them by the drug industry. The inadequate pharmacological education of the medical school graduate does not provide the background to examine critically the claims of the industry for its products. Even research is often influenced by the interests of the drug industry. Medical journals become the vehicle of promoting the same interests. Companies use them as advertising media overwhelming the physician not only with publicity, but also with article after article on the product that is being promoted at the time. Thus they hinder legitimate scientific enquiry by placing articles designed to reflect industry views.

10) *Bourgeois competitive values* induce the physicians to seek the maximum advantage. Not only are they misinformed by cleverly prepared and attractively got up brochures regarding the efficacy of the drugs, but they are influenced by physician samples, (often sold), and other forms of inducements like pens, diaries and even conference attendance costs. It is indeed a sad fact that the continuing education of doctors is largely carried on by medical representatives and their information material containing a lot of half-truths. Besides, an undue desire for gain leads the physician to neglect the pin pointing of the disease and to prefer 'fixed combination' anti-biotics and 'broad spectrum' drugs to take care of multiple eventualities and thus be able to process a large number of cases during a working day. Thus there is an unhealthy and in many ways corrupt relationship between the medical profession and the drug industry.

11) On the other hand, *research on the therapeutic value of medicinal herbs and roots*, presented in some rare journals, collects dust in reference libraries. However, fortunately, the healing value of non drug therapies like Yoga, Pranayama, Meditation and Accupuncture is being increasingly recognized. Strangely, these are being patronized by the well-to-do than by the poor.

12) The technological and manipulative mentality is a block against the promotion of *preventive health*. It is yet to be fully realized that clean water is much more important than anti-biotics, wholesome food than vitamin pills, vaccination than expensive drugs or gadgets.

13) The technological mentality also leads to the transgression of the legitimate bounds of *human experimentation*. It is not permissible to use a drug unless it has been sufficiently tested in the laboratory and on animals. Further, an experimental drug may not be used when a certainly effective remedy is available, the risk is proportionately tolerable and there is at least the reasonably presumed consent of the patient. The practice of trying out experimental drugs on patients in poorer countries is to be condemned as a grave offence against humanity.⁴

The Remedy

The very exposition of these evils regarding drug prescription suggests a programme

to combat them. However, some of these will be here briefly mentioned.

1) There is need of evolving a more humane and person-centred approach to health care. This should above all seek the true interests of the patients. For this the time honoured principles of totality and of double effect must be clearly understood and applied.

2) The physician must regain the autonomy and ideals of his noble profession.

3) Cultural alienation and political interference of foreign powers must be unmasked and vigorously countered.

4) There is need for counteracting the pernicious aspects of materialism and capitalism.

5) There should be a massive movement against the manipulation of drug companies. While the more immediate perspective of abuses in the field of drugs must be attended to, the deeper political and cultural roots of the problem need to be tackled.

6) The well-intentioned efforts of the government to check the abuses in the production, distribution and use of drugs need to be supported.

7) Especially urgent is the effort to reduce prescription to roughly 200 essential drugs (WHO estimate) with generic names so that low cost, efficient and safe drugs are available to everyone.

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1. See Willaim Barrett *The Illusion of Technique*, Garden City, N.Y. Anchor Press. 1978.
 2. For Clinical Iatrogenesis and the Medicalization of Life, see Ivan Illich, *Limits to Medicine*, Calcutta, Rupa, 1977.
 3. Concerning the modern tendency to manipulate human beings, see Bernard Haring, *Manipulation*, Slough St. Paul Publications, 1975.
 4. For a more complete treatment of ethical principles regarding Medical Experimentation, see my book, *Current Problems in Medical Ethics*, 3rd ed., 1980. pp.100-105.

'If there are no side effects, this must be Argentina

DRUG COMPANY SPONSORED MISINFORMATION OF DOCTORS

In countries with less well-organized drug control mechanisms, studies have shown that the same drug manufactured by the same multinational company is sold for more indications.

with less contra-indications
less side effects

as compared to the information provided in U.S.A.

The following comparison of promotional literature for three drugs bears this out only too well.

Drug : **Tetracycline** (Antibiotic used against various infections; Lederle Laboratories)

	Caution Against Use	Adverse reactions publicized
U.S.A.	By infants, children; during pregnancy : Liver or kidney impairment (latter can be fatal) or if overly sensitive to light.	Vomiting, diarrhoea, nausea, stomach upset, rashes, kidney poisoning, can poison fetus.
Mexico	By infants, children; during pregnancy or if overly sensitive to light.	Vomiting, diarrhoea, nausea, stomach upset.
Brazil	By infants, children, during pregnancy.	Vomiting, nausea, stomach upset, rashes.
Argentina	None	None

Drug : **Ovulen** (birth control pills : GD Searle Co.) in US used for contraception only. In some Latin countries, Searle recommends it also for regulating menstrual cycles, premenstrual tension, menopausal problems.

	Caution against use	Adverse reactions publicized
U.S.A.	If patient has tendency to blood clot, liver dysfunction, abnormal vaginal bleeding, epilepsy, migraine, asthma, heart problem.	Nausea, loss of hair, nervousness, jaundice, high blood pressure, weight change, headaches.
Mexico	If patient has tendency to blood clot, liver dysfunction.	Nausea, weight change.
Brazil	If patient has tendency to blood clot	None

(Contd. to page 30)

A to Z of Drug Policy Issues

A = Advertising	One of the main tools to drug companies to create a need for their products. Includes appeals for status, modernity, even unnecessary uses and cosmetic embellishments.
B = Bulk Purchasing	Buying of drugs in bulk by competitive buying of generic drugs in the international market. It does away with brand names and private importers.
Bulk Drug	This is the basic, active chemical ingredient of a drug formulation.
Basic Research	This implies fundamental and innovational process or product research. A necessary step to prevent dependence on foreign companies.
Bio-Availability	This means that the same chemical ingredient, may be therapeutically different because of the way of formulation. A common but unconvincing argument against generic prescribing by drug companies.
Brand Name	The registered trade mark name given to a specific drug product by its manufacturer.
C = Consumer Alert and Consumer Action	An important and growing need in the formulation of a safe drug policy.
Combination Drug	A pharmaceutical product containing more than one active ingredient.
D = Dumping	Passing of old, unwanted, out-dated and banned or otherwise inferior products on an unsuspecting public. A common practice of multinationals operating in third world countries.
Drug Price Control Orders	Government orders to control prices of drugs and profits issued in 1963, 1966, 1970 and 1979.
E = Essential Drug List	A list of medicinal products of proven efficiency, acceptable safety and suitability to satisfy the health needs of the majority of the population.
Expiration Date	The date appearing on a drug product and established by the manufacturer, beyond which the manufacturer will not guarantee the potency, purity, uniformity, or bio-availability of the product.
F = Formulations	These are finished products which are directly consumed and contains in addition to the active drug compound other

	ingredients such as diluents, binders, flavouring/coloring agents, gelatin shells, chemical bases waxes and preservatives.
Formulary	A list of approved or recommended drugs compiled by an individual practitioner or a group of medical and scientific professionals for the purpose of a specific medical practice or supply system.
Foreign Company	In India defined as a company with foreign shareholding exceeding 40% of the total share capital.
G = Generic Prescribing	Prescription of drugs using the official, international, non-proprietary name and not trade or brand names. eg : aspirin not Aspro or Plusprin.
H = Hathi Committee Report	An exhaustive report of far reaching importance, by the Committee on Drugs and Pharmaceutical Industry, Government of India, published in April 1975.
I = International Codes	These are codes of quality or safety of products or business procedures eg., Code of Ethical Marketing Practices of Health Action International. An important step in pressurising multinationals to stop exploiting the third world.
Irrational Prescribing	Extravagant prescribing, overprescribing, incorrect prescribing, multiple prescribing, or underprescribing of medications, as compared to good standards of treatment.
J = 'Junk' Drugs	These are newer drugs in the market whose only additional value are cosmetic embellishments, elegant packing, irrational combinations all of which help to increase its cost.
K = Know-How	An important requirement for the technical improvement of the drug industry. Often controlled by patent, royalty rules and monopoly of foreign companies.
L = Labelling	Placing written or symbolic instructions on the immediate container in which drugs are dispensed. Depending on the motive this could be either a hall mark of consumer safety awareness or a focus for consumer misinformation.
Level of Use	A classification of drugs according to the medical practitioners who use them and the clinical facilities at which they are used.
M = Me-Too Drugs	These are products of research using molecular manipulation which are profitable but not necessarily a scientific advance.

