FIFTY YEARS ago in the world's poorest countries average life expectancy was only 30 years. At that time the first modern drugs were only just being developed in Europe and America. In the poor world today average life expectancy is 50 years. The poor may live longer now but the evidence suggests that during their lifetime, they are likely both to experience as much ill-health as their great-grandparents, and to suffer from essentially the same health problems. In fact, for the vast majority of the Third World poor, the quality of life has barely improved. For some it has almost certainly worsened.

Do modern drugs offer a solution? Could their use radically improve the quality of life of the Third World poor? Before looking at the potential of modern drugs, we need to take stock of the health problems in poor countries and examine their underlying causes.

DIAGNOSIS OF ILL-HEALTH

Even the most 'reliable' statistics on ill-health in poor countries can be little more than 'guesstimates'. Localised studies can often give a more accurate picture than national statistics. In many countries official figures on causes of death are based entirely on hospital records. But hardly any of the dead end up in hospital, for example, less than 4% in Tanzania. Official statistics also tend to mask the major health problems of the poor. After all, they can only cover patients treated by the health services, whereas WHO estimates that in many Third World countries as many as 70% of the population has no access to organised health care.

So official statistics are almost invariably underestimates of the true incidence of premature death and disease. But there is little doubt about the major health problems in poor countries, or the fact that the poorest are most severely affected. The single most widespread cause of ill-health is malnutrition.

MALNUTRITION

The most vulnerable group in poor countries are young children. Deaths of children under the age of five can account for up to three-quarters of all deaths in the community. According to the United Nations Industrial Development Organisation (UNIDO), of the 15.6 million children under five who die each year,
15.1 million are from developing countries, and of these, 12 million deaths could probably be avoided. (7)

The under-fives are especially at risk because they have little resistance to disease, and their vulnerability becomes acute when they are malnourished. Repeated bouts of diarrhoea and other common infections reduce a child’s ability to absorb food. The child becomes weak and stops growing and may become severely malnourished. This precipitates a vicious circle of malnutrition and disease that is often only broken with the child’s death. A large-scale study of child deaths in the impoverished north-east of Brazil found that measles was the probable cause of half of all child deaths. But three-quarters of these children also showed obvious signs of malnutrition. (8) The problem of malnutrition is not of course confined to those who die. Many are saved from death but are left severely physically and mentally disabled.

Poor nutrition undermines the health of other vulnerable groups in the community, such as pregnant and lactating mothers who can become severely anaemic from the effects of repeated pregnancies. A recent nutritional study carried out in North Yemen found that in one region almost three-quarters of mothers were suffering from anaemia. (9) In most developing countries the basic food intake of a large section of the population is totally inadequate for their health needs. It was estimated in 1980 that at least a third of the people in Mozambique get less calories than they require. (10) In the very poorest countries, such as Bangladesh, where there is tremendous pressure on the land and rapid population growth, there is likely to be a much higher percentage of people undernourished and consequently vulnerable to infectious disease.

**COMMUNICABLE DISEASES**

People in the Third World today suffer from the same communicable diseases that were widespread in developed countries in the nineteenth century. Many of these illnesses are transmitted by food and water contaminated by disease organisms from human and animal excreta. They include diarrhoeal disease, amoebic and bacterial dysentery, typhoid, cholera, polio and infectious hepatitis, which are all major problems in the Third World. (11)

One Bangladeshi expert on diarrhoeal disease describes it as the major health scourge of Asia, responsible for at least half and possibly as much as three-quarters of infectious disease. (12) In Bangladesh itself, an estimated 60% of children who die under the age of five, die as a result of diarrhoea, and in India it is thought that acute diarrhoeal diseases alone take 1.5 million lives each year. (13)

Respiratory infections are major problems throughout the Third World. During the 1970s pneumonia and bronchitis were the main causes of death recorded in Tanzania and Nepal. (14) In some countries TB is a disease of epidemic proportions. A report published in 1981 estimates that each year TB kills half a million people in India alone. (15)
TROPICAL AND VECTOR-BORNE DISEASES

Nearly one thousand million people - a quarter of the world’s population - are affected or threatened by tropical diseases. The most prevalent of these include malaria, schistosomiasis, filariasis, trypanosomiasis, leishmaniasis and leprosy.

Of these, malaria is a major killer, each year causing the death of about one million children under the age of 14 in Africa alone. Chagas’ disease, a South American form of trypanosomiasis affecting over 10 million people, is also often fatal in children. But the effects of most tropical and vector-borne diseases are severely debilitating and crippling, rather than fatal. One example is onchocerciasis, or river blindness, a form of filariasis transmitted by blackfly, which is endemic in parts of Africa and Latin America. In the upper basin of the Volta River in West Africa about a million people are thought to be suffering from partial blindness caused by worms that grow under the skin where the blackfly have bitten. The disease is progressive and leaves thousands completely blind.

The parasites that cause many of the different tropical diseases attack the blood and vital organs like the liver. They cause painful and debilitating symptoms such as recurring bouts of fever. In common with the mass of infectious diseases, they can perpetuate poverty by their constant debilitating effect. For example, a poor family of subsistence farmers may have their livelihood destroyed if an attack of malaria leaves them too weak to work at critical times of the year, especially when crops need to be planted and harvested.

In many poor communities parasitic diseases are a fact of life for the majority. Many are easily transmitted because of lack of sanitation and clean water supplies. The prevalence of these parasitic diseases is well illustrated by studies from Sri Lanka, Bangladesh and Venezuela showing that over 90% of 6 year olds examined had some form of worm infestation.

URBANISATION AND DISEASE

Finally, industrialisation and the rapid growth of the cities are beginning to change the pattern of ill-health. Over half the population of Latin America now lives in urban areas, and rural people are also migrating to the towns throughout Asia and Africa. Today the urban poor are exposed to infectious diseases from insanitary living conditions in the shanty towns and the new hazards of industrial accidents, pollution and traffic accidents. Even the rural poor bear the brunt of pressures from the consumer society as they are enticed away from local foods and encouraged to consume expensive factory-produced food and drinks and high-tar cigarettes.

The fact that life expectancy is now longer, particularly amongst the affluent minority, means that cancer, cardiac and coronary-artery disease and other major problems of industrialised societies are becoming more significant. But the incidence of these conditions is proportionately minute compared to the mass of nutritional, infectious and tropical diseases, suffered by the poor.
Medicines can represent a major financial burden to poor people. Health centres to provide the necessary drugs and clear instructions on their use are not available to millions of people in the Third World.
THE UNDERLYING CAUSES
The poor suffer disproportionately from ill health. (21) This is as true of the prevalence of disease in the world's poorest countries, as in rich industrialised nations. In Britain, for example, the 1980 Black Committee Report, *Inequalities in Health*, showed that the poorest suffer more illness and are more likely to die in infancy than the affluent. (22) In other words, poverty is one major cause of ill-health. As the Indian Council of Social Science Research (ICSSR) and Indian Council of Medical Research (ICMR) state in their 1981 report, *Health for all: an alternative strategy*, "'Poverty', itself is an extremely tenacious disease. It must be directly attacked to improve the health status of the people.'" (23)

But, as the ICSSR/ICMR report points out, in India, a country that is modernising and industrialising fast, "... although there is some evidence to show that the percentage of people below the poverty line may have declined, there is no doubt that their absolute numbers have increased substantially". (24) It is OXFAM's experience that, in many developing countries, the distribution of wealth is becoming more concentrated in the hands of a small minority, whilst the mass of the poor sink deeper into the poverty trap. (25)

Poverty means different things in different societies, but above all it means powerlessness. In the words of Dr. Klouda, OXFAM's medical adviser in Tanzania, "'The existence of the poor has almost no effect on the national goals, and the poor have no power or voice to influence village thinking, let alone national thinking. The nation rewards those who actively contribute to its success.'" (26) Powerlessness means that the poor have only a limited ability to improve their health by obtaining more food, or changing their physical environment. As a result, they are trapped in semi-permanent hunger and squalid living conditions.

Powerlessness means, for example, that the growing minority of relatively well-paid factory workers, many in the Third World's new free trade zones, are in no position to protect their health by demanding safer working conditions. There is chronic unemployment and underemployment in both urban and rural areas, and in most countries wages are extremely low in relation to the cost of basic necessities. Inflation, particularly rising food prices, has a direct impact on nutrition, because the poor have to spend a very high proportion of their income on food. (27) For example, a doctor reports that in Ghana in 1979, at a time of rapid inflation, a labourer's basic daily wage "would have just covered the cost of carbohydrate for two adults and two children, with no allowance for protein, rent, clothes or other essentials". (28)

Many poor families have so little purchasing power that their health has been endangered by the growth of the money economy. In Tanzania, for example, a detailed study of the nutritional status of people in the Southern Highlands in 1977 found that the highest nutritional levels were in families that had stayed outside the money economy and still depended on subsistence farming. (29) Commenting on this study, Dr. Klouda points out that "'money introduces a new method of obtaining status or acceptance'". (30) Moreover, the pressures of
modernisation and consumerism have made an impact even in remote rural areas. They have created new aspirations that can often only be satisfied at the expense of buying food.  

The food intake of families dependent on subsistence farming can, however, be dangerously low because of their inability to produce enough food. Marginal farmers are particularly vulnerable to drought and floods. Very few can get advice on how to improve poor, overworked soil or legal aid if forced off their land. They may have no access to credit to buy seeds or water supplies to irrigate their land.  

The availability of water can be critical for food production and consequently for nutrition. Lack of water is also a major factor in the spread of infectious disease. Skin infections and communicable disease are rapidly transmitted, when families have no easy access to water for washing. Moreover, the poor are particularly vulnerable to water-borne diseases, because many have to rely on unsafe water for drinking. In North Yemen, for example, only 4% of households had clean piped water in 1978. In India, although 80% of the urban population has been provided with a protected water supply, out in the rural areas, only one village in ten has safe drinking water. One village in five lacks even basic water facilities.  

In most developing countries there is a chronic shortage of sanitation facilities and sewerage, particularly in the rural areas, where even simple latrines are virtually unknown. In Bangladesh, for example, no more than 6% of households throughout the country had sanitation facilities in 1977. The Third World poor almost invariably live in overcrowded housing. In North Yemen the Government has estimated that nearly half the population live in one-room housing. Living conditions in the Third World’s sprawling urban slums are particularly unhealthy, as people are forced to live alongside open drains and refuse tips.  

The problems of lack of food and unhealthy living conditions are compounded by ignorance, apathy and fatalism, generated by a lifetime of powerlessness and deprivation. The oppression of millions of poor women is an important factor in perpetuating ill-health. In some societies girls have even less access than boys to elementary education with the result that over 90% of women are illiterate. Their low status can mean that adult males come first in sharing out a family’s meagre diet, to the disadvantage of women and children. Mothers may have little understanding of hygiene or the nutritional needs of their children. Commercial pressures have compounded the problems in recent years as a growing number of women in poor communities have abandoned breast-feeding, unaware of the hazards to their babies’ health from contaminated feeds in unsterilised feeding-bottles.  

THE REMEDIES  

From the broad range of social, political and economic factors underlying ill-health in poor countries, it must be readily apparent that medicines alone cannot solve the problems. Disease that is rooted in poverty can only be prevented by
an onslaught on poverty and inequality. In the words of the Tanzanian Food and Nutrition Council, a "society that is perpetuating malnutrition cannot be treated with medicine. It has to develop and be restructured in such a way that all its members are ascertained all their basic human needs". (40)

Most illness is in fact self-limiting through the body's own defence mechanisms. This makes good nutrition crucial in fighting disease. Dr. Klouda observes from Tanzania: "If the nutritional status of the nation improved, that, at one blow, would do more for the health of the population than any other measure. The health services have only a limited role to play in this." (41)

The ICSSR and ICMR report confirms that ill-health has to be tackled with political and economic measures. "... there are millions of individuals whose illness arises basically from malnutrition. No 'pills' can help them; and the only way to prevent their morbidity and mortality is to make a direct attack on poverty itself through such programmes as guaranteed employment at reasonable wages." (42)

This prescription for better health is borne out by the experience of developed countries such as Britain. The diagrams overleaf trace the rapid fall in infant mortality rates over the last century. Diagram 1 shows that deaths of babies in their first year of life had already fallen dramatically before the advent of modern life-saving drugs which, with the exception of small-pox vaccine, were not generally available until the 1930s. (43) In fact, as Diagram 2 demonstrates, the major impetus to better health in Britain from the mid-nineteenth century can be directly attributed to public health measures and social legislation which improved the living standards of working people. (44) Higher wages and welfare benefits made it possible for the poor to eat properly. Public health measures radically improved conditions in the densely-populated urban areas, particularly with the provision of clean water supplies, sanitation, sewerage and new housing. Finally, improved health care contributed to the prevention of early deaths. Infant mortality fell sharply at the turn of the century, when the Midwives Act (1902) came into force.

The fact that medicines can be seen to have played a relatively minor role in the trend to better health in countries like Britain is of course no argument against their potential value in developing countries today. Most deaths in the Third World are caused by infectious diseases that can now be treated with drugs.

It is also clear that when the first modern drug treatments became available their impact was soon felt in speeding up recovery and preventing deaths. TB was once a major killer in Britain. From the end of the nineteenth century public health measures, better diet and improved housing contributed to a dramatic fall in TB deaths. By the 1940s the TB death rate was still declining, by about 3% a year. But when the first modern antituberculous drugs became generally available in the early 1950s, the fall in TB deaths increased to 15% a year. (45)

Over the past thirty years drugs have made a tremendous impact in controlling some specific diseases. One of the most obvious successes is the eradication of smallpox with smallpox vaccine. There are numerous examples of drugs which have made major contributions to the relief of human suffering. These include
Diagram 1.  
**INFANT MORTALITY IN ENGLAND AND WALES**

![Graph showing infant mortality and mortality in age group 1-2 years](image)

Diagram 2.  
**INFANT MORTALITY IN ENGLAND AND WALES**

![Graph showing infant mortality and mortality in age group 1-2 years](image)
drugs to alleviate painful symptoms, but most vital are those that provide cures for killing diseases. An outstanding example is the development of antibiotics targeted to attack life-threatening infections without the patient suffering ill effects. Antibacterial drugs have made it possible to save lives on a massive scale. Their success has created what Dr. John Yudkin describes as the "antibiotic mentality", the belief in "a pill for all ills". (46)

The fact remains that medicines cannot tackle the social roots of ill-health. With a few notable exceptions, such as vaccines and antimalarials, they cannot prevent disease. But to make any major onslaught on disease, prevention is essential. The inevitable limitations of medicines are put clearly by a research and development director of Wellcome, one major British drug manufacturer. He points out that "drugs are not synonymous with health, ... there are many forces for the promotion of health, including nutrition, education and hygiene. In some parts of the world, these take priority before more sophisticated medicines are brought into play." (47)

Even vaccines which can be used selectively to protect young children from tetanus, diphtheria, whooping cough, polio, measles and TB may not all be entirely effective let alone cost-effective. (48) For example there is evidence to indicate that the anti-TB BCG vaccine is of unpredictable effectiveness. (49) It has been suggested that this may be related to the nutritional status of the recipient. In any case, no drug can be a substitute for food. Dr. Klouda highlights how vaccines may be an unrealistic option in terms of cost. "A good health budget will provide about £3 a head in a developing country [per year]. The cost for just measles vaccine for every child in Tanzania, including transport and other costs, came to about £1.50 in 1977. How can they even think of £1.50 a head for vaccines, which are not dealing with the major health problems?" (50)

Moreover, drugs are powerless to break the cycle of disease in an unhealthy environment. This is illustrated by the treatment, as against the prevention, of hookworm anaemia, a disease which is very common in poor communities that have no basic sanitation. Hookworm larvae thrive in moist soil where they have been deposited in human waste. The larvae break through the skin of people walking barefoot and work their way into the small intestine. Lodged in the intestine, the hookworm parasite leeches blood. A heavy worm infestation can cause severe iron-deficiency anaemia. If left untreated, an infected person gets steadily weaker and can die from heart failure. (51)

Hookworm anaemia can be treated effectively with modern drug therapy - worm pills in conjunction with iron tablets. But so long as the community remains ignorant of how the disease is transmitted, they will go on using the moist ground instead of latrines and keep on getting hookworm anaemia. The only long-term solution is to build latrines. Finding an appropriate method to dispose of human waste can be both technically difficult and expensive. But people could protect themselves from the disease if they knew how it is transmitted. For instance, many could buy cheap plastic sandals as a simple preventive measure. (52) Encouraging
the poor to go on buying drugs without doing anything to stop diseases from recurring makes as much sense as continuously wallpapering a damp wall and failing to do anything to treat the damp. It is expensive, wasteful and ultimately doomed to failure.

So to improve health in poor countries disease has to be attacked simultaneously on a number of fronts. Amongst them clean water, sanitation and other public health measures are vital. The difficulty is that these require a great deal of capital investment. For example, it has been calculated that the basic cost of providing clean water supplies for the rural population of India by the year 2000 would require an investment of at least £277 million a year. This estimate excludes all the time-consuming and expensive business of coping with the technological and maintenance problems that would have to be overcome. (53) This sum is roughly equivalent to the £250 million calculated to have been invested in the Indian drug industry in 1977. (54) But whereas there are immediate returns to be made on medicine sales, there are clearly few attractions for private investors in providing poor communities with clean water.

However, lack of money to carry out preventive health projects need not be an insurmountable obstacle to better health. This is illustrated by the experience of Kerala, one of the most economically underdeveloped States in India. Kerala spends less on health per person that all but one of the 14 remaining states, but it has by far the best health statistics, even by comparison with the most affluent Indian States such as the Punjab. The death rate in Kerala is 7.2 per thousand, compared to 19.2 per thousand in the State of Uttar Pradesh. The significantly better health status of people in Kerala has been linked to its greater social and educational development. Women have relatively better status. The society is less rigidly segregated on caste lines. Literacy rates are high and women, in particular, are now benefiting from widespread adult literacy campaigns and elementary education. (55)

The experience of Kerala, that greater awareness can generate better health, is confirmed by OXFAM’s experience of community development projects throughout the Third World. The poor only take an active interest in preventive health measures, such as devising basic sanitation, if they participate in making decisions. For this to happen, poor communities need to go through a process of social education, to gain the will and the confidence to organise to improve things. (56)

We have seen that the main health problems of the poor are rooted in their poverty and powerlessness, and that no single prescription for better health is likely to succeed. Improved living standards, more equal distribution of land, job opportunities, clean water, control of disease vectors and other public health measures are all essential elements, as are education and preventive and curative health care. All depend on the political will of governments to give priority to the needs of the poor. Consequently lack of political will and of money to implement changes remain the major stumbling blocks to meeting these needs.
ESSENTIAL DRUGS FOR PRIMARY HEALTH CARE

Over the past five years governments of all complexions have been expressing their commitment to extending health services to cover their entire population. The new emphasis on the universal right to health care dates back to the joint World Health Organisation (WHO) and United Nations Children’s Fund (UNICEF) international conference on Primary Health Care held in Alma-Ata in 1978. This set the ambitious target of “the attainment by all peoples of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life” (57). Of course, the rhetoric obscures the reality in developing countries, but aims for politically neutral ground to galvanise governments into action.