Mark Up	Is the hike in the price above the basic production cost and is the amount used for selling costs, administrative expenses and profits. It is presently fixed by government orders. The less essential the drug formulation higher the mark up is allowed in India.
N = Net Worth Returns	Is an expression of the profit potential of a drug company and is one of the highest in the chemical industry in India. It makes drug companies one of the most attractive investments in the organised industrial sector of the Indian economy.
O = Oral or Oral Rehydration Therapy	A very important need in the rational management of diarrhoeas in children and its popularity will prevent use of many anti-diarrhoeals that have doubtful therapeutic value.
P = Public Sector	Includes drug manufacturing companies owned by the central government. These have pioneered the production of bulk in the country. The government policy attempts to give it a leadership role.
Patents	Exclusive rights given to manufacturers for fabrication of a specific product, use of a specific process, or application of a product or process in a specific way.
Q = Quality Control	The testing of drug samples against specific standards of quality. A very important step in manufacture and distribution of drugs. In India this is organised by the drug Controller.
R = Rational Drug Therapy	A method of prescribing which is efficient, safe, low cost and easy to administer.
Research and Development (R&D)	A much neglected area in the drug industry. A very necessary requirement for a country to evolve its own indigenous drug policy.
S = Sales Promotion	Techniques aimed at consumers, dealers or intermediaries to increase short term sales and inspire goodwill. For drug companies it includes bonuses with purchase, contests and competitions, samples and give ways.
Samples	Commonest method by drug companies to woo doctors. Other methods are advertising in medical journals, leafleting, sponsoring medical events, hospitality and providing gifts.
Shelf Life	The length of time a material may be stored without affecting the usability, safety, purity or potency of the item.
Symbolic Labeling	A system for providing written instructions for patients using sketches and other graphic representations.

T = Transfer Pricing	Importing of raw materials from parent companies by multinational subsidiaries at rates higher than the prices in the international market thereby transferring cost to the local consumer.
Therapeutic Categories	Division of drugs according to their clinical use. The categories often have a system for assigning numbers.
U = UN Agencies	These include UNIDO, UNCTAD, UNICEF. All of these are gearing up to help developing countries evolve relevant drug policies.
V = Voluntary Action	Only voluntary action and initiative can tackle many drug policy issues. The Gonoshasthya Kendra and GK Pharmaceuticals are one example of such an initiative.
W = World Health Organization	Their expert committee reports and working group reports are providing the technical back up for the evolution of a more health oriented policy in member-nations.

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The Crazy World of Tonics

Mukarram Bhagat

'Health' tonics are a craze with the affluent in the cities with their supposedly hectic, energy-consuming life-styles. Feeling tired? Pop a pill or gulp down a spoonful and it will keep you going (nobody knows where!)

The most commonly used tonics are multi-vitamin preparations with highly excessive quantities of vitamins.

Incremin C, the famous growth tonic with the Giraffe logo, contains an important amino acid lysine which the human body cannot synthesise by itself. However, a teaspoon of Incremin contains only about 300 milligrams of lysine when just a handful of peas contains about 1800 milligrams of lysine. The advertising slogan that Incremin turns "extra eating into extra growth" is medically unsubstantiated and at best a half-truth. The quantities of vitamin constituents of Incremin are absurd: 10 times more vitamin B1, 25 times more vitamin B12, 2 times more vitamin B6 than required by the body daily. (1)

The daily requirement of the human body of vitamin C is about 50 milligrams, of vitamin B1 one milligram and some others in minute quantities of a few micrograms. Against these well established norms, most tonic preparations contain between 10 to 50 times the minimum requirements (2) which are simply excreted away by the body--a colossal waste of valuable nutrients in a poor country. Further, most vitamins are needed in small amounts to stimulate the processes of normal metabolism, they are not energy-giving in themselves.

It is almost certain that the high-potency multivitamin formulations consumed by the well-fed are almost wholly rejected by the body. For example, the daily requirements of vitamin C can be obtained from a single fruit or a salad helping. Vitamin A, supplied by green, leafy vegetables, is stored in large amounts by the body for proper vision. Vitamin D is naturally synthesised by the skin from daily sunlight. Despite all these simple facts, the craze for 'health' tonics continue unabated. (2).

Why? Manohar S Kamath in his article in THE DAILY MAGAZINE provide the answers :

"The real culprits behind the 'tonic craze' are the manufacturers of such formulations. The principal reason for their hard selling of such products that the tonics and vitamins fell in 'category four' of the Drugs Price Control Act, which means that there is no limit on profits made on these preparations. With easy pickings and a readymade market, no wonder then that every new company entering the pharmaceutical world wants to market its own brand of tonic rather than any life-saving drug;" (2)

Explaining how the 'tonic craze' is the result of systematic campaigns of the large companies, he says :

"The first part of the plan was the mounting of an intensive sales campaign to influence doctors on the need for tonics in their day to day practice. This was followed by free sampling" (2)

"The other part of the marketing gimmickry in selling tonics was by directly advertising in the mass media, to catch the public eye. Slogans like "Do you feel tired at the end of the day? You need..." or "A woman needs iron every day" gradually made a deep impact on the people until many were psyched into believing that they could not do without a tonic." (2)



Waterbury's Yellow Label Tonic, a brand leader in the Indian tonics markets, contains only 3 milligrams of iron per teaspoon just 1/10 of which may be absorbed by the body. The Indian Council of Medical Research (ICMR) recommends at least 10 milligrams for women. The producer claims

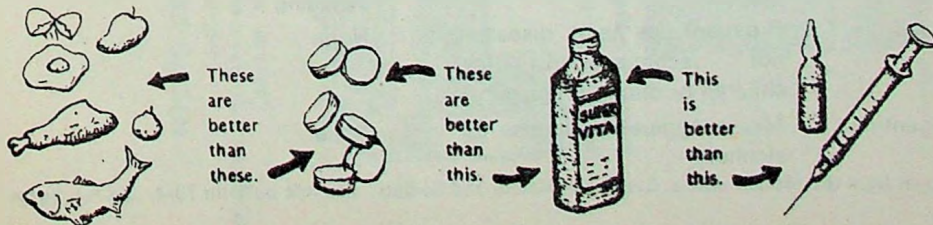
that this tonic stimulates appetites and builds bodies. But chemical analysis has revealed that it has 10% alcohol content which is the real appetite-stimulant : (1),

We have noted that these tonics are not consumed by the poor but mainly by the relatively rich whose ordinary diet adequately meets their vitamin and other requirements. In recent years, evidence has grown that the excessive vitamins may not simply be discharged by the body but may even cause severe disorders. Prolonged consumption of excessive vitamin C may form kidney stones, excessive vitamin A may cause diseases of the hair, skin and liver and vitamin D in excess may cause disorders of the kidneys and bones. (2)

Take this further example from South East Asia. In the U.K., Sanatogen is marketed as a 'nerve tonic' for old women who believe in its doubtful ability to tranquilise. But Sanatogen Powder is marketed to students in Malaysia who believe in its ability to stimulate their minds. "Worried about exams?" says the advertisement. Sanatogen will give you "Greater energy and concentration". Can a drug both stimulate and sedate? (3)

A person who eats well does not need extra vitamins.

THE BEST WAY TO GET VITAMINS:



Thus, the sheer irrationality and deliberate exploitation of consumers through this sinister "tonic racket" is obvious. The fact that many such, rackets' continue unabated is a measure of the enormous influence and power of the large pharmaceutical corporations not only in India but in many other countries, particularly the developing ones.

More than 20 years ago, the following words were spoken before the Kefauver Committee hearings on drugs in the U.S.A.:

"The incidence of disease cannot be manipulated and so increased sales volume must depend atleast in part on the use of drugs unrelated to their utility or need, or in other words, improperly prescribed. Human frailty can be manipulated and exploited and this is fertile ground for any one who wishes

Source: Aspects of the Drug Industry in India
C E D.

to increase profits. The enormous sales of so-called tranquillisers are only a small part of the crop reaped from this ground. The pharmaceutical industry is unique in that it can make exploitation appear a noble purpose." (4)

References:

1. Health for the Millions, VHAI, April-June 1981
2. "Some Boost, and at what price?", The Daily Magazine, 7 May 1981.
3. The Impact of multinational corporations on Health in Developing Countries, by Charles Medawar, Seminar on Health, Food and Nutrition, Consumers Association of Penang, Malaysia, 15-20 Sept 1977.
4. Drugs and the Common Man, Science Today, November 1970.