The Alma-Ata Declaration defines primary health care as “essential health care .... made universally accessible to individuals and families in the community .... through their full participation and at a cost that the community and country can afford ....” (58) It is within the framework of these primary health care services that medicines could be used most effectively as part of a wider preventive strategy. In the words of WHO, “While medicinal products alone are not sufficient to provide adequate health care, they do play an important role in protecting, maintaining and restoring the health of the people”. (59) (WHO’s emphasis)

The crucial issue for poor countries is that, whereas a limited number of drugs are vital to health needs, not all drugs are essential, let alone useful. Of the thousands of different drugs sold, WHO has identified a selection of approximately 200 which experts consider “essential”, in other words “basic, indispensable and necessary to any nation’s health needs”. (60) The drugs included in the WHO Selection of essential drugs (Appendix 1) have mostly been in use for many years and are known to be relatively safe and cost-effective. WHO also urges individual countries to make a much more limited selection of drugs for their priority needs in primary health care. (61) Whilst different experts hold different views on exactly which drugs should be considered ‘essential’ for primary health care, many agree that as few as a dozen or so vital drugs are sufficient to cater for the most pressing needs of poor communities. (62)

In this chapter we have focussed on the relatively limited role of medicines in terms of the Third World’s overall health strategy. But modern drugs are nonetheless, in the words of one United Nations (UN) report, “a marginal albeit essential technology”. (63) As WHO stresses, drugs are “essential tools for health care and for the improvement of the quality of life”. (64) Some key medicines could be used to save millions of the world’s poor from unnecessary suffering and premature death.

Bearing in mind that the poor need a small number of essential drugs, in the next chapters we shall concentrate on the reality in the Third World today and examine the drug market and its relevance to the needs of the poor.
"The public health services of the 67 poorest developing countries, excluding China, spend less in total than the rich countries spend on tranquilizers." (Dr. Halfdan Mahler, Director General, World Health Organisation, World Health Forum, 2(1), 1981.)

CHOR ASHARIDAH is an island in the middle of the Ganges, just inside Bangladesh, on the border with India. The island is really no more than a mud-flat thrown up by the river, but, because land is desperately short in Bangladesh, it has become the home of about 12,000 people. They are dynamic and industrious. Everyone is up before dawn and working: the men labouring in the paddy fields, the women straining over the monotonous task of husking paddy and the children tending the animals.

The island is at the mercy of the river. Every year, at the time of the monsoon, it runs the risk of serious flooding. As the water-level rises dramatically there is nothing to stop the water breaking across the island, washing away the crops and mud houses in its path. September 1980 brought a massive flood. Many people lost their homes and, as the year’s main rice crop was destroyed, most lost their livelihood.

When this happens the poor landless labourers cannot find work, so they have no means of feeding their families. The powerful in the community who have their own land, suffer from the loss of their crops. But they have reserves to tide them over, and by selling their rice at inflated prices they can even amass more wealth at the expense of the poor. The landowners have little difficulty obtaining credit to buy seeds for the next crop. But the landless have nothing to fall back on. They are trapped in the day-to-day struggle to secure food and shelter.

For several days at a time the poorest go without even a bowl of rice. Amongst the worst off are young ‘widows’ and their children, abandoned by husbands who have left because there is no work. The health of the poor is seriously threatened by both lack of food and the insanitary conditions in the villages. There are no latrines or basic sanitation on the island and much of the water supply is contaminated.
As the flood water recedes, hookworm and roundworm thrive in the moist soil where people must squat to defecate. The skies are beginning to clear as the monsoon is nearly over. But every so often a sudden downpour leaves the villagers soaked to the skin as they work on, rebuilding the mud walls of their homes. Adults and children look thin and weak from intestinal parasites and repeated bouts of diarrhoea. Many of the youngest children have pot bellies from the combined effects of malnutrition and heavy worm infestations. The eyes of those worst affected are dull and dry-looking. At night they stumble in the dark, showing the first obvious signs of nutritional blindness. Those who survive may have their eyesight damaged for life. Respiratory illnesses are common, and there are serious pneumonia and TB cases.

What both children and adults obviously need is more food and a healthy environment. The prospects of any far-reaching changes are remote. Even with the necessary resources and the political will, the process of improving health will take time. But the islanders could benefit from preventive health measures and a few key drugs could make the difference between life and death for some. Antibacterial and antituberculous drugs, deworming pills and some vaccines could all make an immediate impact on the islanders’ health.

There are four government-paid health workers on the island. But people see little point in going to find them. They have no drugs. There is also a small drug dispensary, but its annual drugs allocation, worth Taka 5,000 (about £138), is hopelessly inadequate to cater for the needs of 12,000 people. Not only is the allocation meagre at little more than 1p a head, but supplies are so erratic that the dispensary only has stocks for a few months of the year. Most of the time its shelves are empty and the doors locked.

The island has no private pharmacy, but some traders do sell high-priced drugs to those who can spare the cash to buy them. Medicines are an impossible luxury for the poorest families, who spend about three-quarters of their income on food. Across the water, there is a government health centre where medicines are distributed free. But the poor have neither the time nor the money to pay for the crossing and then make the 6-mile trek to the centre. They might queue for hours only to find that the dispensary has run out of the drug they require. So the poor are forced to treat illness as a fact of life and carry on regardless. They may not go for help until the problem is serious. All too often, by the time they go for treatment, it is too late.

The situation of the islanders is not unique. Throughout Asia, Africa and Latin America, millions of the world’s poor have no means of obtaining medicines to help relieve suffering, or cure illness. This is because the world distribution of medicines is like that of most commodities. It is dependent on purchasing power, not need. The rich take a disproportionate slice of the pharmaceutical cake, leaving the poor with the crumbs. Nineteen of the world’s richest industrialised countries (with a combined population of 684 millions) consumed 58% of drugs on the world market in 1976.
In the same year, thirty-four of the poorest nations, with almost double that population (1,317 millions) consumed just 3%. The Third World as a whole has three-quarters of the world’s population, but today accounts for little more than 20% of world drug sales, and nearer 15%, when China is excluded. Drug expenditure each year in the poorest countries averages less than 50p a head. In some industrialised nations it exceeds £35. These figures underline the lack of purchasing power of the Third World poor. Essentially, they reveal more about wealth than health. It is, for example, highly debatable whether the level of drug consumption in much of the rich world represents a particularly ‘healthy’ state of affairs. But one conclusion is inescapable: whereas rich countries can afford to be extravagant with medicines without risking acute social consequences, poor people and their governments cannot. Because they have so little money, it is crucial that it is spent only on essential drugs.

In most countries drugs are distributed both through organised health services, either government or voluntary, and by private pharmacies and retailers. Patients in industrialised countries can usually obtain treatment through government-subsidised services or health insurance schemes. For example, in Britain anyone in need of medicine is entitled to a prescription subsidised by the National Health Service. In many developing countries medicines are also, in theory, available free of charge through the health services. In practice, only a privileged minority has easy access to treatment, mostly because they can afford to pay for drugs prescribed by private doctors, rather than relying on the desperately inadequate health services.

Drug distribution cannot be looked at in isolation from health care systems. The stark fact is that throughout most of the Third World almost three-quarters of the population has no access to basic health services. This lack of a primary health care infrastructure to meet the needs of the majority is the single major obstacle to the safe and effective distribution of drugs in poor countries.

But the Third World poor face a double deprivation. In the absence of organised health services, they are particularly vulnerable to pressures from the expanding commercial drug market which is subject to a minimum of controls. There are of course exceptions. A few developing countries have succeeded in providing basic health services for the majority of their people and have introduced controls on private drug distribution to safeguard health. However, in this chapter we concentrate on the problems of public and private drug distribution common to many very different developing countries.

LIMITED HEALTH BUDGETS
Much of the problem of people not getting health care or drugs is straight economics. Governments of poor countries lack resources not just to buy medicines, but to balance all the conflicting demands generated by underdevelopment. The deficiencies of the health infrastructure are, after all, just one problem area. Food production, transport and other sectors may present more
Diagram 3.

World pharmaceutical consumption

Northern consumption

Western Europe, N American developed countries, Japan, S Africa, Australia and New Zealand

China

Other Asia

Developing Americas

Eastern Europe

Africa

Total $76,000 million in 1980 (manufacturer's prices)

immediate problems. Many governments appear to rate 'health' as a low priority alongside more strategic sectors such as defence. For example, the Government of North Yemen spends 44% of its budget, and Bangladesh 20%, on the armed forces, compared with 3.5% which each Government allocates to health. (8)

Even governments whose policies commit them to achieving a greater degree of social justice will not necessarily allocate a lot of funds to their health budget. After all, health services play only a limited role in improving health. Governments may decide they can do more to improve health by investing more in agriculture, industry or education. (9)

Similarly, other sectors of government spending have some bearing on a government's ability to distribute medicines to the people. For example, funds allocated to setting up basic industries may be used to increase self-sufficiency in essential drugs, and good transport and communications are vital to an efficient drug distribution system.

Almost invariably the health budgets of poor countries are very limited. In 1978/9 the British National Health Service spent over 900 times more money providing services to 54 million people in Britain than the Bangladesh Health Ministry spent on health care for its 85 million people. (10) This lack of resources is of course a major stumbling block to making health care available to the mass of the people. But the difficulties have been greatly exacerbated by the fact that most Third World countries have modelled their health systems on the expensive curative services that form the basis of health care in rich industrialised countries. Even in these countries the bias towards high-technology curative care as opposed to more emphasis on disease prevention is increasingly questioned.

HOSPITALS OR HEALTH POSTS?
The escalating costs of health services are beginning to tax the governments of rich countries. But to poor countries the high recurrent costs of these Western-style curative services are crippling. Money is syphoned off to pay for costly medical equipment and keep hospital dispensaries stocked with all the latest drugs. The cost of extending this level of services to the mass of the people is unthinkable. So millions of the poor remain outside the system, denied the most basic health care. Part of the problem is that it is of course much easier to spend the health budget providing services for a compact urban population than on people dispersed in the rural areas.

The tremendous drain of paying for hospital services is illustrated by the situation in Tanzania, where the Government's 1979 Evaluation of the Health Sector reveals that the hospitals alone are eating up 60% of the entire health budget. Yet the same study shows how little of the population actually benefits from hospital services. Over half of all hospital in-patients and three-quarters of out-patients live within 5 to 10 kms of the hospital and almost all the hospitals are in the towns.
This means that most of the health budget is only benefiting people in the urban areas - little more than 14% of the population.

Recurrent expenditure on each Tanzanian hospital (seeing 137,000 out-patients a year) costs as much as it does to run 53 dispensaries (which, together, see 1,060,000 out-patients a year). The true cost of running the hospitals is clear from the fact that two out of three villages are left with no health facility at all.\(^{(11)}\)

Dr. Klouda, OXFAM’s medical adviser in Tanzania, reports that after paying for the hospitals, “Only a little [ of the health budget ] is left to keep the country’s dispensaries and health centres going, as well as provide a tiny budget for preventive services. The amount left for the dispensaries and health centres covers salaries and a few drugs and other necessities. Little is provided for transport, repairs, maintenance, spare parts or equipment. But even the drug allowance does not cover the basic needs of a dispensary. This means that dispensary staff provide inadequate treatment, are very rarely supervised, very rarely visit the four or so villages they should cover, and are often demoralised.”\(^{(12)}\) Yet Tanzania is a country which has given a higher priority than many to the equitable spread of health care.\(^{(13)}\)

The distortion between where money is actually spent on health care and where it is needed recurs throughout the Third World, and indeed elsewhere. For example, in Bangladesh, three-quarters of the money spent on curative health services is channelled through health facilities in the towns, where only 8% of the people live. There are specialised orthopaedic, cardiovascular and eye institutions already, and plans to set up more of each, in addition to a new cancer research institute.\(^{(14)}\) Cancer and heart disease do not rank among the country’s priority health problems, but they are an increasing concern for the urban elite.

Meanwhile, in rural Bangladesh most people have no access even to the most rudimentary health post. The 1977 official *Health Profile* states: “The seven million urban population is relatively well covered by Government and private health facilities but a major proportion of the 76 million rural population do not have health care of any sort.”\(^{(15)}\)

A factor that contributes to the misallocation of funds away from real health needs is that Third World governments and aid donors alike are keen on ‘visible’ projects. Brand new health posts in the north-east of Brazil have been kitted out with electric sterilisers where there is no electricity. Some of the buildings remain unused except by the occasional visiting dignitary.\(^{(16)}\) These gleaming white elephants demonstrate the good intentions of planners frustrated by the shortage of money for running costs and, above all, the absence of trained personnel where they are most needed.
INAPPROPRIATE TRAINING

The chronic lack of trained health workers is one of the major obstacles to providing basic health care to the majority of the rural poor. Most governments recognise the urgent need to train paramedics and to develop referral systems to support them. But in most cases demand far outstrips the number of health workers successfully trained.

Meanwhile, large sums of money continue to be poured into training doctors who emerge from medical schools with no intention of working in the rural areas. Moreover, many of the skills the doctors acquire are not relevant to their country's most pressing health needs. Dr. Mahler, Director General of the World Health Organisation, underlines the deficiencies of conventional medical training: "Most of the world's medical schools prepare doctors not to care for the health of the people but to engage in a medical practice that is blind to anything but disease and the technology for dealing with it." (17)

Doctors' training is very expensive. It rarely opens the students' eyes to their country's major health problems or to an awareness of the social and economic roots of ill-health. In Bangladesh medical students spend far longer than their British counterparts studying subjects such as anatomy, at the expense of gaining an understanding of disease prevention and common health problems. They are encouraged to depend on medicines. For example, throughout five years' training, not a single lecture is devoted to appropriate non-drug treatments for diarrhoea, although diarrhoeal diseases account for over half the country's illness. (18) It is hardly surprising that these doctors prescribe expensive anti-diarrhoeal drugs and rarely encourage oral rehydration, which would enable people to take advantage of a safe and inexpensive means of saving lives.

Most Third World medical students come from wealthier families and many are totally ignorant about the reality of life for the mass of the poor. Neither their background nor their training motivate them to work in the rural areas where conditions are primitive and health facilities very basic. Many opt for private practice and specialised medicine. A Brazilian doctor sees the trend as so well-established that the first question invariably put to newly trained doctors is what they plan to specialise in. He comments that "Specialisation is getting so far-fetched that there will be specialists in the retina of the eye and the right hand". (19)

It is hardly surprising that Third World doctors congregate in the urban areas. In the towns of Bangladesh there is one doctor for every 1,200 inhabitants. But in the rural areas, where over 90% of the population lives, there is one doctor for every 31,300 people. (20) Similarly, in North Yemen, the hospitals in the country's three largest towns, catering for only 7% of the population, employ more than half the doctors in the country and 60% of all trained nurses. (21)

Often Third World countries lose out on the expensive investment they make in medical training as doctors migrate to richer countries for better pay and access to advanced technology that poorer countries cannot afford. Britain is just one of the rich nations benefiting from this drain on Third World resources. (22)
Bangladesh Government is particularly concerned by the exodus of doctors to the Middle East “for better monetary gains”. (23)

Most developing countries also suffer from a chronic shortage of trained pharmacists, who obviously have an essential part to play in the safe and efficient distribution of drugs. Like the doctors, many are creamed off by the private sector. A British professor of pharmacology writes: “Of the pharmacists who qualify either locally or overseas, very few enter government service. Most enter commercial pharmacy practice in the larger urban areas. Thus, although many students may train in pharmacy (at their country’s expense), very few actually become available to deal with the basic pharmaceutical problems of their developing country.” (24)

PUBLIC DRUG DISTRIBUTION

Different countries break down their health expenditure in different ways so it is difficult to make accurate comparisons of spending on drugs as opposed to other health inputs. For example, expenditure on drugs for hospitals may be shown under the hospitals budget, or under the national drug budget. Moreover, country-by-country comparisons are distorted by the fact that salaries are very much lower in most developing countries. However, WHO calculates that, whereas most developed countries allocate 10-20% of their health budgets for drug purchases, some developing countries are spending over 40% of their health budget on drugs. (25)

There is little doubt that out of total health expenditure, poor countries allocate proportionately more for drugs than many rich nations. However, in terms of meeting actual needs, the funds allocated for drug purchases are often hopelessly inadequate. For example, in Bangladesh the drugs budget in 1979 was equivalent to £4.6 million, an expenditure of about 5p a head. (26)

Furthermore, the distribution of drugs, like that of health facilities, is highly uneven. The situation in Tanzania is representative of other poor countries. The Tanzanian Government’s 1979 Evaluation of the Health Sector shows that the main hospital in the capital is allocated 14% of the nation’s drug budget. By contrast, all the government dispensaries put together only receive 15%. Thus, it is hardly surprising that little more than a third of the rural dispensaries were found to have an adequate supply of medicines. (27)

Shortage of key drugs is a problem common to dispensaries throughout the Third World, particularly in remote areas. But in some countries even the central medical stores are known to run out of essential supplies. For example, the central government stores in the capital of North Yemen sometimes exhausts stocks of penicillin and folic acid. By contrast, large quantities of less useful medicines, such as hormones, are freely available, and from time to time there is a glut of a particular drug which is farmed out to the dispensaries because the expiry date is close. (28)
Many Third World countries lack administrators with the technical skills needed to operate an efficient drug distribution system. To avoid wastage, officials responsible for drug supply need to be in a position both to assess actual drug requirements for the whole country, and to operate tight controls. In practice, they are seldom in a position to do either. The extremes of climate in many poor countries make the shelf-life of drugs a crucial factor. Bureaucratic inefficiency and lack of understanding that medicines cannot be treated as ordinary goods often means that drugs are left lying around in docks and airports, where the ambient temperature may be 100 degrees Fahrenheit. Lack of refrigeration facilities and difficult transport compound the problems, so that the quality and potency of some drugs may be seriously impaired long before they reach the shelves of the rural health posts. For instance, this is often the case with polio vaccines transported over long distances in unrefrigerated vans. A physiotherapist in Nigeria finds that a number of the young polio victims she has to treat have cards showing that they were "immunised". (29)

A recent study of medicine distribution through the public sector in south Cameroon indicates the extent of wastage through inefficient record-keeping, ordering, storage and transport. The Dutch anthropologist who carried out the research calculates that because of the inefficiency of the central drug agency, only about 65% of the medicines they should receive actually reach the health centres. (30)

In some countries, because administrative controls are weak, drugs are stolen from hospital and clinic dispensaries and given to relatives or sold on the black market. In the capital of Bangladesh government hospital employees are known to be selling medicines from the hospital stores to traders in the well-supplied Mitford market. (31) In Zambia, in 1980, President Kaunda exposed a racket in which government doctors and nurses were known to be selling drugs from government clinics to private doctors who then sold them to their patients for three times the price originally paid by the Government. (32)

A detailed study of drug availability in three primary health care units in rural India relates the scarcity of useful drugs to wasteful drug purchases. The authors of the study found that "most of the drugs purchased were by trade names which were several times costlier than the equivalent drugs with generic names". An uneconomic assortment of different brands of almost identical drugs were stocked and "valuable resources were wasted in the purchase of drugs with doubtful or limited therapeutic effectiveness, namely enzymes and vitamins". (33) By contrast many of the most useful drugs were in very short supply. Consequently, on average over 40% of patients were sent away to buy drugs not in stock. "Since there were no chemists' shops at any of the primary health centre villages, the villagers had to obtain them either from the city market or go without them." (34)

Clearly, lack of money is only one cause of the serious shortages of drugs for primary health care. Problems of mismanagement, wasteful purchases and overprescribing have to be tackled to avoid even greater wastage as drug budgets
are increased. The most obvious consequence of rural dispensaries running out of drugs is that people stop going to them. Meanwhile governments have to go on paying for health facilities that are under-used, and paramedics find it doubly hard gaining acceptance as health educators when they cannot deliver basic drugs.

PRIVATE DRUG DISTRIBUTION

The shortcomings of the public health sector and the relative and growing affluence of a small sector of the population have encouraged the rapid growth of private medicine in most developing countries. In Third World cities, in particular, where those with the greatest purchasing power live, there is a concentration of private doctors and retail pharmacies, mostly run by non-pharmacists. In most Third World countries private drug sellers have also made significant inroads into the rural areas and a largely haphazard, uncontrolled system of drug distribution has evolved. A major problem in the rapid expansion of the private drug market is that, whereas drug manufacturers and retailers have been quick to develop the potential market in the rural areas, they have shown insufficient interest in contributing either capital or technical expertise to developing the necessary infrastructure for medicines to be distributed safely and efficiently. Consequently, transport and communication facilities remain bad and drugs are frequently dispensed by untrained salesmen and unlicensed traders. (35)

Private drug sales have boomed and dwarfed distribution by the public sector. In some developing countries the value of drugs distributed through the private sector is over 90% of the total. This is the case in Bangladesh, Nepal and North Yemen. (36)

Few Third World governments have succeeded in imposing any meaningful controls on private drug sales. Consequently, medicines that can only be obtained on a doctor’s prescription in developed countries are freely available over the counter or from street traders in poor countries. Whereas less than a quarter of drugs sold in Britain are products that do not require a prescription, it is estimated that in some developing countries up to 75% of medicines are bought without prescriptions. (37)

Drug control agencies in developing countries are generally very poorly funded and understaffed, so they are in no position to carry out regular inspections of drug stores or crack down on illegal sales. Some Third World governments are also reluctant to regulate the sale of drugs too strictly, on the grounds that medicine sellers may be providing the only source of treatment available especially to the poor. A 1979 official report explains that in Bangladesh: "Restrictions regarding prescriptions are not strictly enforced, particularly because of the small number of qualified physicians in the country and the low level of medical coverage." (38)

There are potential benefits to be weighed against the risks in allowing some drugs to be sold without a prescription. For example, in Bangladesh the contraceptive pill is sold in pharmacies, general stores, even on market food stalls by people with absolutely no medical training. One month’s cycle costs about 1p. A relatively
small number of women will suffer adverse, even dangerous, side-effects from taking the pill without medical supervision. But if the pill were only available on a doctor’s prescription, as in developed countries, many poor women would have to go without it, because there are so few doctors and they are expensive to consult. Consequently, they would be deprived of a relatively safe and reliable contraceptive, when the risks of pregnancy and childbirth are much greater in poor communities.

Nevertheless the uncontrolled distribution of drugs on the private market presents major problems, particularly for the Third World poor. The situation in Bangladesh, described in a Government report, is in no way atypical of other developing countries: “Almost all the retail drug shops are owned and run by non-pharmacists and/or untrained persons. Drugs and medicines, including dangerous drugs, are often sold as ordinary articles of commerce ... leading to misuse and waste.” (39) Drug sellers are not in business to recommend cost-effective treatments. They are out to earn a living.

It is sometimes argued that controls and rationalisation of commercial drug distribution will be of little benefit to the poor since the main drug consumers are the rich. There is no doubt that the wealthy in developing countries spend more on drugs than the poor, but the differential can be surprisingly small. For example, a study of drug use in a town in southern Brazil revealed that families in the richest neighbourhood spent only two-and-a-half times more a month on medicines than poor families from the shanty towns. (40)

But the weight of evidence suggests that it is the poor who stand to gain most from controls on private drug sales. In the absence of adequate health services, the poor turn to drug sellers for treatment and advice. An anthropologist has made a detailed study of where people in a small town in El Salvador go for treatment when they fall ill. She has found that the commercial drug sellers are an important source of treatment for rich and poor alike. But it is the poorest who rely on them most. They cannot afford to consult a doctor as well as buy medicines, so they go straight to the drug stores. (41) There, they may be victims of pressurised sales tactics as “clerks and owners consistently recommended more expensive medications and more medications to their customers seeking health care advice”. (42)

In most developing countries, neither the public nor the private drug distribution system caters for the needs of the poor. As the Dutch anthropologist who studied the government and commercial distribution in south Cameroon concludes, “The present inefficiency favours exactly those who are least in need of medical help and, moreover, are most able to pay for it. In other words, the current inefficient medicine distribution perpetuates and aggravates existing inequalities both in economic and health conditions.” (43)

The poor are at the mercy of the drug sellers and the dictates of the market. In the next chapters we look at the implications of this dependence and examine the conflict between what the poor need and the rich choose to sell.
IN MOST countries, rich and poor alike, drugs are produced and sold by private business. So even life-saving medicines are subject to normal market forces. In developing countries the mass of the poor lack purchasing power, so they have little impact on the dynamics of the drug market. Consequently, the type of drugs marketed may bear no relation to a poor country’s most pressing disease problems.

An Indian doctor puts the problem forcefully: “The drug industry, like any other industry, produces only to the extent that drugs can be sold at a reasonable profit in the market, irrespective of the needs of the people. The majority of our population is very poor. It is precisely this poor section that requires more medical attention and hence larger quantities of drugs. But since these people do not have money to buy the drugs, the industry ... neglects this section of the populace ... This happens because the logic of present day society is such that production is geared to the demand in the market, irrespective of the needs of the people.” (1)

Scientists and managers within the industry are acutely aware that poor people are deprived of vital drugs. Poverty is the main constraint and drug producers are in no position to end poverty. The pharmaceutical industry acknowledges, however, that it has “special” obligations “arising from its involvement in public health”. (2) In practice actual marketing policies are inevitably determined by the demands of running a viable and profitable commercial operation. Companies have workers to pay and shareholders that want a return on their investment.

A spokesman for the British drug industry did not mince words in explaining the constraints on manufacturers: “You must understand that the reason multinational companies try to grab back as much profit as possible out of the less developed countries is frankly because they are suspicious of the future stability of their operations there.” “I would just be talking rubbish if I were to say that the multinational companies were operating in the less developed countries primarily for the welfare of those countries... They are not bishops, they are businessmen.” (3)

Bearing in mind that there are business constraints, in this chapter we examine how far the drugs marketed in poor countries are relevant to public health needs - ultimately whether the drug market is contributing more to alleviate or to perpetuate poverty.
RICH WORLD CONTROL

We have seen the extent to which the world distribution of drugs is skewed in favour of the rich. There is a similar imbalance in drug production. About 70% of world drug production (by value) corresponds to drugs manufactured in Western industrialised countries. A further 19% of total production is located in Eastern European and other centrally planned economies. As little as 11% of pharmaceutical production takes place in the Third World as a whole. (4)

The imbalance is even greater in the control of world trade in pharmaceuticals. The US, France, West Germany, Britain, Switzerland and other rich industrialised nations dominate 90% of drug shipments. About two-thirds of these are controlled by just 50 European and US-based transnational companies. (5)

Production has remained largely concentrated in the major industrialised countries because some (but not all) stages in the manufacturing process require sophisticated and costly technology. The image of monolithic difficulties in all areas of drug production is false. It serves to reinforce the poor world’s dependence on the rich. No country can be entirely self-sufficient in drug production without a fine chemicals industry to provide chemical intermediates which are the starting point for producing most modern drugs. But a chemical industry is not essential. Switzerland, one of the world’s leading drug producing nations, does not produce its own intermediates, but imports them for processing into bulk drugs. (6)

The technology needed to produce some bulk drugs from imported chemical intermediates is relatively straightforward, with the necessary technical know-how and resources. (7) But some bulk drugs production can be particularly difficult. For example, the fermentation plants needed to produce antibiotics are expensive and uneconomic without large-scale production. There are also varying degrees of difficulty in the third stage of processing the bulk drugs into formulations or finished dosage forms (i.e. the actual tablets). For example, it is complicated to manufacture ampoules for injections because sterile conditions are essential, but relatively simple to produce tablets and capsules. The final stage of packaging or repackaging finished drugs is easy and requires minimal equipment. This cost-saving processing is well within the technical capacity of even the least developed countries. (8)

But most Third World countries either have no manufacturing facilities at all, or local manufacture consists of little more than repacking and simple formulation of some bulk drugs. Forty-five of the world’s smallest and poorest nations are totally dependent on imports of finished drugs. They are mostly in Africa which accounts for only 0.5% of world production (compared with 5.61% of world production in Asia and a further 5.26% in Latin America in 1977). (9)

In countries with local production, there is a wide variation in how much each country continues to rely on imports of finished drugs. For example, Kenya and Nigeria respectively import about 75% and 90% of finished drugs consumed locally, whereas Bangladesh imports under 20% and Colombia only 5%. But all these countries share a heavy dependence on foreign suppliers for large quantities
of drugs and some intermediates.  

Little more than a handful of developing countries have an advanced drug industry. Between them, India, Egypt, Brazil, Argentina, Mexico and South Korea account for two-thirds of all Third World production. With the exception of Korea, these countries all have a chemical industry capable of producing most drug intermediates, and the technical expertise to carry out research and development into drugs and manufacturing processes. Indian state-owned and private companies now export not only drugs but also their own technology to other developing countries. 

Despite the sophistication of local production, even India, Brazil, Mexico and other industrialised countries still rely on foreign manufacturers for some bulk drugs, chemical intermediates, and advanced production technology. For example, in 1978/9 India was still importing over 40% of its bulk drug requirements and a recent study on foreign technology in the Indian pharmaceutical industry highlights the fact that the local industry is held back because it lacks advanced technology developed by foreign manufacturers. 

The continuing dominance of foreign firms in the Third World drug market is confirmed by a 1981 report from the United Nations Centre for Transnational Corporations (UNCTC), which includes case studies on developing countries with varying degrees of local production. With the exception of Egypt, where the large public sector caters for 70% of the country’s drug requirements and leaves foreign companies only a 14% share of the market, in all the countries studied foreign companies take the lion’s share of the market: 59% in Argentina (1978), 70% in India (1977), 82% in Costa Rica (1977), 88% in Brazil (1979), 90% in Kenya and Colombia (1978) and 95% in Sierra Leone (1976). 

There are more than 10,000 companies producing drugs around the world, but 90% of pharmaceutical trade is dominated by little more than 100 manufacturers. The top twenty-five European and US-controlled transnationals controlled 44% of world drug sales in 1978. They are shown in the diagram overleaf which also shows that the market leaders each account for only 2-4% of world sales. This low degree of concentration in overall sales is misleading because the drug market is fragmented into about a dozen sub-markets (such as antibiotics, antihistamines, tranquilizers and other specific types of drugs). In each of these sub-markets sales concentration is very high with individual manufacturers controlling from a quarter to over half of total sales. 

According to UNCTC, “At the level of bulk drug production, the evidence for concentration is even more striking”. 650 bulk drugs were produced in the United States in 1975, and of these only four were made by more than four manufacturers and nearly 500 were produced by a monopoly supplier. 

The market power of these major producers accounts for the rich industrialised countries’ strong trade surplus in pharmaceuticals. By contrast the poor world had a negative trade balance in pharmaceuticals with the rich world amounting to around 4,000 million dollars in 1980.
## Diagram 4.

### THE MAJOR PHARMACEUTICAL COMPANIES OF THE WORLD, 1978–1979

<table>
<thead>
<tr>
<th>Rank</th>
<th>Name</th>
<th>1978 Pharmaceutical Sales</th>
<th>1979 Pharmaceutical Sales</th>
<th>1979 R&amp;D Expenditure</th>
<th>As % Total Sales in 1978</th>
<th>As % Total Sales in 1979</th>
<th>As % World Total 1978</th>
<th>As % World Total 1979</th>
<th>As % Drug Sales</th>
<th>As % Drug Sales</th>
<th>Origin</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Hoechst</td>
<td>2,290 ($M)</td>
<td>2,300 ($M)</td>
<td>200 ($M)</td>
<td>16</td>
<td>16</td>
<td>3.8</td>
<td>3.2</td>
<td>9</td>
<td>9</td>
<td>German</td>
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<tr>
<td>2</td>
<td>Bayer</td>
<td>1,890 ($M)</td>
<td>1,850 ($M)</td>
<td>300 ($M)</td>
<td>13</td>
<td>13</td>
<td>3.2</td>
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<td>9</td>
<td>9</td>
<td>German</td>
</tr>
<tr>
<td>3</td>
<td>Hoffmann La Roche</td>
<td>1,355 ($M)</td>
<td>1,355 ($M)</td>
<td>200 ($M)</td>
<td>44</td>
<td>44</td>
<td>2.4</td>
<td>2.4</td>
<td>13</td>
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<tr>
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<td>Merck</td>
<td>1,355 ($M)</td>
<td>1,595 ($M)</td>
<td>840 ($M)</td>
<td>28</td>
<td>28</td>
<td>2.4</td>
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<td>American</td>
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<tr>
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<td>Ciba-Geigy</td>
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<td>1,289 ($M)</td>
<td>220 ($M)</td>
<td>48</td>
<td>48</td>
<td>2.1</td>
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<td>American Home Products</td>
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<td>1,448 ($M)</td>
<td>180 ($M)</td>
<td>52</td>
<td>52</td>
<td>1.9</td>
<td>2.1</td>
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<td>1,430 ($M)</td>
<td>150 ($M)</td>
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<td>52</td>
<td>1.9</td>
<td>2.1</td>
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<td>Pizer</td>
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<td>1,092 ($M)</td>
<td>120 ($M)</td>
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<td>45</td>
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<td>59</td>
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<td>956 ($M)</td>
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<td>French</td>
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<td>Upjohn</td>
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<td>956 ($M)</td>
<td>70 ($M)</td>
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<td>43</td>
<td>1.3</td>
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<td>862 ($M)</td>
<td>60 ($M)</td>
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<td>43</td>
<td>1.3</td>
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<td>43</td>
<td>43</td>
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<td>757 ($M)</td>
<td>53 ($M)</td>
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<td>20</td>
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<td>21</td>
<td>Sterling-Winthrop</td>
<td>600 ($M)</td>
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<td>22</td>
<td>Schering AG</td>
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*Figures from company reports and from information from Interpharma, Scrip, various issues; Aries, op. cit.; European Chemical News, various issues. R&D expenditures are approximate and should be used with caution. They have however been considered as realistic estimates by industrial experts consulted.*
In recent years Third World countries have been doubling their expenditure on medicines every four years, whereas their GNP has been doubling only every sixteen years. (22) Pharmaceutical imports average only about 2% of the value of all commodity imports to developing countries, but according to WHO, “For developing countries importation of pharmaceuticals is one of the fastest growing drains on hard foreign currency…” (23)

Spiralling drug costs present an acute problem for most developing countries because of their dependence on imports. The Health Minister of Zimbabwe drew attention to this when he addressed a regional meeting of African pharmacists in April 1982. “We are all aware that this country like practically every Third World country, is experiencing the ill-effects of inflation, falling commodity prices, rising prices of imports leading to unfavourable terms of trade. Foreign exchange allocations which were adequate for the import of ‘essential’ medicines a year or two ago now fall far short of the mark. This is due to the increase in the rates levied by the traditional manufacturers or agents outside Zimbabwe.” (24)

This dependence can have both social and economic costs. In the words of WHO: “In developing countries the pharmaceutical sector is a captive market which has an effect on the health care system, and especially on the cost and type of drugs supplied.” (25) (our emphasis) We shall concentrate in this chapter on the type of drugs marketed in the Third World and look at the question of cost in the next.

**PLACEBOS IN WASTEFUL ABUNDANCE**

To recap: developing countries need large quantities of a small number of essential drugs, above all those that can prevent and treat disease. These include antibacterials and antimalarials; drugs that are needed for specific conditions (such as insulin for diabetics), and some key medicines to provide effective relief from painful symptoms. The terms ‘essential’ and ‘non-essential’ are obviously very loose. Any attempt to evaluate the usefulness of specific drugs is likely to produce as many views as experts - depending on the criteria behind the selection and where the drugs are to be used. A clear illustration of the difficulties is that the same combination of two anti-tuberculous drugs which was defined as extremely useful by one WHO working group on tuberculosis was rejected by the expert committee that drew up the WHO Selection of Essential Drugs. (26)

But there is a clear consensus of independent expert opinion on some types of drugs that are either wasteful or unnecessary or both - and therefore harmful to the needs of the Third World poor. These have been expressly excluded from the WHO list. (27) The obvious categories include most combination drugs (particularly irrational mixtures such as antibiotics and vitamins); the latest and most expensive formulations of drugs like antidepressants, and the mass of multivitamin and mineral tonics, and cough and cold preparations which have little value except as placebos. (28)

The ‘ideal’ of what the poor need clashes with the reality of the drug market. In the words of two senior pharmacologists: “Unfortunately a good proportion of
the drugs available are of little importance in terms of essential health care and they are marketed mainly because they can be sold and not because they benefit the health of the population." (29)

Throughout the Third World there is evidence that drug consumption habits have been indiscriminately transferred from rich nations to poor. The causes have been pinpointed by WHO. “In recent years many medicinal products have been marketed with little concern for the differing health needs and priorities of different countries. Promotion activities of the drug manufacturers have created a demand greater than the actual needs.” (30)

There are countless illustrations of distorted priorities in the type of drugs manufactured and imported into developing countries. The value of vitamins and tonics imported into North Yemen in 1980 was 17.8% of total pharmaceutical imports. But only 1.3% of the total was spent on importing drugs to treat three of the country’s most widespread diseases - malaria, bilharzia and TB - affecting an estimated 800,000 people. (31) On one estimate, at least 65% of all imports are for non-essential drugs, both placebos and symptomatic treatments for self-limiting conditions. (32)

The WHO Essential Drug List includes one cough suppressant: codeine. On the drug market in the Philippines there are 162 different brands of cough suppressants, and under a dozen are based on codeine. Spending on these cough preparations represented 12% of total drug expenditure in the Philippines in 1980. (33)

A 1977 report on local production in Sri Lanka by the Chairman of the State Pharmaceutical Corporation underlines the distortion between what will sell and what is needed in a market with 97% of local production controlled by just seven manufacturers, five of them subsidiaries of leading transnationals. “Vitamin preparations, soluble aspirin and cough remedies accounted for over 50% of production. They were elegantly presented, heavily promoted and used by the affluent. For example, the two largest firms made 18 different combinations of vitamins with or without iron, which were swallowed by the well-nourished who did not need them. The undernourished could not afford to buy them.” (34)

MULTIVITAMIN TONICS

The quantity of multivitamin tonics marketed is just one illustration of the wider problem of wasteful products that swamp the market in even the poorest countries. In Nepal a 1980 study found that out of 2,000 different products on the drug market, 733 - more than one third - were ‘tonics’. Anaemia and malnutrition are major health problems in Nepal, but as the report concluded, “Those who need iron and vitamins can seldom afford to buy these expensive proprietary preparations... A few inexpensive preparations of iron and vitamins could effectively and easily replace the 733 formulations, and enormous savings could be made as a result.” (35)
Primary health care brings appropriate treatment to the rural poor. Health workers are trained to dispense a limited range of the most effective drugs where they are really necessary.
One of the most glaring examples of demand being wastefully stimulated in poor countries is for preparations containing vitamin B12. This essential drug is prescribed in Britain only for pernicious anaemia and other vitamin B12 deficiency states. In contrast to developed countries, pernicious anaemia is relatively rare in the Third World. Of course many poor people suffer from dietary deficiencies, but these are far more commonly due to lack of folate or iron, than to vitamin B12 deficiency. But vitamin B12 is amongst the most widely sold drugs in many Third World countries. There were no less than 126 formulations containing B12 on the Indian market and 160 on sale in Brazil in 1978, compared with 16 listed in the British National Formulary. Many of the formulations containing vitamin B12 are multivitamins. This is highly wasteful according to the British National Formulary: "There is no justification for prescribing multiple-ingredient vitamin preparations containing these substances". (original emphasis) Moreover, many are tablets or liquids, but since most cases of B12 deficiency are caused by a problem of malabsorption from the stomach, taking B12 by mouth is "futile" according to the experts.

Doctors in Brazil have also expressed concern that some of the injectable preparations of vitamin B12 are sold in highly wasteful dosages. Of the products marketed in Brazil, 106 ranged from dosages of 5,000 to 30,000 micrograms per millilitre. They included two formulations sold under the brand name Retar B12 by the British manufacturers, Glaxo. This, despite the fact that in Britain the highest dosage form recommended or sold by Glaxo for B12 injectables is 1,000 micrograms per millilitre. According to the British National Formulary: "There is no evidence that larger doses provide any additional benefit in vitamin B12 neuropathy."