(Contd. from page 22)

Argentina	If patient has tendency to blood clot.	None
Drug : Imipramine (Anti-depressant, Ciba Geigy) In U.S. used for depression only. In some Latin American countries, Ciba Geigy recommends it also for senility, pain and alcoholism		
	Caution against use	Adverse reactions publicized
U.S.A.	If patient has heart disease, history of urinary retention, history of seizures, manic disorder or is on typhoid medication. Not recommended for children or during pregnancy.	Hypertension, stroke, stumbling, delusions, insomnia, numbness, dry mouth, blurred vision, constipation, itching, nausea, vomiting, loss of appetite, diarrhoea
Mexico	During first trimester of pregnancy	Dry mouth, constipation itching, sweating
Brazil	If patient has heart disease; not recommended for children or during pregnancy	None
Argentina	May exaggerate response to alcohol	None

(Taken from the Mother Jones, Courtesy—Health and Society, also mfc bulletin 73-4, Jan-Feb 1982).

Consumer Alert - Consumer Action

Ravi Narayan

The Problem

The Indian Council of Medical Research (ICMR) and the Indian Council of Social Science Research (ICSSR) have, in a joint study group report entitled "Health for All — an Alternative Strategy" warned that 'eternal vigilance is required to ensure that the health care system does not get medicalised, that the doctor-drug producer axis does not exploit the people and that the abundance of drugs does not become a vested interest in ill-health'. This warning is a serious indictment of the drug industry and the medical profession in the country. It confirms the growing evidence that drugs are being pushed on an unsuspecting public by devious methods which masquerade as 'sales promotion' of drug companies and 'professional prescribing practice' by doctors.

A spate of reports have been appearing in our newspapers and periodicals of late, on drug related issues and a review of these highlight that many of the following practices are not at all uncommon in India.

- (i) Sale of drugs banned in other countries eg: Lomotil and Clioquinol preparations.
- (ii) Sale of irrational combinations and formulations eg: Hathi Committee has suggested weeding out of atleast 23 such preparations.
- (iii) Sale of drugs without adequate precautionary product information.
- (iv) Sale of drugs at highly inflated costs eg: it is reported that Analgin is being sold at 20 to 30 times the cost of production.
- (v) Promotion of drugs for indications that are not clinically proved and are often potentially dangerous eg: Promotion of EP forte combinations for pregnancy testing and induction of abortion. There is well documented scientific evidence that risk of foetal deformity is increased by the use of these hormonal preparations.
- (vi) Sale of spurious, adulterated or poor quality drugs eg: Turmeric powder in tetracycline capsules and poor quality and reaction producing intravenous fluid preparations have been reported.
- (vii) Sale of old, expired and unused drugs. There is the double danger of effects of denatured drugs as also of inadequate dosage.
- (viii) Over-prescription and misuse of tonics, high protein foods, hormonal preparations and baby foods that are both superfluous and a drain on the family economy.
- (ix) Production of drugs for profits rather than health needs of people eg: The ICMR/ICSSR report highlights that drugs for diseases like leprosy and tuberculosis which affect millions are produced at one third and one fourth of the actual requirements while tonics, vitamins and high protein substitutes are being produced in wasteful abundance.
- (x) Sale of drugs over the counter without doctors' prescriptions or the necessary statutory checks.

It is evident then that what is needed in the country today is a consumer awakening and awareness building process that will sensitise people to the realities of the drug industry, mobilise public opinion, sensitise policy makers, confront the medical establishment and challenge the drug industry. This process will have to the initiation, promotion and sustenance of consumer action to ensure that the drug policy in India is more 'people' and 'health' oriented. Is there any evidence of such an awareness?

Consumer alert and action

Beginning in the late seventies, there is an increasing number of organisations, associations, projects and action groups who have begun to create an awareness of drug-related policy issues. These groups are predominantly if not exclusively urban-based, consisting of young professionals and intellectuals from different ideological backgrounds.

Since the Medical Profession is the 'instrumental consumer' i.e., they prescribe the drugs, many of these groups have directed their efforts particularly towards them. Many others are health or development associations, science popularising movements and consumer associations who are increasingly taking up drug-issues as one of their many activities.

The main types of action they have been involved in are:—

1. Meetings :

- * *'The Drug Industry and the Indian People'* organized by Delhi Science Forum, Society of Young Scientists, Federation of Medical Representatives Association of India (FMRAI) and others in Delhi, November 1981.

- * *'Drug Issues and Feasible Alternatives'* by Voluntary Health Association of India (VHAI) at Pune, January 1982.
- * *'Drug use and Abuse'* by medico friend circle (mfc) of Tara, June 1982.
- * At the *All India Convention of People's Science Movements* at Trivandrum, organised by Kerala Sastra Sahitya Parishad (KSSP). A health group was formed to coordinate joint action programme specially on drug issues.
- * Seminar on *'National Health Policy'* by VHAI, Concern for Correct Medicine (CCM), All India Women's Conference (AIWC) and others in Delhi, April 1983. Drug issues were also discussed.
- * Meetings on *'Drug Policy Issues'* were held in Pune, Bombay, Trivandrum, Madras, Bangalore and Delhi during Dr Zafarullah Chowdhury's (of Gonoshasthaya Kendra) whirlwind tour of India in November-December 1983. These 'galvanised everyone into more action'. National and local press gave coverage right along the tour.
- * FMRAI Annual Convention in New Delhi, December 1983 made a 27 point charter of demands which included demands for *Rational Drug Policies* relevant to the health needs of the country effective drug control, ban on irrational and hazardous drugs.
- * *Misuse of Drugs* — Seminar organised by the Andhra Pradesh Voluntary Health Association at Hyderabad in February 1984.
- * *'Drugs vs. People'* — A Seminar organised by West Bengal Voluntary Health Association at Max Muller Bhavan at Calcutta in February 1984.
- * *'Low Cost — Cost effective health Care'*, one day symposium organised by Kerala Voluntary Health Services.

2. Educational Campaigns

- * Arogya Dakshata Mandal (ADM) Pune, launched a movement called '*Operation Medicine*' in July 1977 against irrational prescription of vitamins, tonics, and tinned foods.
- * VHAI along with many associates launched a campaign in March 1982 (International Women's Day) against the misuse of hormonal preparations for pregnancy testing.
- * National Alliance for Nutrition of Infants (NANI) was formed to promote breast feeding and prevent/control of promotion of commercial milk foods and substitutes.
- * mfc launched campaign for rational management of diarrhoea with ORT, and prevent misuse/abuse of available anti-diarrhoeals.
- * Lok Vidnyan Sanghatana, Maharashtra (PSM) launched a campaign about anemia in women and irrational anti-anaemia drug preparations is the market, in May 1983.
- * FMRAI have launched a separate campaign against irrational practices and role of multinational corporations in pharmaceutical industry in India.
- * KSSP has organised jathas (Science and Cultural Marches) through the villages and towns of Kerala in October-November 1983 on '*War: the war against unscientific practices in the field of drug industry.*'
- * Drug Action Network launched a nation wide signature campaign in April 1984 to demand for a Rational Drug Policy. This campaign involves activist and consumer groups civil

liberties grievances, health professional associations.

- * KSSP launched a campaign for a 'People's Drug Policy' on April 7th World Health Day. District level Seminars were held in all the 13 districts of the State. On October 2nd, the Sastra Kala Jatha was launched with signature campaign, Slide shows, art forms etc. Two seminars—"The Indian Drug Industry" and the People's Needs" and 'A Drug Policy for Kerala' are planned for November 1984.

3. Publications

- * mfc published two anthologies — 'In Search of Diagnosis' (1977) and 'Health Care Which Way to Go' (1982) which included many articles on drug issues.
- * VHAI published special issue of their bimonthly—Health for the Millions—in 1981. Thematic issue was entitled 'Medicine as if people mattered'.
- * Centre for Education and Documentation (CED), Bombay, published an exhaustive well researched book called 'Aspects of Drug Industry in India'.
- * Indian Social Institute (ISI) New Delhi, brought out an Indian edition of the book 'Insult or Injury' by Charles Medawar of Social Audit (UK) which is a study of practices of British Pharmaceuticals and Food Industry in Asia.
- * 'Taste of Tears' is a recent publication of VHAI on problems of diarrhoea and its management.
- * Consumer Education and Research Centre, Ahmedabad, prepared a well documented report on Analgesics and submitted it to the Drugs Controller.