ESSENTIAL DRUGS IN SHORT SUPPLY

In most developing countries private importers and chemists stock a wide range of expensive - mainly foreign - brands of all sorts of different products. But basic drugs like penicillin are invariably in short supply and rarely available at all outside the health service dispensaries. Their low cost makes them a particularly unattractive proposition for private importers, especially when they are held to fixed price mark-ups. The situation in Mozambique before independence closely resembles the reality in other non-drug-producing countries today. Penicillin could only be bought in fancy film-coated capsules. These were sold in small packs at several times the prices of ordinary penicillin tablets used in British hospitals at the time. Only one distributor had even bothered to import oral penicillin. It would have been against the company’s interests to shop around for a good price, so they chose an expensive brand that guaranteed them a good profit margin on sales.

Attempts to control profit margins on drug sales in the free market have also acted as a disincentive on local production of low cost essential drugs. As a result, even India - a major drug producing nation - experiences shortages of supplies of essential drugs due to the skewed pattern of drug production. This was highlighted
in a recent joint report by the Indian Council of Social Science Research (ICSSR) and Indian Council of Medical Research (ICMR) which describes the situation as one where "the drugs required by the poor are not produced on the main ground that there is no profitable market and adequate demand for them, while the country continues to be flooded by a plethora of costly and wasteful drugs meant for the minor illnesses of the rich and well-to-do." (43)

The ICSSR and ICMR explain that out of total drug production in India in 1976, "25 per cent is taken away by vitamins, tonics, health restoratives and enzyme digestants mostly consumed by the relatively well-fed urban population. Twenty per cent is covered by antibiotics, only 1.3 per cent by sulphonamides (a very cheap and useful anti-infective) and 1.4 per cent by antituberculous drugs" ... "Dapsone, the basic drug for leprosy costing only Rupees 5 [ under 30 pence ] a year's treatment, is always in short supply." (44) Yet India has a third of the world's leprosy sufferers (about 4 million people) and an estimated 8 million active TB cases - the equivalent of the entire population of London. (45)

India has literally thousands of drug manufacturers, ranging from very small local units to about 100 large-scale manufacturers under varying degrees of Indian and foreign control. All must share responsibility for producing and creating demand for non-essential drugs. In terms of the total numbers of these products, many more are marketed by local than foreign producers. A United Nations Conference on Trade and Development (UNCTAD) study quotes figures for 1972 showing that foreign companies accounted for 15% of all the different brands of vitamins and tonics, 21% of antacids, 14% of digestive enzymes and 13% of cough and cold preparations. (46) But the UNCTAD study also revealed that up to one-third of all the drug formulations marketed by foreign-controlled companies in 1972 consisted of vitamins and tonics, cough syrups, tranquilisers, sedatives and painkillers. (47)

A number of studies have concluded that the way in which local production in India started up as an 'off-shoot' of the rich world drug industry is to a large extent responsible for its failure to cater for the needs of the mass of people. (48) For example, according to the Hathi Committee on the drugs industry which reported to the Government in 1975, "In India, in spite of efforts to plan socio-economic growth, the drugs and pharmaceuticals industry ... operates on the principle of free market economics. The drugs industry is dominated by the foreign units which set the pattern in this industry. The drug needs of any country are characteristic of the climatic conditions, social behaviour and economic conditions in each society. The foreign units which evolve their policies for the rich countries in temperate climates, with radically different socio-economic conditions, operating in free-market systems, promote the same systems in India, which are adversely detrimental to our national interests." (49)

Controls introduced in India to try to limit production of non-essential drugs have failed to break the mould. Ironically in some instances they have backfired and actually held back increased production of essential drugs. (50) For example, we have already singled out the shortages of dapsone - for treating leprosy. The Indian
This tonic cost 35 Rupees (£1.95) in India in 1981. For the same price an Indian family could have brought all the nutritious food shown here.
subsidiary of Wellcome which produces the drug confirm that "Dapsone is not commercially an attractive proposition for us to manufacture". But they point out that Wellcome has been producing 12-14 tons of dapsone a year, when it was officially only licensed to produce 10.8 tons. By contrast, they say that the only other dapsone producer in India, a public sector company, has been unable to produce more than 5-6 tons, despite their licensed capacity of 15 tons. In 1978 Wellcome attempted to get permission to more than double their dapsone production capacity but this was not forthcoming for two-and-a-half years.

The complex situation of drug production in India, added to what one analyst has described as its "labyrinthine regulatory statutes", illustrate the obvious fact that it would be simplistic to ascribe all blame to manufacturers for shortages of essential drugs. Nonetheless, subsidiaries of European and US manufacturers are aggravating the problems for developing countries by producing marginally useful drugs - and in some cases even drugs that they would not be authorised to sell on the home market. We can best illustrate the problems by taking a closer look at drug production in Bangladesh which, in contrast to India, is more typical of the situation in developing countries as a whole.

BANGLADESH: A CASE STUDY

In 1982 there are 166 licensed drug producers in Bangladesh. But the local market is dominated by just eight foreign-controlled manufacturers - mostly subsidiaries of European and US transnationals - which account for three-quarters of local production. Besides taking the lion's share of sales turnover on the private market, these companies have been near monopoly suppliers of drugs for the public health services, controlling about 80% of total government purchases.

According to Drug Administration officials, by comparison with other sectors of manufacturing industry the drug producers are to be congratulated for the dramatic rise in production they have achieved. In the decade after independence, production capacity has more than trebled. The drug market has also been growing rapidly - by about 20% a year at the end of the 1970s/early 1980s. Total sales turnover will have more than doubled in just four years from 1978 to 1982.

Over 80% of drugs on the market are now locally produced. But all this means is that they are formulated and packaged in Bangladesh. No more than a handful of bulk drugs are actually produced there. The majority have to be imported and paid for in foreign exchange, and they are costing the country about Taka 600 million a year - a sum equivalent to 1.7 times the 1979/80 health budget. This drain on foreign exchange, but above all the fact that about three-quarters of the population still has no regular access to vital drugs, makes it crucial that local production cater for priority needs.

Faced with the needs of the poor, the reality of drug production in recent years jars. Market estimates for 1978 produced by the local branch of one foreign company reveal the skewed pattern of production: vitamins, iron tonics, cough and cold preparations, 'tonics and restoratives', 'volume restorers', enzymes and
digestants, antacids and psychotropic drugs make up 33% of the market. By contrast, on these estimates, antibiotics, antiparasitic drugs and skin preparations for treating some of the country’s major public health problems together account for under 23% of the market. (60) Market estimates drawn up for the previous year by another foreign company set the share of the market for vitamins and tonics alone at 30%, with a further 8% for tranquilisers, anti-depressants and sedatives. (61)

An expert committee reviewing the Bangladesh drug market in May 1982 concluded that of total drug expenditure in the country, “Nearly one third .... was spent on unnecessary and useless medicines such as vitamin mixtures, tonics, alkalisers, cough mixtures, digestive enzymes, palliatives, gripe water and hundreds of other similar products”. (62)

NON-ESSENTIAL AND NOT SOLD IN BRITAIN

An analysis of products marketed by the subsidiaries of two leading British manufacturers with factories in Bangladesh reveals a product range top-heavy with drugs that are not relevant to priority needs. Full details of products listed in the 1981 price lists of the Bangladesh subsidiaries of Glaxo and Fisons appear as Appendices II and III. Only a quarter (14 out of 56) products marketed by Glaxo (Bangladesh) Limited and as few as 4 of the 31 products of Fisons (Bangladesh) Limited are formulations included in the WHO Selection of Essential Drugs. (63)

No less than 22 of Glaxo’s range of 56 pharmaceutical products listed in the 1981 product list are vitamins and tonics. Only 3 of these are brands marketed in Britain and only 2 are basic formulations of vitamin A and vitamin B-complex. Most of the 19 extra vitamin products they have chosen to market in Bangladesh are “fruit-flavoured” and “sugar-coated” multivitamins and mixtures of multivitamins and minerals. Vitamin B12 which is an essential drug has been promoted by Glaxo in Bangladesh for non-essential uses as a general tonic. (64)

Of Fisons’ 31 products listed as available in Bangladesh in 1981, less than a dozen are formulations marketed in Britain. Over half are vitamin, calcium and mineral preparations, only 2 of them single-ingredient preparations of folic acid and iron dextran that are considered essential by WHO. There are two antacids; one brand of aspirin and one of paracetamol; two cough preparations and two inappropriate antidiarrhoeals - one containing clioquinol - a drug that can have serious toxic side-effects crippling to the nervous system. (65)

Framycort ointment and Framygen Eye and Ear Drops marketed by Fisons in Bangladesh include neomycin sulphate. But in Britain the formulation of these products is different, as they contain framycetin sulphate instead of neomycin sulphate. (66) Some experts have expressed the view that “the rare but potentially serious adverse effects of neomycin in skin products makes it unacceptable, particularly because it has not been proven effective in such products”. (67) (our emphasis)
FOR YOUR PRESCRIPTION IN CALCIUM DEFICIENCY CASES

Glaxo and Fisons promotion material.
A number of multivitamin preparations can be highly wasteful because they contain amounts of vitamin far in excess of what the body can absorb. Commenting on one multi-ingredient “geriatric preparation” that Fisons has marketed in Bangladesh, a British Professor of Clinical Pharmacology (who is also a member of the Committee on Safety of Medicines - the British Drug Regulatory Agency) expressed the view that it is “inconceivable that Decatone would receive a Product Licence for sale in Britain”. We understand that Fisons (UK) have said that this product was withdrawn from sale in Bangladesh in 1979, although this has not been confirmed to us.

Another Fisons’ product that is not marketed in Britain, but has been widely sold in Bangladesh, is Digeplex - a liquid preparation of two digestive enzymes and some vitamin B-complex. The advertisement reproduced here claims that: “Its vitamin B-complex content will correct the underlying deficiencies which are the basic cause of digestive disorders. Digeplex gradually helps the patient in building up the natural enzymes.” In the opinion of a British doctor this is a ludicrous claim with no scientific basis. Another British doctor, Dr. Schweiger, who has worked in rural Bangladesh, is concerned about the widespread use of Digeplex for any abdominal complaint. He points out that “Gastric ulcers are already very common in Bangladesh... do you really want to put pepsin into such an ulcer? It will only make it worse.”

Commenting on the range of products manufactured in Bangladesh by Glaxo and Fisons, Dr. Schweiger concludes: “Bangladesh is a poor country and can ill afford to spend foreign exchange on non-essential items. The nutritional problems of the poor will not be solved by expensive packaged multivitamins which will only divert limited resources from other more relevant purchases.”

The comments received to date from Glaxo and Fisons on their product range appear at note 73. However, in our view, these do not provide a full answer to our criticisms.

Of course, the two British companies, whose product range we have studied in some detail, are not alone in marketing non-essential medicines in Bangladesh. Both the locally-owned companies and other foreign manufacturers are selling products of little relevance to the country’s needs.

In terms of sheer numbers of different brands of cough syrups, tonics and other over-the-counter products, most are marketed by the national companies. But by value the products that sell best are those of the transnationals. Amongst the top-selling tonics are Squibb’s Verdivitone Elixir and Hoechst’s Polytamin Tonic, the latter described in the May 1982 Expert Committee Report as a “combination vitamin tonic including vitamin B12 and alcohol; one of the most abused drugs on the market”. Hoechst argue in support of Polytamin that “Bangladesh is in a chronic state of malnourishment, the vital supply of polyvitamins is essential in countries where a balanced diet is not available”; and that “The ready-for-use liquid formulation is essential for those countries where safe drinking water supply is not available.”
Digeplex relieves all symptoms which are due to improper digestion of protein and starch.

Digeplex offers more than just temporary relief of symptoms. Because its Vitamin B-Complex content will correct the underlying deficiencies which are the basic causes of digestive disorders. Digeplex gradually helps the patient in building up the natural enzymes.

**COMPOSITION**

Each 4 ml. (approximately one teaspoonful) contains:

- **Diastase**: 1:2000 (in tablet form) ... 12.5 mg.
- **Pepsin** ... ... 10 mg.
- **Thiamine Mononitrate**: U.S.P. ... ... 4 mg.
- **Riboflavine**: B.P. ... ... 0.5 mg.
- **Pyridoxine Hydrochloride**: B.P. ... ... 0.5 mg.
- **Cyanocobalamin**: B.P. ... 2 mcg.
- **Nicotinamide**: B.P. ... 10 mg.
- **dl-Panthenol** ... ... 2 mg.

With adjuvants, flavouring and vehicle.

Digeplex is stabilised at a pH of 5 to 5.2 to ensure the stability of Diastase in presence of Hydrochloric acid secretion of the stomach.

**DOSAGE**

- **Adults**: 1 to 2 teaspoonfuls immediately after meals.
- **Children**: 1 teaspoonful after meals.

**PRESENTATION**

Bottles of 100 ml. & 170 ml.
But the reality is that people in Bangladesh without safe water supplies and in a "chronic state of malnourishment" are in no position to buy multivitamin tonics costing more than a poor family's entire daily income. There are much cheaper sources of nutrients in local foods. Indeed, the chairman of ICI's local subsidiary explained to us that although doctors and drug sellers in Bangladesh add multivitamin preparations to almost any prescription, he considered that these products could not represent value for money in a country where spinach, limes and other fruit and vegetables are readily available. (77)

The growing dependence on vitamin and mineral tonics can have a damaging impact on the nutrition of the poor. This is the case when they spend money on tonics instead of food, but it can even present problems when they do not have to buy them. Dr. Schweiger who worked in rural Bangladesh explains: "Malnutrition is not treatable at all by drugs and it is the biggest single problem - malnutrition is treated with food. People will die from lack of calories long before they die from lack of a particular vitamin. I wonder very much about the patients I treated with my previous organisation. We gave a lot of multivitamin tablets there for children with malnutrition and I saw a lot of those children go slowly downhill because obviously the teaching message of more food requirement was not really accepted by the parents. If we gave tablets then the feeling may very well be, well we can't remember all the junk the health workers have told us, but these tablets 3 times a day is all we need...." (78)

When we spoke to local company managers in Bangladesh and queried the relevance of many of their products to the country’s needs, most expressed their sensitivity to the sufferings of millions of their fellow citizens. None tried to suggest that the major health problems were anything other than malnutrition and infectious disease. Most argued that, so long as they were not in a position to help the poor, what harm could there be in catering for the needs of the affluent minority?

The Marketing Manager of Fisons (Bangladesh) Ltd expresses a view shared by others which he gives "as a citizen of Bangladesh", "not as a vitamins seller". He puts the question: "Why, on one hand, as a government, or as a policymaker of my country, do you allow me to buy and drive foreign cars, enjoy foreign colour television, put on expensive foreign clothes and smoke expensive foreign cigarettes and on the other, forbid me to take locally produced (under foreign collaboration) quality vitamins at locally competitive prices, specially when I think, or my doctors think that I need to take them! ... Please consider the country’s situation in its entirety and if you cannot provide even sub-standard vitamins to everybody in the country who needs vitamins, at least do not put a bar on those who can afford to buy quality vitamins at lesser cost than the sub-standard vitamins". (79)

Critically, the argument hinges on how far medicines can be bracketed with cars, televisions and clothes, if this means that placebos intended for the well-to-do are produced at the expense of vital drugs needed by everyone, but particularly by the poor. The distortions in production in Bangladesh and other developing countries appear all the more acute when industry has set itself the "obligation"
of producing drugs that "have full regard to the needs of public health". Dr. Mahler, Director General of the World Health Organisation, is one of a growing number of people to have reached the clear conclusion that "We can no longer treat these vital components of people's health as normal commodities in the market-place. They have to be taken out of the market-place, and other ways may have to be found to produce these essential drugs."

But apart from the difficulties of treating medicines as any other commodity, more holes can be knocked in the argument that the production and marketing of non-essential drugs does not really hurt the poor. As the ICSS and ICMR point out, it is misleading to suggest that only the well-off consume these unnecessary drugs. "They have a demonstration effect which misleads the poor also and becomes an additional channel for their exploitation."

The poor are encouraged to buy multivitamin tonics and other non-essential products. These are routinely prescribed by doctors and chemists and are often bought at the expense of useful treatments. Some of the hard-hitting facts are revealed by a study of prescriptions given to a sample of 90 women patients at an Indian hospital. This showed that when these women returned for treatment, only 26 had been able to buy all the medicines prescribed on their first visit; 27 had not had enough money to buy more than the first two items on the prescription, which were almost invariably a tonic and vitamin B-complex; 37 had been too poor to buy any of the drugs prescribed.

Of those who had bought all the drugs prescribed, four had had to borrow money; some even used the cash they had been paid for being sterilised; one found the money by economising on what she bought with her son's daily wage of 4 rupees (about 20 pence). She had been prescribed two tonics and vitamin B-complex capsules. Almost all the prescriptions were identical; with tonics, vitamins and aspirin at the top of the list, and the important treatment often appeared in only about fifth position. Most of the drugs prescribed were well known brands.

Turning back to our review of the product range of leading foreign manufacturers in Bangladesh, we discussed the wastage of a poor country's resources on non-essential drugs with the Association of British Pharmaceutical Industries. They advanced the argument that manufacturers in Bangladesh are merely catering to demand, and not actively creating the market for non-essential products. This is not a view shared by Dr. Hye, the former Director of Drug Administration in Bangladesh, who states categorically: "Manufacturers are responsible for creating the demand for non-essential drugs in the first place and they are stimulating it with promotion sometimes even with forced sales."

An insight into how demand can be created is given by the "Merck in Bangladesh Marketing Plan 1980(1982)" of the local branch of the West German manufacturers, E. Merck. This reveals that they at any rate have little doubts about the effectiveness of promotion in creating demand. Merck's biggest selling product on the local market in 1979/80 was Neurobion, (containing vitamins B1, B6 and B12). According to the Marketing Plan, Neurobion alone accounts for over
68% of the total market in neurotropic preparations. The marketing strategy outlined in the Plan states: ‘Our objective will be to achieve at least 75% market share by intensifying more promotional effort ...’ and that ‘remarkable results can be achieved by motivating field force’. The Marketing Plan also reveals that the ‘major threat’ to business ‘is that the government may ban import of one or more of our fast moving items’. Thus a key strategy will be ‘to maintain very good relations with government officials in Health and Commerce Ministry to guarantee importability for our products’.

Merck’s promotional strategy has obviously paid off. According to Dr. Hye, the popularity of Neurobion (in its injectable form) is demonstrated by the fact that in 1980 £77,777 worth of the product was imported. This was equivalent to 1.94% of total imports of all finished drugs in 1980.

Poor countries like Bangladesh have enough problem with the adverse balance of trade without having to foot the bill for imports of non-essential finished drugs. But the unnecessary drain on foreign exchange is not confined to drugs in final dosage form. The value of imported raw materials in 1980 was 38 times greater than that of finished drugs. To take the raw materials imports of one company alone, commenting on the situation in 1980/81 Dr. Hye writes: ‘Almost 40% of the foreign exchange allocation to Fisons (Bangladesh) Ltd for the import of pharmaceutical raw materials is used up for making non-essential, practically useless preparations.’

But the non-essential medicines produced with these raw materials are not only draining valuable foreign exchange, they are also taking up limited production capacity that could be used to produce the drugs the country really needs. In the words of the Expert Committee reporting to the Bangladesh Government on drug policy in May 1982: ‘Though the multinationals have all the technologies and know-how to produce sophisticated essential drugs and basic pharmaceutical raw materials, in Bangladesh these companies are engaged mostly in formulation of simple drugs including many useless products such as vitamin mixtures, tonics, gripe water etc.’ As a result 90 of the 182 essential drugs needed for the public health services are not produced at all in Bangladesh.