This report deals with hazardous and irrational combinations.

- * Rational Drug Therapy — first volume of the book by Arogya Dakshak Mandal, expected in December 1984.

4. Bulletins/Journals

- * Pune Journal of Continuing Health Education, by Arogya Dakshata Mandal, sensitises its readers to the half truths of medical advertising apart from providing reliable scientific information.
- * 'Drugs Bulletin' — of Pharmacology Department of Post-Graduate Institute, Chardigarh is a authentic and authoritative resource on drugs in India.
- * Handouts of the Low Cost Drugs and Rational Therapeutic Cell of VHAI have covered an extensive range of drug prescribing and policy issues.

5. Low cost Drugs ventures

- * Bangarapet Medical Mission Tablet industry is a successful small scale venture providing low cost, good quality formulation to a limited group of mission hospitals in the country.
- * LOCOST a collective voluntary endeavour in Gujarat for rational therapeutics through the promotion of low cost, quality generic medicines. It also plans an educational effort for minimum use of drugs and increased awareness of the socio-economic implications of irrational therapeutics.

6. Public Interest Litigation

- * Vincent Panikulangara, a lawyer from Kerala, filed a writ petition in the Supreme Court, regarding the ban of the import, manufacture, sale and distribution of drugs identified as hazardous

and or irrational by the Drugs Consultative Committee of the Government of India. This was done on behalf of the people of India.

7. Networking

- * All these groups have now come together to form the All India Drug Action Network. Regional and State level network are also forming up, eg : West Bengal Drug Action Forum, Hyderabad Drug Action Forum. DAN also bring out the Drug Action Network Newsletter which keeps the network up-to-date on activities and ideas of all the groups. DAN meets twice a year to plan and coordinate its activities.

Towards a People's Movement

All the above efforts are small steps towards a much more wide based consumer movement against drug use and abuse and profit oriented drug policies. However, it must be remembered that in a country like ours when a very large percentage of people are below the poverty line and when more than 75 percent of the people have little access to basic health science a consumer action programme only on drug matters will continue to be cut off from the needs and aspirations of the majority.

Dr Norman Bethune, Famous for his work in China, wrote '*The best form of providing health care and health protection would be to change the economic system which produces ill health-to liquidate ignorance, poverty and unemployment*'.

One hopes that eventually drug related issues will become part of a much wider people's campaign for health, development and socio-political change because at the root of the entire problem of drug production and availability lies what Ivan Illich has aptly described as 'Social-iatrogenesis-*ie.*, health policies reinforcing an industrial organisation which generates ill-health'.

Source : Bulletin of Science December 83 Jan, 84 (up dated

Towards Rational Therapeutics

Extracts of a letter from a young doctor in a small rural hospital in Madhya Pradesh.

Dear Friend,

.....About drug prescribing practices in our hospital in the first few months of my work I had ordered many new drugs. Later I realised mainly because of financial conditions of the patients that only important essential drugs and a minimum possible list should be adopted.

Antibiotics

We use commonly Procaine Penicillin and Penidure. They used to use a lot of Streptopen, which I don't. I mainly use procaine penicillin. Then I use a lot of septram when there is double pathology, like respiratory tract infection with urinary tract infection or otitis media. We use tetracyclines very rarely. Injection Terramycin I don't use at all. So also chloromycetin. I never use chloramphenicol. If I doubt enteric fever, I start with septran. Then we have streptomycin only for TB patients. Crystalline penicillin I use only in new borns. At present I feel very confident regarding the usage of antibiotics and I don't use two drug combinations, so I have stopped using chlorostrep.

Diarrhoea

This is usually controlled with rehydration salts and plenty of oral fluids. Slowly discontinuing lomotil and other drugs.

Cough syrups/Tonics

When I joined there were lots of varieties of cough syrups, cough/cold tablets and also lost of variety of tonics. It took me nearly a year to cut down many brands. We had 11 brands of cough syrup and 10 brands of tonics.

Now we make cough mixture in the hospital for free patients and we have 3 other brands of cough syrup

About tonics—it takes a lot of patience to convince patients—they don't need tonics—they can get the same benefit with proper food and milk/eggs. Now-a-days very few people ask for "*Thankath ka sissi*" and we have only two types of tonics...

I have kept multivite tablets, fersolate and calcium tablets. Not a single brand of costly vitamin capsules or tablets are stocked. They used to use a lot of varieties. Slowly I stopped even B-complex injections...

For TB patients we have pyridoxin. For children we have Vit A & D and multivite drops. Vit C. I hardly use—nor do I use calcium injections except in tetany.

Antacids

We had lots of brands before. Now we use Belladenal and two brands of antacids only.

One thing I have succeeded in proving here is that you can run a small hospital and treat patients successfully with only a handful of drugs which are cheap and good quality. Why do we insist on each doctor or specialist having his own petty brand of drugs in our large hospitals and even the medical college hospitals?



Irrational Drug use Prescribing

IRRATIONAL DRUG PRESCRIBING

Type of Irrational Drug Use *Occurs if a drug is prescribed when :*

Extrava-
gant
Prescrib-
ing * a less expensive drug would provide comparable efficacy and safety

* Symptomatic treatment of mild conditions diverts funds from treating serious illness

* a brand name is used where less expensive equivalents are available

Over-
prescri-
bing * the drug is not needed

* the dose is too large

* the treatment period is too long

* the quantity dispensed is too great for the current course of treatment

Incor-
rect * the drug is given for an incorrect diagnosis

prescri-
bing * the wrong drug is selected for the indication

* the prescription is prepared improperly

* adjustments are not made for co-existing medical, genetic, environmental, or other factors

Multiple
Prescribing * two or more medications are used when one or two would achieve virtually the same effect

* several related conditions are treated when treatment of the primary condition will improve or cure the other conditions

Under-
prescri-
bing * needed medications are not prescribed

* dosage is inadequate

* length of treatment is too brief

IRRATIONAL DRUG USE- CAUSES

In brief, the main causes identified by those who have studied prescribing behavior are the following :

1. **Inadequate training in clinical pharmacology**—Despite the daily use of medicines in clinical practice, formal training in drug use is usually brief and often limited to the early part of medical training.
2. **Lack of continuing education and supervision**—For the medical auxiliary as well as the practicing physician, there is usually little opportunity for regular review of their prescribing habits. In addition, there are few opportunities for them to learn about new drugs from unbiased sources.
3. **The practitioner's inappropriate desire for prestige**—In some areas a "good doctor" is expected to use many different drugs and prescription of multiple drugs is falsely considered a sign of good care.
4. **Promotional activities of drug company representatives**—The role of commercial interests in promoting irrational and costly prescribing has been well documented and cannot be over-emphasized. Even where the choice of drugs is limited by centralized purchasing,

company representatives frequently promote overuse of drugs.

5. **Lack of time due to heavy patient load**—Medications are often given out to help end a patient visit, or prescribed "just in case", to avoid a return visit.
6. **Pressure from patients**—Even in the most remote areas, patients quickly come to expect that every symptom has a medicine to cure it. Because patient education can be slow, time-consuming, and tiring, practitioners often give in to the request for medicines.
7. **Fear-induced prescription**—Diagnoses are rarely made with absolute certainty and the course of an illness cannot be predicted exactly. Medical

practitioners often try to "protect" themselves against this uncertainty by extravagant, multiple, or overprescribing.

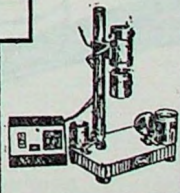
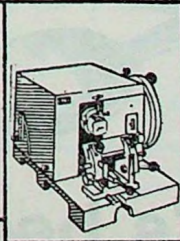
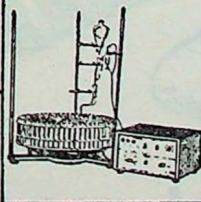
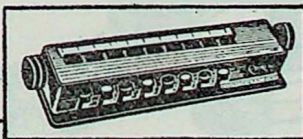
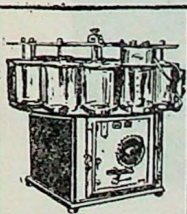
8. **Incorrect generalization about a drug from limited experience**—Unexpected favourable results/unfavourable side effects are sometimes seen with the use of a drug. Although these results may be totally unrelated to the drug, practitioners may over-react and, depending on the result, later overprescribe or underprescribe on the basis of this anecdotal information, rather than on the basis of scientific evidence.