The situation in Bangladesh is not unique. Other detailed case-studies in very different developing countries have shown up similar problems in production and wide-scale promotion of drugs which are far removed from priority needs. An illustration of this comes from the research carried out by a French pharmacist into the products marketed in Mexico by the three Swiss pharmaceutical giants. Of 165 products marketed in Mexico in 1978 by Roche, Ciba-Geigy and Sandoz, only 36 were drugs included in Mexico’s selection of 426 drugs essential for public health care. Of these 16 were formulations on the WHO Essential Drug List. But some of their top-selling products were hardly ‘essential’. For example as much as 62% of Roche’s sales turnover in Mexico in 1978 was made up of just 5 products. One of these was Cal-C-Tose (a chocolate-flavoured mixture of
vitamins and minerals) popular amongst the well-to-do in Mexico. A second of Roche's best-selling products was Redoxon. This, despite the fact that Dr. Brudon - who carried out the research - calculated that Mexicans could have obtained their necessary vitamin C intake by buying oranges - at one tenth of the cost of Redoxon. (100)

* * * * *

In the next chapter we focus on the critical area of prices. But to sum up the equally important question of the type of drugs that major manufacturers choose to market in developing countries: lip service is increasingly being paid to the need for a limited selection of essential drugs for developing countries. But in most cases the need to stick to priorities to benefit the majority is applied only to the public requirements of the public health services. Attempts to reduce private sales of non-essential drugs have often been fiercely resisted. (101)

A 1980 report "based on the opinions of individuals in the industry", with the title "Opportunities for Pharmaceuticals in the Developing World over the next twenty years", is - to say the least - not encouraging. It states: "The most important requirements for drugs by the developing countries will continue to be for antibiotics, cough and cold preparations, vitamins, analgesics, hormones and tonics, but demand for other types will increase in line with the extent of greater urbanisation and industrialisation." (102)
CHAPTER 4

POOR VALUE FOR THE POOR?

Drug prices

"It has now become common knowledge that international trade - and specifically North-South trade in pharmaceuticals - bears hardly any relation to the objective costs faced by suppliers, but is rather one of the most striking manifestations of unequal exchange which has the ultimate effect of creating and sustaining the underdevelopment of the Third World." (Dr. Rainford, Deputy Secretary General of the Secretariat of the Caribbean Community (CARICOM), 1980.)

TO POOR PEOPLE throughout the Third World drug prices are astronomically high both in relation to wages and to the cost of basic necessities. In Mexico the best-selling brand of the antibacterial drug cotrimoxazole is Roche’s Bactrim. Just 20 tablets - enough for a short course of treatment - cost Pesos 138.60 (over £3) in 1978. A peasant family lucky enough to have a few hens would have had to sell 110 eggs to buy those 20 tablets of Bactrim. For the same amount of money a family of four could have bought enough black beans to provide their basic diet for two weeks, or 33 kilos of tortillas, equivalent to bread in Europe or chapatis in India.

The same drug, cotrimoxazole, is available locally from other manufacturers at less than half the price. But Mexicans buy over a million packs of Bactrim each year. The products of the ‘big name’ manufacturers are usually the most expensive. Promotion ensures that they are also the market leaders. Out of about 9,900 different pharmaceutical products on the Mexican market in 1978, just 80 cornered a third of the total market. Without exception, these top-selling drugs are brand-name products of the major US and European research-based companies. Only six were developed within the last 2-6 years. The remainder are well-established and many are now off patent. They could be bought far more cheaply from non-research-based manufacturers.

The situation in Mexico is in no way unique. Throughout the Third World poor people pay high prices for expensive brands when far cheaper alternatives exist. In this chapter we explore the huge variations in drug prices and the problems created by an obvious conflict of interests. On the one hand, poor people and
governments need to obtain reliable drugs at the lowest possible prices. On the other, the leading companies claim they need to charge high prices in relation to other manufacturers to pay for their costly research establishments.

There are striking differences in drug prices from one market to another, between different manufacturers and in the prices that the same producers charge different buyers. Pricing is a complex issue, not least because of all the external factors that influence prices, including the size of the market, the degree of competition between similar products, the extent of government controls, taxes and the margins added by wholesalers and retailers.

Recent cooperation between Caribbean countries on drug policies has unearthed some major discrepancies in the prices of identical drugs. One supplier sold methyldopa tablets (for high blood pressure) to Trinidad at six times the price quoted in Barbados for the same quantity, and roughly three times the prices charged in Guyana and Jamaica. Meanwhile the small island of St Kitts obtained the same drug from another manufacturer under a group purchasing scheme for about a ninth of the price paid by Trinidad. These and similar price differentials cannot be explained away by different market size, or variations in freight and insurance costs. (4)

An important factor underlying different prices between both developed and developing countries is the degree of government price control. A recent UNCTAD report reveals that in the Philippines, where the Government exercises few controls on the market, prices are generally much higher than elsewhere. For example, the least expensive tetracycline capsule cost over 8 times more than the cheapest available in the USA and four-and-a-half times more than in neighbouring Malaysia. Similarly in the Philippines Roche’s products Librium and Valium were priced 8 times and 14 times higher than in Britain. (5)

£14 FOR 100 ASPIRIN

Contrary to some popular misconceptions actual drug prices are not always higher in developing countries. On a straightforward currency conversion, actual prices are often much lower than prices in developed countries, even in manufacturers’ own home markets. For example out of 24 identical products marketed in Bangladesh and Britain in 1980/81 by seven transnational companies, with two exceptions, prices were all lower in Bangladesh. (6)

But direct price comparisons can be misleading because they ignore vast differences in purchasing power, in this case between the majority of people in Bangladesh and in Britain. In terms of purchasing power the real cost of these products is much higher in Bangladesh. One 60 ml bottle of Beecham’s ampicillin syrup, sold under the brand-name Penbritin, costs a poor family in rural Bangladesh about 66p - or 6% of their total monthly income. If a British family with a net income of £7,000 a year had to spend the same percentage of their monthly income on the drug, one bottle would cost them about £35. Similarly, the cost of 20 capsules of ICI’s oxytetracycline, Imperacin, represents 5.3% of the Bangladeshi family’s monthly income. So proportionately, this short course of antibiotics would eat
up about £31 of the British family's budget. One hundred aspirins sold under Fisons' brand name, Genaspirin, have a maximum retail price of 82p in Britain. In Bangladesh their actual cost is 27p or 2.5% of the poor family's income - equivalent to £14.57 for the British family. (7)

A French pharmacist, Dr. Pascale Brudon, has used the United Nations purchasing power parity system to calculate the true cost of identical products in a number of different countries. Her analysis reveals that, particularly in the least developed countries, the real cost of drugs is very much higher than in the major drug producing nations. For example, Ciba-Geigy's antidiarrhoeal, Mexaform, costs one-and-a-half times more in Mexico than Switzerland, 6 times more in Indonesia, 13 times more in Niger and 20 times more in Upper Volta. (8)

"WHAT THE MARKET WILL BEAR"

There is every indication that drug prices are determined as much by market factors as the actual costs of production and supply. (9) Some of the most compelling evidence is the way that manufacturers have dropped their prices massively in competing for orders for the public sector, as opposed to acting as monopoly suppliers to private importers. (10)

The extent to which prices are influenced by competition on the local market is indicated by the following extract of E. Merck's "Bangladesh Marketing Plan 1980 (-1982)". This refers to the company's product, Neurobion, which accounts for most of local sales turnover. "The movement of both tablet and ampoules are very fast and being the leader overshadowed other neurotropic vitamins. The reasonably good turnover of Neurobion has drawn the attention of our competitors and some of them are seriously thinking to produce identical product locally. Although the high price is acceptable by the market, but becoming burden to the consumers and it's constant complaint from the doctors". (11) (our emphasis)

Our research supports the conclusion reached by earlier studies that manufacturers appear to charge what the market "will bear". (12) But external market forces alone do not account for all the price discrepancies. The structure within the industry makes it inevitable that identical drugs are sold at very different prices. There are exceptions, but as a rule the research-based companies charge one set of prices, and the non-research-based producers another.

IT'S ALL IN THE NAME ...

Perhaps surprisingly, the easiest way to focus on the reasons underlying manufacturers' very different price strategies is by looking at the name under which a drug is marketed. Initially, the research chemists who develop a new drug will refer to it by its chemical name, as for example, '7-chloro-1, 3- dihydro-1-methyl-5-phenyl-2H-1, 4 benzodiazepine-2-one'. The active ingredient or drug is then patented and - fortunately for non-scientists - it is given its generic or non-proprietary name. The generic name, 'diazepam' in this case, means the drug can be easily recognised internationally. When the drug is ready to be launched on the market, its manufacturers give it an exclusive proprietary or brand name.
Promotion ensures that most of us will recognise the drug by its brand name—in this case ‘Valium’.

A company that develops a new drug is granted monopoly rights over its production, import and sale in countries that recognise patents—in many for up to 20 years. The effective life of patents may in fact be only half as long by the time a new drug is fully tested and ready for sale. But while manufacturers enjoy this monopoly their new products can sell at high prices. Once the patent expires (or before that in countries that do not recognise patents) the drug can be copied by anyone with the technical know-how to produce it. So non-research-based companies can step in and market the drug either under its generic name or their own brand.

Keeping to the example of diazepam, this is now off patent and sold in Britain both under its generic name and half a dozen brand names, including Valium, the trademark of its originators, Roche. (13) Two characteristics distinguish the brand name product from the generic. Valium is well known, diazepam less so, and the trade price of Valium to the National Health Service is over twice the price of the generic. (14) The differences can be greater. A comparison of prices of thirteen top-selling brands and their generic equivalents on the British market in 1979 revealed that the generics cost only two-thirds to one-tenth of the price of the brand-name products. (15)

The situation in the Third World is similar. For example, in Bangladesh Valium costs approximately four-and-a-half times more than diazepam from a local generics factory. (16) According to UNCTAD, in the Philippines the retail price of Smith, Kline & French’s Isona 500 tablets was over 22 times more than the generic equivalent (isoniazid) from the generics producer Rhea-Pilusa. (17)

THE COMPETITIVE RACE

Price competition is crucial in the generics market, with obvious advantages for the Third World poor. (18) Generics producers have nothing like the overheads of the research-based manufacturers, so they can sell drugs profitably for slightly more than their actual manufacturing costs. As the Director of Operations of Beecham explains: “Imitators will always be able to charge less than originators because they have no research and development costs of to recover.” (19)

The research-based companies have rarely tried to compete with the low prices of the generics producers. An industry document points out that “innovators hardly ever reduce their prices when their products are copied”. (20) Broadly speaking price-cutting is against the interests of research-based companies that need to maximise their prices and profits to cover their large overheads. (21) The market leaders compete by bringing out new products that can sell at high prices while they are covered by patents. Each aims to increase its share in about half a dozen different sub-markets. Glaxo, for example, specialises in antibiotics and drugs for asthma, rheumatism, ulcers, skin complaints and heart conditions. (22)
Dr. von Grebmer of Ciba-Geigy explains the position of the market leaders: "The innovator is compelled to develop new innovations if he is not to fall behind in the competitive race. Theoretically, the research-based company could defend its market share, even after expiry of the patent, by effecting price reductions. Such a strategy, however, involves the danger of its tying down a growing proportion of its resources as a company to this generics market and thus weakening its capacity for research and development." (23)

BRAND PROLIFERATION

The results of this "race" are that the world market is flooded with what Senator Edward Kennedy has described as "a myriad of competing drug products". (24) There are about 1,000 different active ingredients or drugs but of these little more than 200 are considered as essential to priority needs by WHO. Moreover, these active ingredients are sold under thousands more trademarks and dosage forms. In Britain alone there are an estimated 17,000 different drugs on the market, including all brands and formulations, but excluding homeopathic and herbal medicines. (25) In India there are about 15,000 products on the market, and a similar number in Brazil. In Nepal alone there are 67 different brands of chloramphenicol, 79 antacids, 63 cough syrups, 63 brands of phenobarbitone and 42 of aspirin. (26)

Although there are only seven combination drugs on the WHO Selection of Essential Drugs, there are over 10,000 in the Mexican prescribing guide. Many are more expensive than single-ingredient drugs. Arguably they have more to offer manufacturers in securing new patents than in any clear therapeutic advantages to doctors. (27) The proliferation of different brands of similar, if not identical drugs, all on sale at different prices, can easily present headaches for doctors. For prescribers in developing countries the choice of the most cost-effective treatment is even more fraught with difficulty than it is for their counterparts in developed countries. The Third World doctor rarely receives any objective drug information from any non-company source.

The inevitable consequence of this variety of competing brands is that manufacturers must spend large sums of money on promotion to convince doctors that their products are superior to their competitors'. These marketing costs can add up to as much as 20% of sales turnover. (28)

Inevitably the costs of innovation and advertising have to be paid for in higher drug prices. As a result actual production costs can account for as little as 20-30% of the research-based companies' prices. Dr. von Grebmer explains that "Between 70% and 80% of the sales figure goes towards general costs and profit". (29) The Third World's heavy reliance on the market leaders means that the poor are helping to foot the hefty bill for research and promotion. According to Dr. von Grebmer: "Owing to the special nature of the costs structure in the research-based pharmaceutical industry, the only economically reasonable accounting procedure to adopt is to calculate for each product a so-called 'contribution margin' (= price minus directly chargeable costs) which includes an extra percentage to
cover general costs." However, the price discrepancies we have described make it clear that this ‘contribution margin’ cannot be distributed evenly.

This system of adding a premium to the actual production cost of all drugs has the advantage that a few of the best-selling drugs effectively subsidise the cost of drugs for rarer diseases. (Commonly 50% of a company’s sales are made up by only about 5% of their product range.)

Third World patients do of course benefit, because rich world purchasers are helping to pay for drugs for tropical diseases that might otherwise be even more prohibitively expensive as their sales volume is low.

But drugs for specifically ‘tropical’ diseases are only one aspect of a poor country’s needs. Most of the medicines urgently needed by the Third World poor are for common infections and are decades old. Hardly 5% of the WHO selection of essential drugs are covered by valid patents, so they could be obtained as generics at competitive prices. Furthermore, as the British industry-funded Office of Health Economics points out, the research and development costs for these drugs “have largely been paid for”.

**SHOULD THE POOR SUBSIDISE NEW DRUGS FOR THE RICH?**

Without doubt, new drug research is vital. It offers the only hope to many suffering from incurable diseases. Research and development is, of course, a high-risk and costly business. This is beyond dispute. The question is, should the Third World poor have to help pay for it and how relevant is the research to their needs?

On average it takes about a decade and costs around £35 million to develop a new drug. It can cost as much as £50 million. When a company makes a major breakthrough its huge investment in time and money is usually amply rewarded, although not of course immediately. It was reported that Smith Kline & French’s record-breaking new drug Tagamet, for gastric ulcers, should bring in £2,000 million in sales over ten years on an investment of about £17 million. After its launch the company reported a 45% rise in turnover and a 90% rise in profit. It has recently been forecast that the British company Glaxo, which spent about £45 million on research and development in 1980/81 may make profits of between £30 and £40 million a year averaged out over the next five years from the launch of its rival anti-ulcer drug, Zantac.

But these major breakthroughs are obviously relatively few and far between. Profitability depends on bringing out new products, irrespective of whether they offer any major advantage over existing drugs. A 1981 report by the British licensing authorities reveals that of the 604 new product licences approved in 1980, only 23 were for new chemical entities as opposed to new formulations of existing molecules and active compounds. Over the period from September 1971 to 1980 less than 6% of licences granted in Britain were for new chemical entities.

Some new formulations of existing compounds are of course extremely valuable. But figures from the United States Food and Drugs Administration (FDA) reveal
that only a minority of new products licensed offer any major therapeutic advance. Out of a total of 484 new drug applications approved over a five year period, 112 were new chemical entities, 106 new formulations and combinations and 253 replicas of existing formulations. According to the FDA, of these 31 represented an important therapeutic gain, 62 a modest gain and 391 a minimal or non-existent gain.\(^{(40)}\)

The majority of these new drugs may therefore do little more than add to the cost of treatment, which can only be harmful to the poor. The British licensing authorities concluded from their study of new drugs that innovation is “directed towards commercial returns rather than therapeutic need”. Most new drugs are not directly relevant to the needs of the Third World poor, but are for “conditions which are common, largely chronic and occur principally in the affluent western society”.\(^{(41)}\)

Of course the poor could potentially benefit from research into heart disease, cancers and other chronic and viral diseases common to both developed and developing countries. Because of this industry commentators argue that “it is misleading to split off pharmaceutical research oriented towards the health problems of countries like Britain from that for poor nations”.\(^{(42)}\) A second argument advanced is that all research is relevant to the poor because a breakthrough, for example on immunology techniques for rheumatoid arthritis, may turn out to be helpful in preventing parasitic diseases.\(^{(43)}\)

But there is a wide gap between theoretical benefits and concrete advantages to the poor. The Third World poor are still not benefiting from essential drug technology developed in the 1950s and 60s. Since they are expected to contribute to the cost of this research (in paying higher prices for brand-name drugs) it is essential to question how far the research actually sets out to benefit people in developing countries.

In 1976 WHO estimated that total world expenditure on research and development for tropical diseases amounted to about £17 million a year - a sum equivalent to 2% of the money spent each year on cancer research alone.\(^{(44)}\)

An article that appeared in the Roche staff journal in 1978 stated: “It has unfortunately become apparent that in recent years a number of university institutes and pharmaceutical companies have reduced or even ceased their research activities in the difficult field of chemotherapy of tropical diseases.”\(^{(45)}\)

The explanation given is that research costs have increased because of stricter clinical trials now needed before a drug can be marketed. This makes it unlikely that profits from sales of tropical medicines will be sufficient to cover the initial research outlay, given the lack of purchasing power of people in the Third World. Roche also suggests that with the severing of colonial ties the British and French now give less priority to tropical medicine.\(^{(46)}\)

According to Roche: “It is today mainly pharmaceutical companies in Switzerland (Roche, Ciba-Geigy), Germany (Hoechst, Bayer), France (Rhone-Poulenc) and,
to a lesser extent, in Great Britain (Wellcome) which are engaged in the
development of new drugs against tropical diseases. In the US it is mainly the
Walter Reed Army Institute of Research which is involved in research in this
field. " (47)

Amongst the latest and most useful medicines developed for Third World needs
are rifampicin for the treatment of TB and leprosy (the product of collaboration
between Ciba-Geigy and Lepetit); Roche’s new antimalarial Fansidar, which is
effective against chloroquine-resistant strains of malaria, and Bayer’s new
schistosomicide Praziquantel, which is less toxic than early drugs. (48) Wellcome’s
commitment to research into tropical diseases dates back to the turn of the century.
It has since brought out a range of drugs including treatments for malaria, intestinal
parasites and a vaccine to cater for the needs of a minority threatened by Pig-bel,
a disease which claimed a few thousand lives each year in Papua New Guinea.
Research is currently being undertaken by Wellcome into the six major tropical
diseases, which are also under investigation by scientists of other manufacturers,
including Roche and Ciba-Geigy. (49)

Other companies such as ICI and May & Baker have produced useful antimalarials
and Janssen, Bayer and Merck Sharp & Dohme have contributed anthelmintics,
relevant to Third World needs. These are just some examples, but by no means
a comprehensive list of manufacturers’ valuable contributions to tropical medicine.
At least a dozen of the major research-based companies are actively cooperating
with WHO’s Special Programme for Research and Training into Tropical Diseases. (50) The amount of these companies’ research budgets specifically
directed towards the needs of developing countries is comparatively small. (51) But
the majority of manufacturers spend nothing on research into Third World
diseases. (52)

In fact, out of total research and development expenditure of around $5,000 million
(£2,100 million) in 1980, according to an industry analyst, ‘‘The international
pharmaceutical industry spent over $50 million [ £21 million ] on specifically
‘third world’ drug research”. (53) In other words, in 1980 the international
industry overall allocated just 1% of research and development spending to poor
world diseases - or about half as much as it costs to develop just one new drug.

The extent to which the specific needs of the Third World are neglected is
He identifies 87 diseases specific to poor countries. Of these, there are vaccinations
for ten, and satisfactory drug treatment available for a further 23. But there are
no drugs to treat 32 diseases and the remaining 22 can only be treated with very
unsatisfactory drugs, with toxic side effects. (54)

**REVOLUTION WITHOUT THE POOR**

Meanwhile leading manufacturers continue to increase their research expenditure.
Pfizer for example is committed to a 20% a year increase for each of the next
five years. (55) The industry has high expectations of exciting new technological
advances in bio-engineering and other fields. In September 1982 the British industry held a conference on the expected “Second Pharmacological Revolution”. But the “revolution” is apparently mainly of interest to the rich. George Teeling-Smith of the Office of Health Economics explains: “…we took a fundamental planning decision that this meeting should be concerned only with pharmaceutical innovation relevant to the advanced world. We are always conscious of the risk of trying to cover too wide a front on any one occasion and felt that we could not do justice to the very important Third World issues if we simply tried to tack them on to a meeting dealing with very high technology ‘21 Century’ innovation.” (56) The implication seems to be that “21 Century innovation” is not relevant to the needs of two-thirds of the world’s population. A further symposium is planned for later to look at the “equally important problems of health care for the world’s poor”. (57)

There is no straightforward answer to the intractable problem of who can afford to pay for research into new drugs for tropical diseases. Both industry and international agencies see the best hope for the future in joint collaboration. By contrast the Third World’s need for low-cost generics is clear-cut. Some years ago WHO officials estimated that if world drug consumption reached $42,533 million (£18,254 million) by 1980, the poor world would be paying the rich a contribution of over $800 million (£343 million) towards research and development costs. (58) World consumption has more than doubled that figure and the poor continue to shoulder the bill. (59)

**AN IRREVERSIBLE TREND TO GENERICS**

Poor countries are not forced to buy brand name drugs at uncompetitive prices from the research-based companies. There are alternatives. Working in the Third World’s favour is the fact that there is a growing demand for generics. A Ciba-Geigy policy document explains: “The amount of products no longer enjoying patent protection is becoming more and more important, giving way to increased competition, specially with regard to prices, and thus encouraging the production of the so-called generics.” (60)

Much of the impetus is coming from within rich countries, as governments and health insurance funds attempt to curb spiralling drug bills. For these reasons Ciba-Geigy sees the trend towards generics as “an irreversible course of action, which the pharmaceutical industry will not be able to keep at bay”. (61) In the US, generic prescriptions now represent about 14% of all new prescriptions written and some forecasts suggest that, by 1989, generics will account for nearly half of the total US market. Not surprisingly, 15 out of 20 major research-based companies in the US are now involved to some extent in generics production. (62) Clearly their strategy, as outlined by Ciba, is to hold on to the market: “Our main aim remains innovation through research. Where generics have already captured a very large share of the market and represent a threat to our traditional business or in cases where additional markets can be opened up by means of generics, we are prepared to enter into the business of generics.” (63) (our emphasis)
As this suggests, research-based manufacturers are not going out of their way to push generics at the expense of their brand name products. In 1980, the value of the world generics market was only 4-6% of the total drug market and brand name products accounted for an estimated 90% of total UK drug exports. A publication of the British industry-funded Office of Health Economics (Brand Names in Prescribing) indicates that many research-based companies see no role for themselves in responding to the growing demand for inexpensive generics. It states: "Older unbranded medicines which are by now long-established in the various national formularies can usually be adequately and cheaply manufactured in even the less developed local world markets. International trade in these unbranded products is consequently negligible."

This statement obscures the very real difficulties that developing countries face in setting up local production. To start with they must obtain the necessary technology and technical know-how. These may be available from other developing countries that have already set up local production. But rapid technological refinements in the rich world can leave local production vulnerable to price undercutting. Third World producers also remain heavily dependent on rich world producers for supplies of bulk drugs and chemical intermediates.

Not all countries are in a position to set up local production. Those attempting to break the monopoly of traditional suppliers by buying bulk drugs on competitive tender, have other problems to overcome. Many Third World countries lack both skilled administrators and the necessary market intelligence to operate an efficient purchasing system. In some cases patent laws may debar them from buying from cheaper generic suppliers or obtaining technology to produce the drugs themselves. It is open to patent-holders to attempt to enforce their monopoly rights, even when they have no intention of producing a drug locally themselves.

A further major obstacle is the high cost of quality control facilities essential to test drugs produced locally or imported from unknown suppliers. Lack of quality control can enforce dependence on the market leaders especially if promotion exacerbates fears about the reliability of products from generic imitators. Some countries with chronic foreign exchange shortages may be forced to go on buying from the leading companies, and paying high prices, because cheaper suppliers cannot give them credit.

But manufacturers cannot be expected to want to relinquish their existing markets. Even research-based companies that have diversified into generics production like Ciba will of course not wish to threaten the market power of their brand name products. They wait for governments to make the first move. A Ciba document explains the strategy: "This policy of ours is deliberately of a reactive type, which explains why we refrain from entering into the generic business in markets where such products are still of no great significance."

The research-based companies attach considerable importance to their exclusive trademarks as a source of market success. This is borne out by the results of a survey conducted by the Office of Health Economics. Twenty-eight companies
were asked to rate various factors in an order of priority in deciding whether they would enter a Third World market. Not surprisingly, the main consideration chosen was "confidence in the future of the market". But, significantly, the second factor they singled out was "pressures for generic prescribing and attack on brand names". By contrast, "strictness of price control" rated fifth in order of importance. (70)

OPPOSITION TO GENERICS

Any moves to generic prescribing are resisted. A common reaction is for major manufacturers and producers' associations to stimulate concern amongst doctors and the general public that the quality of drugs may suffer without the guarantee of brand names. Doctors are also encouraged to resist any curtailment of their 'freedom' of choice. (71) National companies that have managed to establish their own brands will also oppose a generics policy. As UNCTAD points out: "They may fear a generic policy more than the transnational firms do because, owing to their higher costs, they may be less well equipped to face competition in the market for generics." (72)

In 1980 the Indian Government made a significant step to encourage generic prescribing by abolishing brand names on five commonly prescribed drugs. (73) Soon afterwards a spate of industry-funded advertising appeared in the Indian press in an apparent attempt to discredit the new generics policy. (74) An example of this propaganda is the advertisement reproduced on the opposite page: "Would you rather have your doctor choose a medicine for you - or somebody else?"

The issues the advertisement raises are crucial to people's acceptance of generic prescribing and consequently to cutting drug costs in poor countries, so we shall take a closer look at the arguments advanced.

"The move to abolish brand names is motivated by the erroneous belief that if there are no brands, drugs will become cheaper."

We have seen that brand names do disguise big price differentials. For instance, Limbitrol Forte, a tranquilliser promoted by Roche in Lesotho, contains amitriptyline and chlordiazepoxide. This combination product was in 1980 five times as expensive as the two single ingredients. (75) WHO is in no doubt that "There is great pressure to use brand names rather than generic names for pharmaceutical products. Use of the latter could facilitate the availability of alternative, cheaper drugs that are still satisfactory from the medical point of view." (76) Hence WHO's recommendation: "To ensure standardisation and reduction in price, generic names should be utilised in drug procurement in developing countries." (77) (our emphasis) Many doctors concur including the President of the Indian Medical Association: "Of course generic drugs will become cheaper for the consumer and so far our experience with the drugs that are required to be manufactured under their generic name has not been unhappy." (78)
Would you rather have your doctor choose a medicine for you—or somebody else?

Somebody other than a doctor may choose a medicine for you if brand names for drugs are abolished and doctors are compelled to prescribe by generic name only.

A generic name is the common name of a drug—usually a long chemical name. When this drug is made by several firms, each one gives it an easy-to-remember brand name, which is usually simpler than the generic name.

Simplicity or Confusion?

'Bromophenylephrine Hydrochloride' is a generic name. It is marketed by companies under their own brand names. 'Ambrodryl', for example, is a brand name for this drug. Similarly, 'Dihydroergotamine Methanesulphonate' is the generic name of a drug marketed as 'Dihydroergot', a brand name. 'Otrivin' is a brand name of a drug generically named 'Xylometazoline Hydrochloride'.

Brand names usually have no similarity in spelling or pronunciation. Hence the chances of wrong dispensing of a drug prescribed by a brand name are negligible.

In contrast, several generic names are similar in spelling and pronunciation, although the drugs concerned may be quite different in their therapeutic action. Example: Quinidine Sulfate is a cardiac drug, while similar-sounding Quinine Sulfate is an anti-malarial.

If doctors are forced to prescribe drugs by generic names, the chances of wrong dispensing by chemists can be very high, especially if prescriptions are illegibly written as they often are.

Layman's View

Laymen think that all products with the same chemical composition have the same degree of effectiveness. But chemical equivalence is not the same as therapeutic equivalence, as every good doctor knows.

This is because drug quality and effectiveness are not simply a matter of how a medicine is named or marketed, but how and by whom it is made. Several critical factors which differ from company to company, vitally affect the effectiveness of a drug in patients.

These differences can, and often do, result in variations in the degree and speed of therapeutic response, how much of the drug is absorbed, allergic reactions or other side-effects, tolerance by the patient in specific conditions, etc.

Doctor Knows Best

This being so, the doctor, who knows the patient's condition better than anybody else and has previously observed the action of different brands of the medicine, chooses a brand he knows to be effective and is best for the patient.

If brand names are abolished, the doctor will have to prescribe by generic name. When you take the prescription to the drugstore, the chemist will decide which company's product should be given to the patient.

And the chemist, unlike the doctor, has no knowledge of the patient's condition, nor has he any experience of the therapeutic effects of products made by different companies.

Ensuring Quality

When a company markets a product under a brand name, it stakes its reputation on the brand. This is a less expensive way of ensuring quality than administrative controls.

The Soviet Union has retained the brand system. When Pakistan abolished brands, spurious and sub-standard drugs took over. The country has gone back to brands.

It is obvious that the abolition of brand names will jeopardise the interests of the consumer without any corresponding benefit like lower prices. There is no justification for taking this risk in such a vital field as medical care.

Do you have these misconceptions?

The move to abolish brand name is motivated by the erroneous belief that if there are no brands, drugs will become cheaper. This belief may have some limited validity in countries which permit free competition. But in India the price of every drug is rigidly controlled by the Government. The Government also lays down which company should produce what drug and in what quantity. The profits that drug companies can make are also controlled.

As price control applies equally to generics and brands, there is no question of drugs becoming cheaper if brand names are abolished.

Another misconception is that the brand system somehow favours large firms against small manufacturers. All quality-conscious drug manufacturers—both large as well as small—are in favour of the brand system which wins them consumers on the basis of merit.
“Somebody other than a doctor may choose a medicine for you if brand names are abolished and doctors are compelled to prescribe by generic name only.”

This is a bogus argument as it implies that doctors are invariably well-informed about the special properties and possible side-effects of drugs, or that there is necessarily any significant difference between generics and brand name drugs. It also ignores the fact that in India the great majority of drugs are not sold on prescription.

“Simplicity or confusion?” Generic names are long and complicated. Some are similar and could be confused.

The suggestion that generic names are more easily confused than brand names is once again a non-argument. Whereas similar generic names like digoxin and digitoxin or chlorpromazine and chlorpropamide can cause confusion, it is very easy to compile an equally lengthy list of confusing brand names, like Aramine and Avomine, Daritran and Dartalan or Jadit and Jonit.

In fact, generic names are often more helpful in giving clues about the nature of a drug. For instance, the generic names ampicillin, cloxacillin and carbencillin indicate that all three are penicillins, whereas no clues are given by their corresponding brand names Penbritin, Orbenin and Pyopen. Brand names decidedly do not make life any easier for a doctor. A Bangladeshi doctor wanting to prescribe oxytetracycline, is confronted with the choice of Aldacycline Forte, Clinmycin, Edrucycline, Imperacin, Kedoxyline, Oxaline or Terramycin.

“Laymen think that all products with the same chemical composition have the same degree of effectiveness. But chemical equivalence is not the same as therapeutic equivalence as any good doctor knows ... Several critical factors, which differ from company to company vitally affect the effectiveness of a drug in patients. These differences can, and often do, result in variations in the degree and speed of the therapeutic response - how much of the drug is absorbed, where in the body and how rapidly it is assimilated....”

What the argument boils down to is: whereas a generic drug may well be chemically identical to a brand name drug, it will not necessarily be as effective. The implication is that a generic is usually less effective.

One key determinant of therapeutic effectiveness is bioavailability: the rate and amount at which the active ingredient of a drug is absorbed into the blood stream. This is a significant problem with a relatively small number of drugs. In the case of one, digoxin, differences between brands that could prove fatal have been found. A US Congressional investigation concluded that the vast majority (85% to 90%) of chemically equivalent drugs can be used interchangeably because their therapeutic equivalence is not a problem. A British pharmacist, writing
to the *Daily Telegraph* to counter arguments against generic prescribing, confirms that “the variation in bio-availability in different brands has been shown to have a negligible effect involving less than 0.5% of patients.” The problem of bioavailability is not sufficiently widespread to justify its blanket use against all generics.

“When a company markets a product under a brand name, it stakes its reputation on the brand. This is a less expensive way of ensuring quality than administrative controls.”

But brand names are no guarantee of quality. According to UNCTAD, “The US Food and Drug Administration has shown that branded and generic producers can have substandard products with about equal frequency. A non-branded product from a reliable firm is just as likely to be effective as a branded product.”

Substandard drugs can present very real problems in developing countries. One estimate puts the incidence in India as high as 20%. Foreign firms and large national producers have excellent records on quality. The problems arise with the mass of small firms. Nonetheless, the fact that substandard generics are produced is no argument for reliance on brand names, only for the crucial importance of adequate quality control facilities to test *all* drugs.

WHO is similarly dismissive of the claim that a brand name ensures quality: “The image of drug quality is often linked with the brand name and the name of the producer ... However, exaggerated claims of high quality may not be related to better therapeutic performance of the product but may be used to justify higher prices and to increase market power.”

Dr. Hye, formerly Director of Drug Administration in Bangladesh, explains: “One common practice of multinationals is to set the quality specifications of their branded products a little higher or above the specifications laid down in the official Pharmacopoeia, involving additional refining or processing. This is unnecessary so far as the efficacy or usefulness of the drug is concerned, but very useful for the company to justify branding of the product and for claiming that it is a superior product to other similar products. It also helps to justify higher prices.”

Another factor that makes a nonsense of the claim that brand name drugs are intrinsically superior to generics is that brand name producers sometimes buy drugs in final dosage form from identical sources to generics producers. For example, in US Senate Committee hearings it was revealed that one generics manufacturer was producing capsules of chloral hydrate for seventeen companies. The identical drug was then marketed both by generics producers and research-based companies. The only difference being that under the exclusive Merck Sharp & Dohme, and Squibb trademarks, the drug cost three times more. It was also reported in 1979 to be standard practice for small British generic producers to manufacture brand name products under contract to the big-name manufacturers. “The extraordinary situation arises in which the same drug is made in two guises in the same factory for sale at two different prices, the branded price often being at least twice the unbranded.”
OVERPRICED RAW MATERIALS

The need to assure high quality is often used by local subsidiaries of manufacturers formulating drugs in the Third World as a justification for importing high-priced raw materials, sometimes exclusively from their parent companies. Similarly, locally-owned companies producing drugs under license may be forced to buy raw materials from the licensors in developed countries and pay inflated prices.

A Third World country can operate strict price controls on finished drugs, and still find itself paying exceptionally high prices if the cost of imported raw materials is ignored. A WHO document explains: “The most difficult components in determining the prices of drugs are the costs of production of raw materials and especially the cost of active ingredients, which are generally known only to the producer. Such costs are the most important in determining the prices of drugs by cost calculation because the pricing system is generally based on a percentage mark-up of raw materials costs ... As drugs are moving internationally, many transnational companies decide on the transfer of prices according to their own interests.”

An industry analyst confirms that the transfer prices of raw materials bear very little relation to actual production costs. Prices carry a premium for research and development and “centrally incurred costs”. It is very hard for anyone outside the company to quantify these costs, so in the words of the same analyst it is possible for “appreciable profits to be transmitted from the local affiliate to the parent company.”

This mechanism of transfer pricing is commonly used by transnational corporations to shift capital around the world, avoiding government controls and minimising taxes. Transnational companies, by their very nature are in a position to set their own rules and get by unchallenged by purely national price controls. Probably the most notorious instance of transfer pricing came to light in 1973, in Britain, with the publication of the Monopolies Commission Report on the supply of chlordiazepoxide and diazepam. Roche had been charging its British subsidiary £370 and £922 per kilo for the active ingredients used to formulate Librium and Valium in Britain. The Commission found that these active ingredients were available from Italian manufacturers at £9 and £20 a kilo. Thus they estimated that although Roche had been declaring profits generally below 5% on capital employed, its real profits were over 70% between 1966 and 1972.

When developed countries like Britain, with sophisticated market intelligence sources to hand, are hard put to monitor transfer pricing, it is hardly surprising that developing countries end up paying high drug prices because raw materials are overpriced.

HIGH TRANSFER PRICES TO BANGLADESH

The difficulties for developing countries as a whole are illustrated by the situation in Bangladesh. Figures for imports during 1979/80 show that local subsidiaries and licensees of major manufacturers paid their parent companies inflated prices for imported raw materials. A number of manufacturers - such as Glaxo - operate
an enlightened policy by allowing their Bangladeshi subsidiaries to buy all raw materials on the open market from the cheapest reliable sources.\(^{(94)}\)

The US-based manufacturer, Squibb, buys only 12 of the 195 materials used locally from Squibb sources. But it has imported raw materials at considerably higher prices than other local manufacturers. For example, it paid almost twice as much as Pfizer and over three times more than the locally-owned company K.D.H. to import tetracycline.\(^{(95)}\) The manager of Squibb Bangladesh explains: "We buy them from our affiliates because we are guaranteed the materials will conform in every particular to the exacting Squibb standards. It is strict adherence to these quality standards and therefore product efficacy, that has made Squibb trusted by the medical profession throughout the world and nowhere more than in Bangladesh where we cannot risk wasting precious foreign exchange import licenses on critical materials from outside vendors that may prove to be sub-standard and therefore unusable."\(^{(96)}\)

The Wellcome Foundation also cites the "stamp of Wellcome's quality control" in explanation of the fact that trimethoprim was imported into Bangladesh on its behalf at five times the price paid for this drug by the local manufacturer, Square Pharmaceuticals.\(^{(97)}\) Trimethoprim is one of the ingredients formulated into Wellcome's brand name product Septrin in the factory of ICI Bangladesh, where it takes up a sizeable part of production capacity. The high import price of the raw material influenced the local Drug Administration's decision to hold down the price of Septrin when a representative of Wellcome visited Bangladesh to try to negotiate a price rise from Taka 2 to Taka 3.50 a tablet.\(^{(98)}\)

Similarly, ICI's local subsidiary paid five times more for a consignment of levamisole than another local manufacturer and over twice the price Janssen of Belgium (that originally invented and patented the drug) charged its local licensee, Square.\(^{(99)}\) The Chairman of ICI's Pharmaceuticals Division comments that the price of Taka 5,400 per kilo CIF "referred to a single shipment of special grade material manufactured exclusively to meet the special requirements of ICI Bangladesh Manufacturers Ltd. (ICI BM). Since then we have been able to modify the formulation of 'Ketrax' syrup and tablets so that ICI BM could use a simpler starting material, and from February 1980 all supplies have been shipped at prices in the range Taka 2,070 - Taka 3,130 depending principally on the exchange rate applicable at the time."\(^{(100)}\) ICI's Pharmaceuticals Chairman also points out that "the question of fair pricing is examined by the office of the Drug Controller".\(^{(101)}\) Indeed, according to the Director of Drug Administration at the time, a written warning was sent to ICI telling them that the import price of levamisole must be reduced. After some argument ICI agreed to drop the price.\(^{(102)}\)

BPI, the joint-venture company managed under contract by May & Baker UK, buys raw materials on the open market, but because of the conditions of a UK Government tied-aid grant some raw materials have had to be bought at uncompetitive prices through the Crown Agents in London.\(^{(103)}\) BPI has imported metronidazole at 5 times the price paid by other local manufacturers.\(^{(104)}\) Some
locally-owned manufacturers have found themselves paying high prices for raw materials when they are bound by licensing agreements. The local manufacturer, Therapeutics, a licensee of American Cyanamid, paid Cyanamid over 2 1/2 times more for its initial consignment of dimethyl carbamazine citrate than the price paid by BP for the same raw material. After Government pressure the price was reduced.\(^{105}\)

According to Dr. Hye, then Director of Drug Administration in Bangladesh, “One reason for high prices of drugs is due to practices of price transfer by the multinational companies through procurement of raw materials from chosen single sources.”\(^{106}\) A 1979 report on the viability of local production, commissioned by the World Bank, confirmed that local manufacturers were charging strikingly high prices for some finished drugs, compared with the cost at which they could be produced.\(^{107}\)

The study team compared actual finished drug prices with their assessments of production costs (on a no profit, no loss basis) using raw materials purchased from the cheapest reliable sources. On this basis they calculated that tetracycline capsules could be produced for only one-fifth of the average commercial prices. Prices charged locally for penicillin tablets were estimated to be three-and-a-half times higher, for chloroquine phosphate one-and-a-half times more, and for vitamin C over ten times more than their production costs. On the study team’s calculations, all but one of the 31 essential drugs selected for primary health care could have been imported at much lower cost than the local manufacturers’ prices. Furthermore, the team came to the conclusion that local production of 23 of the 31 drugs would be even more economical than importing them from the cheapest reliable sources.\(^{108}\)

**CHOICES CONFINED TO THE RICH?**

In rich developed countries there is growing concern about the escalating cost of drugs to the health services. Just over 90% of drugs prescribed by GPs in Britain are brand-name products. The British Government has considered the possibility of cutting costs by reducing consumption of expensive brand-name products, through generic substitution.\(^{109}\) This is already happening in some developed countries. In the view of the British industry-funded Office of Health Economics, rich countries have a choice to make. “Europe faces an important economic question. It has an option of a cheap drug policy to keep health service costs low . . .” But, if Europe opts for generics “it will at the same time drive out its innovative pharmaceutical industry. The alternative is to pay the price of the new wave of innovation . . . by supporting a research-based pharmaceutical industry through paying relatively higher prices for medicines . . .”\(^{110}\) The promised rewards are new drugs for Europe’s problem diseases and, of course, a flourishing drug industry improving the trade balance.