From MANAGING DRUG SUPPLY, Management Sciences for Health, Boston, Massachusetts, USA.

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Supplement to Special Issue of
the Medical Service on
"Towards a People Oriented Drug Policy"

Widening Horizons—on Drug Issues

A. Books

1. Hathi Committee : Report of the Committee on the Drugs and Pharmaceutical industry. Ministry of Petroleum and Chemicals, Govt of India, April 1975, Rs. 17.00.

The essential drug list suggested here could provide the foundation for a demand for a Rational National Drug Policy.

2. Health for All—an Alternative Strategy. ICSSR & ICMR, 1981, Rs. 18.00 Available from VHA1. In focussing on a comprehensive national policy of health and a new operational strategy, the report is intended to be a basic document to initiate a nation wide debate on the subject as well as positive action towards certain radical changes to correct the present imbalances in our health caresystem. Has a very comprehensive chapter on drugs and pharmaceuticals.
3. Aspects of the Drug Industry in India. Mukarram Bhagat, Feb 1982, Rs. 19.00 From Centre for Education and Documentation (CED), 3, Suleman Chambers, Battery Street, Bombay.
4. Insult or Injury. Charles Medawar, 1980, Rs. 18.00, 139 p. Social Audit, England. Available from: Indian social Institute, Lodi Road, New Delhi 110003. Highlights marketing and sales of British drugs and food products. Illustrated easy reading.
5. Health Care Which Way to Go Medico Friend Circle Anthology II,

1982, Rs. 10.00 from : medico friend circle office, 326, 5th Main, 1 Block Koramangala, Bangalore 560034
Raises relevant issues regarding peoples health. Questions why is there a lack of political will to solve pressing health problems of the country. How detrimental is the alliance between medical professionals and the drug industry to people's health.

6. Under the lens: health and medicine. III Anthology of medico friend circle is due shortly and will be available from VHA1 and mfc office (above).
7. Kurji Holy Family Hospital: Formulary and Therapeutic Guide. January 1983, Rs. 12.00. Available from VHA1. It is the result of the accumulated experience of senior medical staff of the hospital over the last 10 years. It gives a comprehensive list of drugs to treat 98% of hospital admissions- it also gives the generic name, dosage, indications, contraindications and main side effects in the same page. Information about comparative cost of treatment is also provided.
8. Drugs and the Third World. Anil Agarwal, 1978, \$5.00. From Earthscan, 10 Percy Street, London W1 PO DR. A very comprehensive overview of the drug situation in the third world and the problems and causes.
9. Prescription for change. Health Action Internationals guide to rational health projects, Virginia Beardshaw, Novem-

ber 1983, 85pp US\$ 10.00 from Health Action International Clearing House, PO Box 1045, Penang, Malaysia. Gives more than 40 ideas for action research projects on drugs:

- a summary of the main elements of the rational health issues and suggestions about how to campaign on it;

- advice on how to talk to drug companies and the powers that be

- a reference section that lists the main materials you need to research on drugs.

10. Pill-fering the poor: Drugs and the third world. An information/action pack on drugs and the third world from Interfaith Center on Corporate Responsibility, International Health Programme, 475 Riverside Drive, Room 566, New York, NY 10115. US\$. 4.00 plus postage surface mail \$2.70/air mail \$/4.70. It provides an overview of the problems related to drug marketing in the third world. it contains articles on the need for essential drugs, on the suffering wrought overseas by some US made drugs and on the high price the third world poor have to pay for their medicines. This package includes an extensive annotated bibliography, basic facts and figures about the transnational drugs industry and an outline of suggestions for action on how you can get more involved in helping to stop abuses.

11. Therapeutic guidelines: A manual to assist in the rational purchase and prescription of drugs. Upunda, Yudkin et al 1981, pp. 166, Rs. 35.00 African Medical and Research Foun-

dation. Available from VHA1. An excellent guideline for rational therapeutics, giving special emphasis on drug cost as criteria for choice of drug diagrammatico format.

12. Management schedules for dispensaries: A manual for rural health workers. Peter Petit, 1983, Rs. 35.00. African Medical and Research Foundation. Available from VHA1.
13. 44 problem drugs: a consumer action and resources kit on pharmaceuticals. IOCU, May 1981. Available from HA1 Clearing House (see 9) Gives information about 44 problem drugs, along with articles by some of the leading drug campaigners.
14. A number of interesting papers to keep you upto date about the drug issue is available from Low Cost Drugs and Therapeutics Cell, VHA1, C-14, Community Centre, Safdarjung Development Area, New Delhi 110016. (write to them for a list)

B. Periodicals

1. Pune Journal of Continuing Health Education. Presents scientific information and opinion on drugs and health issues to stimulate thought and further investigation. Annual subscription Rs. 10.00 or a five year subscription for Rs. 45.00 from Arogya Dakshata Mandal, 1913, Sadashiv Peth, Pune 411030.
2. Drug Bulletin
An informative monthly giving unbiased technical information on drugs and therapeutics. Annual subscription Rs. 10.00 from Dr. V S Mathur, Professor, Department of Pharmacology and Editor, Drugs

Bulletin, PGI of Medical Education and Research, Chandigarh 160012.

3. **Medico friend circle bulletin.**

A monthly which discusses issues regarding health problems, the health care system, medical education, drug issues etc., from the point of view of relevance to the needs of the majority in our country. Annual subscription Rs. 15.00. Write to Convenor, medico friend circle, 326, V Main I Block, Koramangala, Bangalore 560034.

4. **HAI News**

A very informative bimonthly of the Health Action International (HAI), covering world drug news of special relevance for the third world. *Hai* is an informal network of health consumer and development oriented associations and professionals concerned with health and pharmaceutical issues, particularly those that adversely affect the poor. Annual subscription : US\$ 10.00 from HAI Clearinghouse, regional office for Asia and the Pacific, International Organization of Consumer Unions (IOCU), PO Box 1045, Penang, Malaysia. A number of journals have brought out special issues on drugs. These may be available on request for back issues.

1. Contact : from Christian Medical Commission, World Council of Churches,

150 route de Ferney, 1211 Geneva 20, Switzerland or VHAI, New Delhi.

- a. August 1981 No. 63 : 'Getting Essential Drugs to the People' with a model list of essential drugs.
- b. June 1983, No. 73 : 'Strengthening and regulating the supply, distribution and production of basic pharmaceutical products'.

2. Health for the Millions. From Publications Department, Voluntary Health Association of India, C-14, Community Centre, SDA, New Delhi 110016.

- a. Medicines as if people mattered-April-June 1981
- b. Special Issues on diarrhoea and tuberculosis

3. The Journal of the Christian Medical Association of India.

From : The CMAI Office, Christian Council Lodge, Nagpur 1, Maharashtra.

Sept 1983, Vol LX, No. 9, Drugs-Fact, fallacy and fraud.

4. World Health : The magazine of the World Health Organization, Avenue Appia, 1211 Geneva 27, Switzerland. July 1984, Essential drugs for the World.

Oral Rehydration - which method is most appropriate ?

Diarrhea is one of the main causes of death in small children. However, most of these children actually die from dehydration—the loss of too much water. It is generally agreed that the most important way to manage diarrhea is to replace the liquid that the child is losing. But there is less agreement about how to do this.

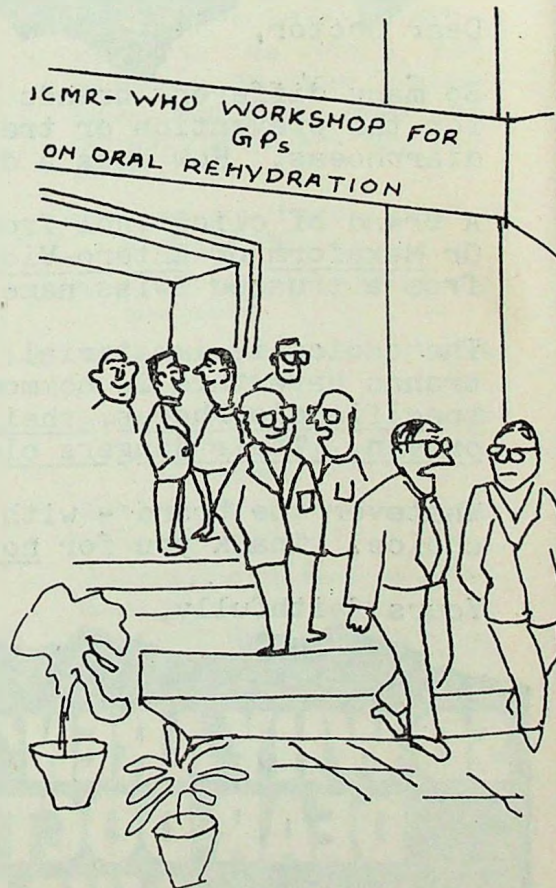
A few years ago, most doctors treated even mild dehydration by giving intravenous (I.V.) solution. But this was expensive, and many children died in diarrhea epidemics because there was not enough I.V. solution, or not enough skilled workers to give it.

Today, most health planners recognize that oral rehydration—or giving liquid by mouth—is the best way to manage most cases of diarrhea and dehydration. Even in clinics, where I.V. solution is available, it usually makes more sense to replace liquids by mouth. This way parents learn how to prepare and give liquids so they can begin treatment early, at home, the next time a child gets diarrhea.

A Special Drink or Rehydration Drink can be made from water mixed with small amounts of sugar and salt. It is even better if the drink contains a little baking soda (bicarbonate of soda) and a mineral called potassium—found in orange juice, coconut water, banana and other foods.

- * The salt in the special drink replaces the salt lost through diarrhea, and helps the child's body to keep liquid.
- * The sugar provides energy and also helps the body absorb liquid more quickly.

- * The baking soda prevents 'acid blood', a condition that causes fast, heavy breathing and shock.
- * The potassium helps keep the child alert and willing to drink and eat.



What is now about sugar salt-solution ? Since ages we doctors have earned money by selling it as medicine for various diseases, though not for diarrhoea.

Courtesy—Health care which way to go MFC Anthology.

The amounts of sugar and salt in the Special Drink do not have to be very exact. In fact, there is great variation in the amounts recommended by different experts. However, too little sugar or salt does less good, too much salt can be dangerous.

The Range of Rehydration Methods for Children with Diarrhoea can be divided into two Broad Groups:

Group 'A'

1. Intravenous solution (I.V.)
2. Factory prepared oral solution
3. Factory prepared packets of rehydration salts for mixing in water
4. Bags with salts, prepared at the health centre for mixing in water.

Advantages and Disadvantages

- Control and responsibility mainly in the hands of professionals, institutions, and drug companies
- Measurement more precise and 'controlled' (atleast in theory)
- More magical; acceptance may be quicker but with less understanding
- More dependency—on high technology, on outside resources, on centralised services, and on local and international politics
- More expensive
- Easier to gather data on, and prepare statistics about
- Reaches fewer people; supply often uncertain and inadequate
- Sometimes causes delay in treatment, because special materials have to be obtained; affect is more curative than preventive
- Focus is on materials and supply (so cost goes up each year)
- May give better (safer) results for individuals treated in time, but has worse results overall since many

children never receive the liquid, or are given it too late.

Group 'B'

1. Homemade drink made with plastic measuring spoons
2. Homemade drink made with spoons found in the home
3. Homemade drink made with home-made spoons
4. Homemade drink with salt and sugar measured with the fingers or by another traditional way

Advantages and Disadvantages

- Control and responsibility mostly in the hands of the family
- Measurements less precise, less 'controlled'
- More practical and easier to understand
- More self-sufficiency; uses local resources (whatever is available in the home or in stores)
- Cheaper
- Harder to gather data on, and prepare statistics about
- Reaches more people; supply is local and almost always available
- Treatment can begin at the first sign of diarrhea; more preventive than curative.
- Focus is on people and on education, so the people's capacity for self-care increases over the years (cost goes down)
- May be less safe in individual cases due to the possibility of errors in preparing or giving it, but it probably saves many more lives—since it reaches more children more quickly.
- Helping Health Workers Learn
David Werner and Bill Bower

A to Z of Problem Drugs

(A check list of hazardous, banned, bannable and dumped drugs in India).

- A = Analgin is a potentially toxic drug and may cause agranulocytosis. Fixed dose combinations (FDC) of any other category of drug in oral dosage form are considered harmful.
- Amidopyrin was used as an analgesic anti-inflammatory agent for over 7 years.
- It has now been found to increase the risk of agranulocytosis and in large doses to be associated with renal tubular necrosis (Banned July 1983).
- Ancoloxin a widely used anti-nausea drug which is reported to have teratogenic potential and hence is a hazard to pregnant women. Sold in India without warning.
- Anabolic Steroids Synthetic derivatives of male sex hormone which have an androgenic and anabolic (body building) effect. It is chiefly indicated for treatment of senile and post-menopausal bone disorders and a plastic anemia. In India it is advised for malnutrition, appetite stimulant and for increasing growth. All these are foolish especially in the light of irreversible harm it can have on children's growth and sexual development. After much publicity of these side effects, CIBA Geigy has withdrawn Dianabol, one of the commonest. Many more preparations continue to be marketed in India.
- B = Bromides On prolonged administration, they replace chloride ions in the body, cumulative poisoning manifests as conjunctivitis, gastrointestinal symptoms, dermatitis and mental disturbances. It was a commonly used hypnotic of low potency but unreliable (Banned in July 1983).
- C = Chloral Hydrate used as a hypnotic has found to be an irritant of the gastric mucosa causing nausea, vomiting, flatulence and epigastric distress. It can also cause hepatic or renal damage. It should no longer be used as a hypnotic (Banned in July 1983).
- Clioquinol or hydroxyquinolines have been popularly used for prophylaxis and treatment of gastro-enteritis amoebiasis and traveller's diarrhoea. Ever since the report of its association with SMON (subacute myelo-optic neuropathy) its use has been restricted or banned in many countries. In India they are supposed to be prescription drugs but are obtainable over the country. A

warning in English small print does occur on the product but it hardly succeeds in warning consumers.

D = Dipyrone

is the sodium sulphonate of amidopyrines having similar properties and adverse effects particularly fatal agranulocytosis. The incidence and risk of this hazard far outweighs any benefit that can be derived from its use.

E = DP Forte

these are high dose estrogen-progesterone combinations which are dangerous for use in pregnant women because of the associated fetal malformation. In spite of the banning of production and sales of these drugs by the drug controller in March/June 1983 these continue to be misused for hormonal pregnancy tests and for induction of abortion.

Enzymes

A very wide range of enzymes preparations are available in India as digestives and for specific conditions. Though by themselves they are not harmful, their production in large amounts along with tonics, vitamins and health restoratives are an indication of our irrational drug policy at the cost of larger social needs. These are mostly consumed by the relatively well-fed urban population.

Ergot

is an alkaloid effective in the treatment of migraine. However fixed dose combinations with drugs like paracetamol, prochlorperazine etc., have no therapeutic advantage and hence are irrational (FDCs of ergot are banned in July 1983).

F = FDC or Fixed
Drug Combinations

These are formulations where two or more drugs are combined for the following reasons : (a) synergistic action; (b) corrective action; (c) two or more drugs normally prescribed together and taken by patient simultaneously; d) when dosage of each drug need not be individualised; e) where combination ensure better patient compliance due to convenience of administration. Conversely FDCs are irrational and should not be permitted if (a) adverse interactions occur; b) when one of the combined drugs becomes toxic on prolonged use (c) when abrupt withdrawal of one causes withdrawal symptoms; (d) if sub-therapeutic doses are used in the absence of clinically demonstrable synergism; (e) when pharmacokinetic behaviour of individual agents is different. (22 FDCs were banned in July 1983—refer Government order).

G = Gripe Water

These are popular preparations promoted for colic in children. Contain alcohol and sodium bicarbonate. Chronic use of the latter can cause milk-alkali syndrome. Uncomfortable but

rarely dangerous gastric distension can also occur. Despite toxicity and side effects gripe water does a thriving business through medical and consumer ignorance (Banned in Bangladesh in June 1982).

H = Hydroxyquinolines

or halogenated oxyquinoline derivatives which include iodochloro-hydroxyquinoline, proxyquinoline, halquinol, dihydroxyquinoline, chlorquinaldol, chiniofon). For hazard see clioquinol.

Hormonal Pregnancy Tests

Oestrogen-progesterone combinations have been indiscriminately used in pregnant women as a hormonal test to detect pregnancy. (See EP Forte) Since there is an increased risk of foetal abnormalities and the test is false positive in one out of five women these tests should not longer be done. Drugs controller had issued a directive to strengthen warning on packages (March 1982) and banned manufacture (Dec. 1982) and sale (June 1983). Due to legal controversy, and professional and consumer ignorance it still continues to be used.