What choice can there be for the Third World poor? As long as unnecessarily high prices are paid, many of the poor must go without vital medicines.
CHAPTER 5

INFORMATION OR MISINFORMATION?
Drug Promotion

"Medical representatives must be adequately trained and possess sufficient medical and technical knowledge to present information on the company's products in an accurate and responsible manner." (Association of the British Pharmaceutical Industry Code of Practice.)

THE QUEUE of patients stretched out into the dark corridor and down the stairs. Inside the doctor's consulting room a row of chairs was filled with still more patients. Some would obviously have a very long wait. The dingy walls were brightened with glossy calendars from big-name drug manufacturers. An eye-catching display of tins of artificial baby milk stood on a shelf above the window. The advertisers' images of healthy babies beaming from the tins made a poignant contrast to the very sick children waiting to be seen. Harassed parents tried to stop them crying.

Looking decidedly unperturbed, the doctor was inspecting a patient's injured knee. Then he saw us in the doorway. Immediately he abandoned his patient and came to greet us. His warm welcome was mainly directed at the familiar face of the drug salesman whom we were accompanying on his rounds. We had stopped off here to deliver a stack of prescription pads specially printed with the doctor's name. This was part of the 'special service' to doctors, we were told, besides providing a means of keeping tabs on their prescribing habits. (Later the salesman could go to the pharmacy and check just which products the doctor had prescribed.)

Outside in the heat and the dust, horns blared as cars, people and animals negotiated their way through the narrow streets. Fully veiled women hurried along silently. This was Sana'a, capital of the Yemen Arab Republic (North Yemen) one late afternoon in August 1980. The salesman's car was parked alongside the doctor's Mercedes, its boot crammed with more prescription pads and an assortment of free samples.

Somewhat bizarrely, our first encounter with the salesman had taken place in the offices of the Supreme Board of Drug Control - the government agency responsible for controlling drug marketing. The salesman was employed there in the mornings as an administrator. But in the afternoons, to supplement his meagre government pay, he worked for the Mohdar Corporation, agents and wholesalers for a number of leading drug manufacturers.
When we had expressed interest in his work the salesman enthusiastically offered to take us on his rounds. Evidently he saw no conflict of interests in regulating drugs in the mornings and promoting them in the afternoons. He described his job as handing out free samples and lavishing praise on whatever drugs he was asked to promote. He had had some training as a salesman, none in medicine or pharmacology. He candidly admitted that his understanding of medicines was minimal. 

* * * *

In this chapter we look into promotional practices in the Third World and their impact on the poor. One analyst has commented that, on the logic of the free market system, industry is “condemned” to promote its products. The Association of the British Pharmaceutical Industry explains: “It is necessary ... for the manufacturer, operating as he does in a keenly competitive industry and serving professions for which freedom of choice is essential, to draw attention to the existence and nature of a particular product; for example by appropriate promotional measures and the dissemination of further knowledge and experience gained in widespread use.”

THE COSTS

From the perspective of the poor, the logic of the market is costly. Promotion adds to manufacturers’ costs, so these have to be passed on to the patient in higher prices. The United Nations Centre for Transnational Corporations states that “The amount of money spent on promotional competition in the pharmaceutical industry is extraordinary. Approximately 20% of all drugs sales at the manufacturer’s level goes for promotion”. It is estimated that in Colombia the money spent each year by foreign companies on marketing their drugs adds up to more than half the country’s national health budget.

Promotion aims first and foremost to encourage sales. But it can be very helpful to prescribers, as two senior pharmacologists point out: “The pharmaceutical industry plays a very important role in providing information on drugs to the medical profession and doctors have come to rely heavily on such information in the choice of a drug.” Consequently, promotion can determine what doctors prescribe. This is illustrated by research carried out in Switzerland which found a close relationship between drugs that are heavily promoted and drugs that are heavily prescribed. The study concluded that prescribing ‘freedom’ is something of a myth because although they prefer not to admit it, doctors are clearly swayed by promotional pressures.

According to these two pharmacologists, the evidence suggests that “heavy promotion has to a great extent been responsible for excessive and irrational prescribing” - problems that are all the more acute in the Third World. After all, no one could expect a salesman to point out to doctors that a rival product to the one he is promoting, costing far less, is likely to be equally effective. Nor is it realistic to expect salesmen to discourage doctors from reaching for the
One company executive says candidly: “All salesmen are biased in that they talk about the virtues of the drug they are selling and cannot be expected to extol the virtues of somebody else’s product.” In recognition of these difficulties, the British industry’s code of practice recommends to member companies that information must be “accurate, balanced and must not mislead either directly or by implication”.

In Britain manufacturers operate a system of self-policing within the guidelines of their voluntary code, which one industry source has described as “virtually monastic in its strictures.” But the Government also monitors advertising standards and has the legal powers to take action against offending companies. It also keeps doctors supplied with more objective drug information, particularly on cost-effective prescribing - an element frequently played down by sales promotion.

Very few Third World governments are in a position to control promotional activities, much less foot the bill for providing objective drug information. The problems created by this information vacuum are set out graphically by an Indian pharmacologist and WHO consultant. “Once our doctors pass out of medical college and set up practice, they are cut off from the world of pharmacology. Only those who are interested enough and find the time will keep themselves abreast of the latest developments in medical therapeutics - and these form a very small minority. The others are thus .... vulnerable to glib medical representatives ... This situation is quite different from that in developed countries like the US and UK, where there are well organised services rendering a constant flow of information about drugs to prescribing doctors. Thus we have a gaping lacuna in our country and most firms take full advantage of it.”

Companies employ a variety of sales promotion tactics, including sponsorship of medical meetings, advertising in journals and prescribing guides, and direct advertising to the public. Among the key target groups in ensuring market success are doctors, drug retailers and government officials. The “Marketing Plan 1980 (- 1982)” of E. Merck in Bangladesh includes all three as central to its marketing strategies. Its authors propose “To maintain very good relation with Government officials in Health and Commerce Ministry to guarantee importability of our products”. Chemists are an important target group because according to the marketing plan 80% of Merck’s products are distributed through wholesalers and retailers, and over-the-counter sales without a doctor’s prescription make up a large percentage of total sales. Strategies proposed to distribute Merck products include: “To take sales goods during up-country trips and make direct sale to chemist on cash base.”

Merck’s sales force apparently already covers a quarter of the country’s doctors. But the Marketing Plan includes as a strategy: “To create more demand of our products by the way of effective promotion through better doctor selection.” (our emphasis) The Marketing Plan also indicates that in 1978 the company’s “average sales proceeds per man per year” were 22 times greater than his average cost to the company.
Two weeks’ collection of free samples and promotion materials.
Details of manufacturers’ spending on promotion in the Third World are not made public. But Dr. John Yudkin, who studied the Tanzanian market, estimated that the amount which “the companies spend each year on ‘educating’ doctors about which drugs to use is more than the annual budget of the Faculty of Medicine, which is used to educate doctors in every other sphere including how to use drugs properly”. (20)

The figures suggest that there is a much greater concentration of sales representatives to doctors in the Third World than in developed countries. Whereas in Britain there is approximately one for every 18 doctors, in Bangladesh the ratio is estimated to be 1:7; in Tanzania 1:4; and as high as 1:3 in Nepal, Brazil and several Central American countries. (21)

Sales promotion can take up a considerable amount of a doctor’s time. A 1975 report gives the example of a Brazilian senator (and doctor) who decided to test out just how much sales activity was directed at doctors. “For 21 working days he kept track of salesmen’s visits to his clinic. He was visited on 18 of the 21 days by a total of 69 salesmen. He was given 452 free samples of drugs (after refusing extra quantities so as not to distort the counting); he received 25 gifts including coffeepots, notebooks, etc.” (22) The photograph opposite shows the promotional handouts and drug samples accumulated by one general practitioner in Secunderabad, India, over just two weeks. (23)

Promotion is directed at both private and health service doctors. In North Yemen sales representatives have been banned from visiting government clinics during the mornings, because they were found to be taking up too much of the doctors’ valuable time. But the main prices paid for uncontrolled promotion are that it encourages both overprescribing and a demand for unnecessarily expensive drugs.

BRAND LOYALTY

Promotion is often designed less to point out the merits of a specific drug than to create ‘brand loyalty’ to the manufacturer’s range of products. The emotionally-charged advertisement “The Priceless Ingredient” reproduced opposite from a prominent position in the Bangladesh Prescriber’s Guide 79 aims to impress upon doctors the superiority of Squibb products and, by implication, the notion that doctors would be unwise to prescribe anything but drugs marketed by a big name manufacturer.

The Indian Hathi Committee which reported on the drug industry in 1975 identified pressurised promotion of brand image as central to the foreign companies’ consolidation of market power: “Attractively got-up medical literature and international brand names of drugs appearing in advertisements in foreign medical journals with which top consultants in the medical profession were acquainted, played their part in popularising the drugs of the foreign companies. Large sums of money were spent by foreign companies in systematically training their ‘medical detailers’ [sales representatives] and the general tone of detailing resorted to was that their products contained ‘something plus’ over products with identical
composition marketed by Indian units and that the edge in their quality was the outcome of their superior expertise and international standing.** (24)

This promotion stressing the intrinsic superiority of the big name producers continues to threaten the viability of small local producers attempting to market inexpensive generics. It also confirms the prejudices of many medical students who leave college with a glowing respect for new drugs. This predilection is easily reinforced by sales promotion to the point that, as a British pharmacist found in Nigeria, “Doctors are sceptical of my comments in favour of cheap, well-established, unbranded drugs and against new, fancy, inadequately documented and expensive drugs”. (25)

**COST IS SECONDARY?**

One example of a ‘new’ product which was promoted to doctors in Sierra Leone in 1980 is Searle’s Rehidrat. As the name suggests, Rehidrat is a rehydration salts preparation. Rehydration saves lives, particularly when children become severely dehydrated through diarrhoea. Rehidrat comes in individual sachets and contains a “‘special granule” to preserve its “lemon-lime flavour”, as explained by the eye-catching promotional leaflet, with its refreshing-looking lemons and limes. But this obviously useful new product has its price. The medical volunteer who sent us the leaflet explains: “This has made the physician specialist here furious because the cost of a sachet to make up 250 mls of solution is 80 cents. I’ve found that by buying sodium bicarbonate, sodium chloride and glucose at the local supermarket in small quantities, but using potassium chloride from England, the cost is just under 10 cents. Moreover, the formula which the rep said followed the WHO recommendation for oral rehydration fluid is in fact quite different, with more than twice as much glucose, half as much sodium chloride and also includes citric acid. To make up the same volume of the WHO solution would in fact cost about 5 cents” (one-sixteenth of the manufacturer’s price). (26)

Searle’s Director of European Clinical Research stresses Rehidrat is quite deliberately different from the WHO recommended product. Children, he explains, may be put off by the taste of the WHO solution and some experts argue that its sodium content is too high. (27) He comments: “Rehidrat is made in Norway, packaged in England, and exported and distributed throughout Africa and Asia. It contains micro-encapsulated flavouring and is stable. When properly reconstituted, and in contrast to the WHO solution - it provides a palatable source of fluid, glucose and electrolytes for the oral treatment of dehydrated infants. It is necessarily more expensive. In context, it costs slightly more than a bottle of Coca Cola in such countries as Kenya, Nigeria and Zambia.128 (our emphasis)

But in Sierra Leone the cost of just one sachet to mix a ¼ of a litre of Rehidrat is about equal to the daily wage of a poor labourer. A dehydrated child weighing 10 kilos will need about 8 times that amount of fluid in just 24 hours. (29) Cost is crucial because rehydration saves lives. Poor families could easily improve the taste of a basic cheaper solution by flavouring it with local fruits. (30) Advertising is designed to catch the doctor’s interest and imagination. A salesman for Merck
If your child was suffering from a bacterial infection

wouldn't you prescribe Septrin?

Septrin

The original trimethoprim and sulphonamide antibacterial specially formulated as a pleasant tasting suspension which children find easy to take.

Septrin's broad spectrum, double blockade action ensures decisive results against a wide range of pathogens and its excellent absorption also ensures rapid clinical results. Septrin is ideal in many kinds of children's bacterial infections, gastrointestinal and urinary tract infections.

Without doubt Septrin is the most acceptable and proven antibacterial in the world today.

Paediatric Suspension

Wellcome
in rural Bangladesh stressed to us that Iliadin drops, a nasal decongestant, were taken by Neil Armstrong, the first man to walk on the moon. Similarly a promotional leaflet for Wellcome's Septrin makes a direct appeal to the doctor's emotions: "If your child was suffering from a bacterial infection wouldn't you prescribe Septrin?" This type of advertising is breakfast reading for doctors the world over. But in the Third World there can be acute social consequences when doctors are encouraged to overlook the relative cost of treatment between brand name products and generic equivalents or between patented products and older medicines.

A doctor who has worked in both rich and poor countries sums up the pressures against cost-effective treatment: "Therapeutics is largely taught in isolation from questions of cost. Once a student has graduated he is usually granted freedom to prescribe any drug he wishes, and the medical establishment in most countries fight strenuously to protect the right. For the rest of his professional life the doctor is subjected to advertising pressure to prescribe the latest types of expensive proprietary preparations. Most of this advertising is aimed primarily at the doctor's emotions, appealing to his sympathy for patients, his professional self-esteem, etc. Such advertising is undoubtedly very effective."

The most serious consequence of doctors' fighting for freedom to prescribe any drug is that many in the Third World actively oppose even the suggestion that they should be restricted to a limited selection of drugs. But it is precisely this limited selection which, both WHO and industry agree, now offers the best hope of catering for the needs of the Third World poor. The International Federation of Pharmaceutical Manufacturers Associations (IFPMA), for example, has stated that they "especially appreciate the problems that arise in those countries which have few physicians, trained para-medical staff, hospitals or diagnostic facilities and where distribution arrangements, particularly in rural areas, are lacking ... In these circumstances, there is an obvious necessity to provide health-workers with a limited number of drugs which they can prescribe with reasonable safety."

But here, in contrast to WHO, the IFPMA is not saying that doctors should be limited in the drugs they prescribe - only health-workers.

"ACCURATE, FAIR AND OBJECTIVE"

According to the 1981 IFPMA voluntary code of marketing practices, one of industry's obligations is that "Information on pharmaceutical products should be accurate, fair and objective, and presented in such a way as to conform not only to legal requirements, but also to ethical standards and to standards of good taste." But in the Third World, the information imparted both by sales representatives and promotional literature is not always as "accurate" and "objective" as it might be. The Director General of WHO has focused attention on the problem that sales representatives "often have inadequate medical and scientific training, insufficient knowledge of the actions of the products they promote and of the comparative safety and efficacy of competitive products".

The evidence suggests that the sales promotion of the big foreign companies
maintains higher standards than that of some of the smaller local companies. For instance, in the experience of a pharmacist working at a Nigerian hospital: “The multinational company reps come 4 to 6 times a year. They bring the usual gimmicks and loads of samples. They try to persuade me to buy branded products, not the cheaper, alternative brands and they push new drugs... The multinational reps tend to be intelligent and well-informed, and are often pharmacists or trained nurses. The smaller firms often use less intelligent reps who sound like tape recordings. One even showed me his ‘script’ to emphasize the point. It read something like this: ‘Doctor I’m sure you’d be interested in a drug even more effective than ..... (old, well-established drug like chloroquine) ... (wait for doctor to agree) ... Well ..... (their new product) has been shown to be ......’”

There are also problems with sales promotion by European and US-based companies. In a small drug store in the Bangladesh town of Rajshahi in September 1980 we encountered a Senior Field Organiser promoting the products of the West German company E. Merck. As soon as we expressed interest in his work, the Senior Field Organiser started reeling off the merits of Merck’s products: Neurobion, Encephabol, Iliadin drops and Pasuma Strong. He told us that the last product (containing hormones, strychnine and other ingredients) for ‘male sexual potency’, was not officially available, but added reassuringly that it was quite easy to get hold of it in Dacca. We interrupted him, to ask what he saw as his main duties. He replied quite simply: “to convince doctors to prescribe Merck products”. We then asked how important he saw it to inform prescribers of problems with drug use. Would he, for example, advise them of any products being withdrawn from the market in West Germany. He answered, with some surprise, “No, I don’t do that.”

Officials of E. Merck in West Germany advise us that “It is, of course, problematic to draw conclusions on the activities of a pharmaceutical manufacturer by interviewing a member of its field force. Regardless of the country in which he practices his profession, no responsible doctor will prescribe a product without being thoroughly informed on its indications, properties and side-effects, and also without being convinced about the benefits of the particular product for his patients. Your question as to whether he would advise prescribers when a product was withdrawn in Gemany, which caused surprise to a member of our field force in Bangladesh, is also surprising to us as none of the products marketed by us in Bangladesh has been withdrawn in Germany.” They also comment that Pasuma has never been registered or marketed by Merck in Bangladesh and that any packs on the market must have been smuggled into the country through channels outside their control.