I = Injections

have played a very important role in the modern medicine and form one of its most distinctive features. However, it has also lent itself to a very large degree of misuse-overuse because of the mystique associated with it in the minds of the public and the temptation of the medical practitioners to pander to this need and pressure for their own economic gain.

J = Junk Drugs

these are newer formulations in the market whose only additional values are cosmetic embellishments, added flavours, elegant packing, irrational combinations—all of which help to increase its cost.

K = Kaolin

is hydrated and purified aluminium silicate, a common addition in antidiarrhoeal mixtures. Along with pectin and bismuth salts it forms a group called adsorbents, astringents and binding agents. These drugs may cause loss of electrolytes by preventing absorption through gastrointestinal tracts. If at all, they are of cosmetic value and may actually mask the severity of disease.

L = Lomotil

or diphenoxylate and Loperamide are drugs whose risks of treatment outweigh their benefits especially in children. They are commonly used in diarrhoeas and the dangers of paralytic ileus leading to inaccurate assessment of fluid loss and toxæmia if associated with gut infections make them especially dangerous in pediatric practice. The use for children under

six has been banned in India. In most other countries its use is banned altogether.

- M = Methapyrilene and its salts (Banned in July 1983)
- N = Nialamide or Niamid a MAO inhibitor used in the treatment of depressive disorders (Banned in July 1983).
- O = OTC drugs or over the counter drugs. These are drugs that are available to consumers without prescription and are mainly painkillers, anti-cold, anti-cough preparations, cough mixtures, tonics, food substitutes and protein powders. Many of them are costly compared to the benefits they render, have some ingredients which are unnecessary or useless but helping to push up cost and are widely advertised with false claims to push up sales. Their scientific scrutiny is a need as also a systematic campaign against their irrational ingredients or claims.
- Oxyphenbutazone these are a group of non-steroidal antiinflammatory drugs which also have mild antipyretic and analgesic properties. The dangers associated with use are bone marrow toxicity and liver toxicity. They are widely used/overused/misused group of drugs and there is great need for building professional awareness and consumer alert on this group of drugs. Recently these drugs have been banned in the U.K.
- P = Phenacetin was a commonly used analgesic/antipyretic agent which has been reported to cause kidney damage and failure and hemolytic anemia. Hence fixed dose combinations containing it are now considered outdated and hazardous. These have been recommended for weeding out by the Hathi Committee.
- Phenylbutazones another group of non-steroidal antiinflammatory drugs which give only symptomatic relief and in no way alter the course of the illness. Its main indications are for ankylosing spondylitis and rheumatoid and gouty arthritis though they are being widely promoted and used for non-rheumatic disorders and aches, pains and fever. Bone marrow toxicity is a real danger with the use of this drug and hence its use should be severely restricted. Its present availability—freely over the counter—should be drastically controlled and its deadly combinations with amidopyrin, algin, paracetamol, diazepam, vitamin B, dextrapropoxyphene acetaminophen should be banned or adequate warnings in labels instituted.
- Practolol (Banned in July 1983).

Penicillin	still an important constituent of antibacterial therapy in spite of the risk of anaphylactic reaction and allergic reactions. (Its combination with sulphonamides and its preparations as skin/eye ointments are banned from July 1983).
Q = Quinine	was the sheet anchor of anti-malarial treatment till safer 4 aminoquinolines and 8 aminoquinolines were developed. Its use leads to black water fever so is restricted now-a-days for treatment of chloroquin resistant cases or sometimes in cerebral malaria.
R = Rational Drug Therapy	is the art/science of prescribing the best suited drugs to individuals who need them taking and not to those who merely want them. It takes into account factors like efficiency, safety (low incidence of side effects), cost and ease of administration. It scrupulously avoids extravagant prescribing over or under prescribing, multiple prescribing or incorrect prescribing.
S = Sulphonamides	These have an important role to play in the therapy of infections. The combination with penicillins is undesirable because of the antagonism of antibacterial effect when bacteriostatic and bacteriocidal drugs are given together. (FDCs of sulphonamides and penicillins are banned since July 1983).
Streptomycin	Since it is one of the most effective drugs in anti-tb treatment its use should be limited to TB treatment and mixed infections of the gut. Its combination with penicillins is undesirable since its use in small doses promotes development of resistance.
Steroids	one of the most misused drugs in general practice because of acute onset of beneficial effects. Patients are exposed to a wide range of toxic cumulative effects and adrenal insufficiency due to adrenal suppression. Its a life saving drug to be used in special circumstances. Their doses should be adjusted to the minimum that can produce the effects. Fixed dose combinations with other drugs are therefore irrational and objectionable since this individualization of the dose cannot be done. (FDCs of steroid for internal use except for treatment of asthma are banned since July 1983).
Strychnine	This was a drug formerly used as an appetiser. Its use in tonics can induce convulsions particularly in susceptible individuals. An obsolete drug! (FDCs of strychnine with caffeine, yohimbine, testosterone and vitamins are banned since July 1983).

T = Tetracyclines	One of the most commonly misused/overused broad spectrum antibiotic mistakenly thought to be free of dangers. Reports of its ability to cause discolouration of teeth, catabolic effect on protein synthesis, diarrhoea, increased intracranial pressure in children, Fanconi syndrome (if outdated, degraded drug is used), liver damage in pregnant women have put it in the list of hazardous drugs. It should not be used in paediatric practice and in pregnant mothers. Its manufacture is supposed to be banned from January 1982.
Tonics	Apart from being an economic waste, most tonics in the market contain alcohol which is the main appetite stimulant and also vitamin and mineral constituents in amounts greater than the physiological absorptive capacities of average GT tracts. Their overuse thus mainly help to vitaminise our sewage systems!
U = Unani and Ayurvedic drugs	These are difficult to standardise since official standardisation methods are not available FDCs of these with allopathic drugs have no therapeutic rationale or justification or proven efficacy. (FDCs of ayurvedic and unani drugs with modern drugs have been banned since July 1983).
V = Vitamins	a typically misused/overused group of agents especially as combinations and tonics. They are essential nutritional requirements but most people get adequate amounts in a balanced diet. Specific and separate preparations are required for specific deficiency states or as adjuncts to therapy. (Their FDCs with analgesics, tetracyclines, anti-inflammatory drugs, tranquillisers have no proven therapeutic effects and have been banned since July 1983).
W = Waterbury's	is one of the brand leaders in the tonic market whose main effects if any are because of the 9-10% alcohol content. It contains insufficient amounts of iron and creosates and guaiacols whose role in man has not been definitively established. Like incremin, phosphomin, hemiphos their advertised claims for surpass their actual chemical content. Advertisements of such tonics are the most symbolic of high pressure, half truths gimmickry of medical advertising.
X =	
Y = Yohimbine	a drug often combined with strychnine, vitamins, testosterone, arsenic, iron and vitamins has been found to penetrate the CNS and cause central excitation including rise of blood pressure, heart rate, hyperexcitability and tremor (Its use especially in such combinations is banned since July 1983).
Z =	

(Contd. to page 20)

Prescribing Drugs

Questions to ask yourself before writing a prescription.

1. Need Is this drug really necessary ?
Is it being given to make the patient feel that something is being done ?
2. Aim What aim is to be achieved by this drug ?
What disorder of function is to be corrected ?
What symptom/s have to be relieved ?
3. Knowledge What is the approved or generic name ?
What class does it belong to ?
What are its characteristics ?
Do I have the requisite experience or knowledge to use it ?
Have I weighed the potential toxic effects against the benefit ?
4. Route and Dosage By what route, in what dose and at what intervals is the drug to be given and why ? In what form/s does the drug come ?
5. Alternatives Have I selected the best agent available for this particular purpose ?
What other remedies might have been chosen ?
How do these compare in efficacy, safety, cost ?
6. Duration For what period of time, days, weeks or months will it be advisable to continue therapy ?
When and how could a decision be made to stop ?
7. Observations What observations can be made to judge whether the aim has been achieved ?
When should they be made and by whom ?
What laboratory investigation if any would help in this assessment ?
8. Elimination How is the drug eliminated ?
Will the patient's illness change the usual pattern of distribution, effects or elimination of the drug ?
9. Unwanted effects What are the side effects or toxic effects of the drug ?
Are they acceptable ?
How frequent are they ?
How can they be modified/managed ?

10. Precautions Have I checked for the following :
 - a. possible allergic risks
 - b. possible idiosyncratic reactions
 - c. patients drug diet which may interfere with the drugWhat precautions can I take to ensure continuation of therapy.
11. Contraindications Are there any conditions in which this drug is contraindicated ?
Are these 'absolute' or 'relative' ?
Are there any drugs which should be avoided when the patient takes this treatment ?
Which and why ?
12. Patients point of view What does the patient believe about the drug ?
What has he been told about it ?
And what has he remembered ?
Does he need additional information ?
13. Patient reliability Does his relative need additional information ?
Is the patient reliable for this type of therapy ?
Will he need/get proper supervision by relatives or attendants ?
14. Cost Is the drug the cheapest drug of that type ?
If not could a cheaper drug do the job as well ?
15. Finally is there anything else I need to know about this drug ?

Adapted from :

- i. A Herxheimer : The Lancet II 1186-1187, 27th Nov 1976
- ii. Formulary and Therapeutic guide—Kurji Holy Family Hospital
- iii. Prescribing drugs — MNAMS Handout, Dept of Pharmacology, St John's Medical College, Bangalore

What Can We Do ?

1. Educate ourselves We should make an effort to avail ourselves of all the available materials on drugs.

We should purchase some of the books and subscribe to some of the journals and bulletins mentioned in 'widening horizons' to keep ourselves upto date.
2. Share and Disseminate information We should circulate all the information and resources to all our staff and to other colleagues and centres through all possible channels of communication. We could share our own initiatives and experiences.
3. Adopt essential drug list We should draw up an essential list for our institution in which cost, efficacy, safety and quality will be important criteria (refer to WHO's suggested list)
We could purchase and stock drugs in accordance with this list.
4. Adopt generic We could use/adopt the generic drug concept during purchasing, prescribing or dispensing drugs.
5. Stop Irrational prescribing Could stop prescribing drugs whose only advertised values are :—
 - a. cosmetic embellishments
 - b. elegant packing
 - c. irrational combinations
 - d. imitative drugs
 - e. inadequate evidence of greater value

We could weed out 'banned drugs' as well as restricted drugs.

We could stop 'injection and tonic' practice.
6. Avoid Drug Industry Linkages We could refuse to take gifts and physician samples
We could avoid allowing drug companies to sponsor events, meetings
We could beware of unethical trade discounts or other forms of inducement
7. Adopt Rational : Drug Purchase We could adopt bulk purchasing
Support cooperative purchasing or production endeavours
Produce drugs in your hospitals, dispensaries.

Learning to use antibiotics wisely

First guidelines

1. Use an antibiotic that kills bacteria rather than one that just slows them down. This usually gives quicker results, and prevents the infection from becoming resistant to treatment.
2. Use an antibiotic that causes fewer side effects and is less risky. For example, if the person is not allergic, it is safer to use penicillin or ampicillin rather than an antibiotic like erythromycin that can cause poisoning.
3. When possible, use a narrow-range antibiotic that attacks the specific infection rather than one that attacks many kinds of bacteria. Broad-range antibiotics cause more problems—especially diarrhoea and thrush—because they attack good bacteria along with the bad. The good bacteria prevent the growth of harmful things like moniliasis (fungus that can cause diarrhoea, thrush, etc.)
4. Use a broad-range antibiotic only when no other will work, or when several kinds of bacteria may be causing the infection (as with infections of the gut, peritonitis, appendicitis, some urinary infections, etc.)

Additional guidelines

5. Use antibiotics only for bacterial infections. Do not use them for viral infections, because antibiotics do nothing against viruses (common cold, measles, chicken pox etc.)
6. Be careful to give more than the recommended dose of a toxic (poisonous)

nous) antibiotic. However, it is usually not dangerous to give higher doses of an antibiotic that is not poisonous (penicillin or ampicillin). Tetracycline becomes more poisonous when old. It should never be used beyond the expiration date or in more than the recommended dose.

7. Do not use an antibiotic that slows down bacteria together with an antibiotic that kills them. The combination is often less effective than one alone. (Once the bacteria are captured or slowed, they stay hidden where the other antibiotics cannot kill them). For example, never use tetracycline in combination with chloramphenicol.
8. Whenever possible, avoid using a toxic medicine for a person with diarrhoea or dehydration. A dehydrated person's body cannot get rid of poisons as quickly in the urine. Even normal doses of a toxic medicine may build up and poison the person. (Sulfas are especially risky for treating diarrhoea. Unless the person is making a lot of urine, sulfa can form crystals in the kidneys and cause damage).
9. Do not use toxic medicines during pregnancy—especially during the first three months. Some medicines can cause severe birth defects.
10. Use a medicine the family can afford. When choosing between medicines, always consider the relative cost, and weigh this with other advantages and disadvantages.

—Helping Health Workers Learn
David Werner and Bill Bower

Seven Steps to success in essential drugs supply

"Essential drugs are those that satisfy the health care needs of the majority of the people. They should, therefore, be available at all times in adequate amounts and in the appropriate dosage forms."

(1) National Drug Policy

Every country's comprehensive health. Policy should include a National Policy on Essential Drugs. WHO's role is to inform governments about the basic concept and the benefits, then to provide technical support for policy formulation,, selection of essential drugs, a plan of action, procurement, quality control, programme management and aspects such as training, evaluation and legislation. A national essential drug policy can provide more drugs to more people at the same cost or even less.

(2) Selection of Essential Drugs

Essential drugs are those that satisfy the health care needs of the majority of the population. Selections are based of the most common local disease and conditions and on the capability of the health care system. More than 80 countries have now adopted lists of essential drugs based on WHO's Model List of Essential Drugs, as have various non-governmental organizations and UN agencies.

(3) Drug Procurement

All too often countries pay more than they need for their drugs. They can get better value for money by putting out bulk orders to international competitive tender on the world market. UNICEF and WHO help countries to strengthen their procurement

systems and to secure, if necessary and possible, reliable financing—internal or external—for their purchase.

4. Logistics of Supply

WHO's goal is to make sure that people can get the 20 most needed essential drugs whenever they require them, within an hour's travel. The supply chain must work; correct ordering, packing and storage; less waste through deterioration, loss or theft, regular transport to the remotest dispensary despite climatic and geographical conditions or fuel shortage. Several countries have established efficient drug supply management systems with support from WHO, UNICEF and bilateral agencies. The pharmaceutical industry also provides expertise.

(5) Proper Use of Drugs

Both health professionals and the general public are in need of better information and education about when and how to use drugs. Common problems are that the former tend to overprescribe while the latter may fail to follow the prescribers instructions or dose themselves. Drug information sheets are being considered by WHO that would give the indications, contra-indications and side effects of essential drugs. Several countries have produced their own therapeutic guides and standard treatment schedules for use by health workers. Consumer groups do valuable work among and on behalf of the general public.

(6) Quality Control

Essential drugs must be of reliable quality as well as efficacious and safe. Quality has to be assured upto the time that the drugs

are administrated by good manufacturing practices and by monitoring of products at all stages in the supply line. The IFPMA member companies provide training in quality control for nationals of developing countries. Any country lacking quality control laboratories can obtain an assurance of the quality of imported products at the time of export through the WHO certification scheme on the quality of pharmaceutical products moving in international commerce.

(7) Training

Many countries lack staff trained in policy

formulation, selection, procurement, management and use of drugs, in drug legislation and regulatory control and in production and quality control. WHO is approaching universities, training schools, non-governmental organizations and the pharmaceutical industry for help with training materials and courses. At seminars and workshops, countries that have developed successful national essential drugs programmes demonstrate to others "how it's done".

from World Health, July 1984

Further Reading

(Contd. from page 13)

1. Banned Brand Drug List
2. Hazardous Banned Bannable and Dumped Drugs
3. Rationality in Banning Fixed Dose Combinations
4. Some painful facts about a pain killer called Amidopyrine
5. Why not to prescribe anabolic steroids ?
6. Irrational use of antibiotics
7. The clioquinol controversy
8. Using tetracyclines for children and pregnant women
9. Consumer Alert-Phenylbutazone and Oxyphenbutazone
10. Scientific scrutiny of some over the counter drugs
11. The case against EP Forte
12. National Drug Policy guidelines and list of banned drugs (Bangladesh)

Available from Low Cost Drugs and Rational Therapeutic Cell, Voluntary Health Association of India, C-14 Community Centre, SDA, New Delhi 110016.