Turning now to the “Merck in Bangladesh Marketing Plan 1980(-1982)”, there is decidedly less emphasis on the need to keep doctors “thoroughly informed” than on other aspects of promotion. For example, a seven point strategy is listed for increasing sales of one product, Neurobion. These include: “1. Promotion of Neurobion throughout the year. 2. Presentation of attractive literature with adequate samples. 3. Presentation of prescription pads. 4. Distribution of stickers
and gift articles. 5. Fair distribution of stocks in rural markets. 6. Motivation of field force with clinical reports. 7. Promotion to the fresh graduates and quack doctors in rural markets.' (39) The seven point plan for marketing another Merck product, Syptobion, includes as point 6: "Promotion to fresh graduates and potential quacks." (40) It is only in the strategy for promoting Encephabol that any specific mention is made of "Providing field force with sufficient scientific information and clinical support". (41)

A British professor of pharmacology comments that "The marketing plan's 'strategy' plumbs the depths when it urges its Sales Force to undertake 'promotion to the fresh graduates and quack doctors'". (42) E. Merck in West Germany have expressed surprise at our queries about their marketing strategies and assure us that "In Bangladesh, all our pharmaceutical products are promoted only to doctors and we always take care that our field force is provided with full information on their properties and use". (43)

PARTIAL INFORMATION

Some manufacturers are not always consistent in the standards they operate from country to country in the critical area of drug information. In the next chapter we focus on potentially dangerous double standards in the promotion of drugs like anabolic steroids and antibiotics in poor countries. First we shall consider why Third World doctors need to be sceptical about some of the claims made in promotional literature, particularly when these are not balanced with precautions on use or warnings of unpleasant and serious side-effects.

A number of studies have documented the widespread problem of substandard drug information in the Third World. For instance, a report by Dr. Milton Silverman of the University of California published in 1976, showed that only 2 out of 23 manufacturers were consistent in what they told US and Latin American customers about their products. In the US most product literature consisted of a relatively short list of recommended uses for a drug, balanced with an extensive list of precautions and possible side-effects. But in Latin America identical products were recommended for many more uses, and warnings were conspicuous by their absence. (44)

The explanations advanced by manufacturers at the time included the fact that legal requirements are different in different countries so there is nothing 'illegal' about not disclosing all warnings that must be given on the home market. (45) Some manufacturers explained that they had accumulated "a wealth of convincing evidence to show that our product is safe and effective for the conditions we claim. Unfortunately, the evidence is not convincing to the FDA [US Food and Drugs Administration]. What we have ... therefore is a dispute between honest scientists." (46) And a Latin American "drug promotion expert" saw the discrepancies as part of normal business practice: "... if your competitor claims five indications for his product, you claim at least six. And if he discloses three adverse reactions, you are senseless if you disclose more than two." (47)
Thai and British versions of package inserts. Note the paucity of information available to the Thais.
But blatant discrepancies in drug information are not just past aberrations. Dr. Silverman concludes from his more recent research that whilst "some companies have changed their policies in Latin America ... the situation remains bad there and probably worse in Africa and Asia". (48) The offenders include Western research-based companies, Eastern bloc producers and nationally-owned companies. (49)

Our own research has brought to light many examples of apparent double standards. Two package inserts for the Roche products, Valium and Mogadon, forwarded from Thailand in 1980 and reproduced opposite, illustrate the problems. Like the English versions of these leaflets, the Thai translations include information on 'composition', 'properties', 'indications', 'dosage' and 'packings'. But the Thai versions expressly exclude the information given to English readers on 'tolerance' and 'precautions'.

Roche advise us that these leaflets "dated from 1974 and are no longer being supplied. Subsequently, the Thai regulations have changed." (50) The Thai product information leaflets now contain "warning" boxes. Roche comments: "We should stress that in general Roche are not in favour of variations in product information leaflets in different parts of the world." Moreover, "It is a policy of Roche Basle to review, from time to time, the leaflets being used by Roche companies in other countries and to examine the differences which exist. Such a review is currently taking place." (51)

In Bangladesh Glaxo's local subsidiary has distributed promotional leaflets for corticosteroids omitting warnings on possible side-effects, precautions and 'contra-indications' (i.e. information on when not to use the drugs) which Glaxo makes available to British doctors. The promotional leaflet for Betnovate-N (see page 76) stresses that the product is "unequalled in effectiveness" and that it "swiftly suppresses dermatoses". But it does not warn that prolonged use should be avoided, particularly in infants, children and pregnant women. Glaxo advise us that the data sheet currently in use in Bangladesh for Betnovate-N contains a very full statement of contra-indications, precautions and side-effects, including 4 separate statements warning doctors of possible adverse results of prolonged treatment. (52)

Similarly, the promotional leaflet for Glaxo's Betnelan oral corticosteroid tablets specifically draws attention to their effectiveness in rheumatoid arthritis. But it does not include specific warnings given in Britain that they should use "the lowest dosage that will produce an acceptable result", or that the dosage should be reduced in stages. The recommended dose for rheumatoid arthritis given in Britain is 0.5 -2mg daily. The Bangladesh leaflet, reproduced on page 77 gives the recommended initial dose as 3 mg, reducing to 0.75 mg. (53)

A tendency to keep any 'negative' information to a minimum is also evident in advertising to the general public. The 'rosy' picture given is particularly striking in advertisements for the high-oestrogen oral contraceptive pill, Maya, that appeared in Bangladeshi newspapers during 1980. The distribution of Maya is
UNEQUALLED IN EFFECTIVENESS

BETNOVATE-N
Trade Mark

SWIFTLY SUPPRESSES SEVERE DERMATOSES

Dramatic and impressive results have been obtained with Betnovate-N (0.1% betamethasone 17-valerate with 0.5% neomycin sulphate) in the treatment of severe inflammatory and allergic dermatoses. Extensive clinical usage has confirmed that Betnovate-N is unequalled in effectiveness in the field of topical corticosteroids.

Doctors have particularly noted the speed and intensity of its action and its ability to obtain a response in conditions that have proved resistant to treatment with other preparations.

INDICATIONS

Psoriasis
Atopic dermatitis: infantile eczema, food eczema, allergic eczema, neurodermatitis
Contact dermatitis: including the eczematous type: patchy eczematous dermatitis
Seborrhoeic dermatitis
Stasis dermatitis
Chronic dermatitis of the hands and feet
Otitis externa
Ano-genital and senile pruritus
Lichen simplex chronicus
Hypertrophic lichen planus

PRESENTATION

BETNOVATE-N Cream, Ointment (0.1% betamethasone 17-valerate with 0.5% neomycin sulphate)

Creams and Ointments are available in 5 gram tubes.

Glaxo Bangladesh Ltd.
Chittagong Dacca Khulna Bogra
Sylhet Barisal Mymensingh
Betnelan Tablet contains 0.5 mg betamethasone. The value of Betnelan in allergic conditions such as eczema, urticaria, asthma and food and drug eruptions is already known and acknowledged. Usefulness of Betnelan in rheumatic inflammatory disorder such as bursitis, tenosynovitis, epicondylitis and synovitis is fully established. In majority of these cases, though rheumatic pain is relieved with analgesic, but the mobility of the patient remains impaired due to inflammation. In these cases Betnelan can be of great help. A short and safe course of 21 tablets given over 6 days reduces the inflammatory condition and enables the patient to move more freely. This extremely small dosage is effective and safe.

Recommended dosage for short-term therapy of Betnelan:
To start (a) 2 tablets 3 times a day for first 2 days
Followed by (b) 1 tablet 3 times a day for next 2 days
(c) 1/2 tablet 3 times a day for last 2 days

Betnelan is a corticosteroid and is about 8 to 10 times as potent as prednisolone on a weight-for-weight basis.

Betnelan is virtually free from risk of causing oedema and hypertension.

Betnelan has a negligible effect on potassium balance.

Betnelan is indicated when corticosteroid therapy is required in a variety of conditions, including acute asthma, intractable hay fever and some inflammatory skin diseases. Other indications include rheumatoid arthritis, the nephrotic syndrome and various blood dyscrasias.
From dreams to reality.....

A reality that could remain as sweet as dreams once you make Maya part of your way of life. Maya, the highly reliable imported birth control pill will help keep the woman in you alive and young.

Maya also ensures menstrual regularity, relieves you from cramps and discomforts and improves your complexion.

MAYA — the choice of millions.

Bangladesh newspaper advertisement
"HOW EFFECTIVE IS MY METHOD OF BIRTH CONTROL?"

As a physician, you may be asked this question by your patients concerning numerous contraceptive techniques.

"The Pill", a daily dose of medicine has achieved an almost perfect record of preventing pregnancy.

The Pill had to await the discovery of 'hormones' regulating human fertility. A woman who takes the pill is adding a small daily dose of estrogen and progesterone in synthetic form to her body's own production of hormones, the effect of which is to prevent conception.

MAYA

—a presentation of Population Services International—is a 28 day low-dosage 'Pill' that provides a continuous oral contraceptive regimen for females of Bangladesh. MAYA consists of 21 white pills and 7 brown pills. MAYA is available in a consumer pack of 2 monthly cycles.

HOW TO TAKE MAYA?

The course should be initiated on the first day of well established menstruation or on the subsequent menstrual day with the first white pill with this arrow mark and then to be followed until 21 white pills have been fully taken. After finishing the 21 white pills, the brown pills should be taken from the 22nd day through to the 28th day. Next menstruation will usually start while taking these brown pills.

A new pack should be started on the day after the last brown pill is taken. It is vitally improtant that MAYA should be taken every day without fail. If however a pill is missed on any one day, it should be taken the next day as soon as it is remembered, along with the normal regimen of that day. The pills should be taken with food or drink preferably at bed time.

WHAT IS THERE IN MAYA?

Each white pill contains: Norethindrone 1mg. with mestranol 0.05mg.

Norethindrone is a potent progestational agent with chemical name 17α-ethinyl-17 hydroxyl-4 estron.

Mestranol is an estrogen with the chemical name ethinyl estradiol 3-methyl ether.

Each brown pill contains: Ferrous Fumerate 75mg.

Ferrous Fumerate is a well-tolerated Iron salt having 33% elemental iron and indicated in iron deficiency anaemia.

WHO IS OFFERING YOU MAYA?

MAYA is offered by

POPULATION SERVICES INTERNATIONAL
House No: 51, Road No: 2, Dhanmondi Residential Area, Dacca-5.

FISON'S (BANGLADESH) LIMITED is the Sole Distributor of MAYA in Bangladesh.
subsidised by Population Services International and the local subsidiary of Fisons has been involved in repackaging and distributing it locally. The advertisement reproduced on p. 78, "From dreams to reality", which appeared in the Bangladesh Times, fails even to hint at the possibility of side-effects from the use of the high-oestrogen pill. But even more disturbing is the fact that a promotional leaflet was circulated to the medical profession bearing the name of Fisons (Bangladesh) omitting any warnings of possible side-effects or precautions for use. (54)

CURE-ALLS

In Britain each 'indication' (or recommended use) of a drug has to be approved separately. This is not the case in developing countries, such as Bangladesh. (55) Manufacturers appear on occasion to have taken advantage of these loose controls, and the fact that few doctors have easy access to independent drug evaluations, to claim indications for their products that are not accepted on the home market.

For example, in Britain the only uses Glaxo recommends for its vitamin B12 preparation, Cytamen, are "pernicious anaemia" and the "prophylaxis and treatment of other macrocytic anaemias associated with vitamin B12 deficiency". (56) But the promotional leaflet from Bangladesh, reproduced opposite, recommends its use for a wide variety of problems, including "poor appetite", "poor growth" and "sterility". We understand from Glaxo that the data sheet in use in Bangladesh since March 1980 does not include any of these indications, which would make the advertisement out of date.

At the time of going to press we have no comments from Glaxo on why these extra indications were ever included. But Glaxo did respond to an earlier query we raised about their promotion of Calci-Ostelin syrup as a general tonic in another developing country, when not only does Glaxo not do this in Britain, but the British National Formulary describes this use as having "no justification". (57) Glaxo's Senior Medical Adviser responded then by stressing that "different countries" have very "different concepts of medical practice". (58) If people in developing countries want to use vitamin B12 as a general tonic, why should we stand in their way? - was the gist of the argument. What it ignored was the manufacturer's role in creating this demand through its own promotion in the first place.

It may require some effort to sift through all the indications claimed for just one product. For example, E. Merck's top-selling product in Bangladesh - Neurobion (containing vitamins B1, B6 and B12) - is promoted for a wide range of uses, as illustrated by the advertisement on page 82. A British professor of clinical pharmacology commenting on this variety of indications points out that the individual vitamins in Neurobion are certainly useful for some specific nerve disorders. For example, vitamin B1 is effective for treating the nutritional disorder beri-beri, which causes peripheral neuritis (nerve inflammation). One specific form of drug-induced neuropathy, caused by the anti-tuberculous drug isoniazid, does respond to vitamin B6. But it has no effect on many other types of drug-induced neuropathy. Vitamin B6 is also taken by women suffering from depression associated with oral contraceptives and Vitamin B12 is useful for neuropathy connected with pernicious anaemia. (59)
CYTAMEN

Pure crystalline Vitamin $B_{12}$, Cytamen represents all known effects of liver extract and is painless on injection. For specific treatment or as a tonic in general debilities, Cytamen is an injection of value and has gone through the test of time.

Indications:
- Tropical macrocytic anaemia
- Macrocytic anaemia of pregnancy
- Poor appetite
- Poor growth
- Sterility
- Herpes zoster
- Trigeminal neuralgia
- Partial haemiplegia
- And other neuropathies

Mode of Issue:
- 250' 10 ml & '1000' 10 ml vials

GLAXO BANGLADESH LIMITED
Chittagong Dacca Khulna Bogra
Barisal Sylhet Mymensingh
For disordered cell metabolism

Neurobion means a quicker return to normal

**Composition**

Each 3 ml ampoule contains:
- Vitamin B₁ (thiamine hydrochloride) 100 mg
- Vitamin B₂ (pyridoxol hydrochloride) 100 mg
- Vitamin B₁₂ (cyanocobalamin) 1000 μg

Each coated tablet contains:
- Vitamin B₁ (thiamine disulfide) 100 mg
- Vitamin B₂ (pyridoxol hydrochloride) 200 mg
- Vitamin B₁₂ (cyanocobalamin) 200 μg

**Indications**

Neuropathy and neuralgia, especially cervical syndrome, shoulder-arm syndrome, lumbalgia, sciatica, facial paresis. Alcoholic polyneuropathy, Diabetic neuropathy, including impotence due to autonomic neuropathy. Metabolic and neuropathic changes due to pregnancy and oral contraceptives. Drug-induced neuropathies. Supplemental therapy following major surgery or debilitating illness.

**Dosage and Administration**

For initial treatment 1 or 2 ampoules daily by deep intramuscular injection. After the acute symptoms have subsided and in less severe cases 2 or 3 ampoules per week. On days without injection and for follow-up and maintenance therapy 1 or 2 tablets 3 times daily.

**Presentations**

Neurobion ampoules: Packs of 25 ampoules
Neurobion coated tablets: Packs of 20 tablets

**MERCK**
Professor Rawlins concludes that the individual vitamins “are effective in alleviating certain specific forms of neuropathy but their use in a blunderbuss fashion for the wide range of indications quoted... would be as inappropriate in Bangladesh as it would be in the United Kingdom”. He also states that “The indications claimed by the company (including neuralgia, neuritis, diabetic neuropathy) would be appropriate in patients also suffering from coincidental malnutrition but in the vast majority of patients with these disorders Neurobion would be valueless. Moreover, adequate nutrition would be a much more appropriate method of treating such patients.”

E. Merck argue in defence of their claims that many patients have nerve disorders resulting from “a sub-optimal supply of vitamins”, and that the “first clinical sign of this [vitamin deficiency] is often in the peripheral nervous system”. Both claims are undoubtedly true in specific cases such as beri-beri, but neither argument supports the use of Neurobion for the specific indications: neuralgia, neuritis or diabetic neuropathy. Merck also argue that a deficiency of a single B vitamin is rare and that “As the diagnosis of a specific vitamin deficiency is more expensive than a course of Neurobion ... it is again a reasonable therapeutic decision to cover the patient by administering a combination of B vitamins”. A single vitamin deficiency is indeed rare in Bangladesh where malnourished people suffer from lack of food, not lack of vitamins. Consequently, it makes more sense to ‘prescribe’ food, especially when the cost of daily treatment with Neurobion adds up to more or less the entire daily income of a family in rural Bangladesh.

**SALES INDUCEMENTS**

In both developed and developing countries, manufacturers offer gifts and inducements to doctors to prescribe their products. In Britain the industry’s voluntary code limits these to gifts that are “inexpensive and relevant to the practice of medicine or pharmacy”. But in most Third World countries, the parameters of ‘normal’ promotional practices are very much wider. Not all countries even have manufacturers’ associations to define and monitor ethical standards - let alone governments that enforce controls.

Promotion in the Philippines is on a noticeably lavish scale. One doctor explains that some “drug companies, in order to get the physicians’ commitment to prescribe only their products, offer the following incentives - a car (Volkswagen), a refrigerator or other home appliances. A drug company has been known to get the bank account number of physicians with a promise that within the week a 4 digit cash deposit will be added to the physician’s bank account, if and when the physician commits himself to prescribing their products.”

The sales inducements described by the Filipino doctor are a far cry from the ethical guidelines laid down by the ABPI code. He also reports that some “drug companies now employ beautiful women as drug representatives (or drug detail persons) to advertise their products to doctors”. “Doctors in remote areas are encouraged by the drug companies to sell drugs on a consignment basis. The doctors are given 20-30% discount (meaning prices that are 20-30% lower than the market value). The doctors are told they can sell them at any price as long as they pay the designated
prices of the drugs." In one specific case a doctor, on the island of Samar, was offered two Ford cars by a drug company to encourage him to set up a pharmacy selling exclusively their products. His store would have had a total monopoly on sales, as he was the town’s only doctor and there were no pharmacies.

From Indonesia a doctor reports that bonuses are paid to doctors and even government officials receive both impressive discounts and special gifts from drug companies. In Bangladesh, as elsewhere, the transnational companies support doctors' travelling expenses to attend seminars and meetings abroad. "These are disguised as neutral scientific gatherings," explains the former Director of Drug Administration, "but are in fact meetings sponsored by big companies to promote their special products. This makes it possible for them to offer ‘paid holidays abroad’ as gifts to doctors who ‘matter’." In some cases influential doctors have a direct stake in a company’s profitability.

The evidence suggests that the big transnational companies are by no means the worst offenders in using over-zealous sales promotion tactics. An article in Business India magazine quotes a "knowledgeable wholesaler based in Bombay’s Princess Street" as pointing out that "It is mainly the Indian sector companies that give expensive gifts like cars and refrigerators to class A doctors who have what is known in the trade as a ‘prescription following’. The multinational companies with their established brand names don’t have to be so lavish.”

It is not of course only manufacturers that offer inducements to doctors to boost drug sales. For example, in North Yemen doctors are known to receive a 10% commission from drug retailers who dispense their prescriptions. Throughout the Third World it is not only business interests - manufacturers, wholesalers and retailers - that profit from sales of prescription medicines. Doctors and sales assistants often have a direct stake in sales and an obvious incentive to overprescribe.

An OXFAM Field Director comments on the situation in Brazil: "...pharmacy salesmen make commissions on over-the-counter sales to boost their meagre salaries. Hence, they try to push the most expensive drugs onto customers, which are often inappropriate. Doctors also receive commissions, sometimes from pharmacies, on the basis of patients and drugs turnover.”

At the receiving end, the poor end up paying for unnecessarily expensive treatments. An anthropologist who investigated the money spent by people buying medicines over the counter in a town in El Salvador, found that the companies’ promotion and distribution methods were directly responsible for unnecessarily high spending on medicines. The poor were most dependent on over-the-counter sales from the drug stores. The most expensive treatments were those recommended at the town’s two pharmacies which depended on travelling sales representatives for their supplies. Customers who asked for advice in these pharmacies ended up paying on average 260% more than those who consulted the sales staff in the town’s two other pharmacies, supplied directly by wholesale pharmacies in the capital.
This grassroots research into the economic consequences of company promotion highlights the fact that when salesmen depend on commissions, poor patients are more likely to end up paying unnecessarily high prices for treatment. The basic monthly pay of the travelling salesmen in El Salvador was very low. But they could earn 6 to 7 times more with sales commission. If pharmacies failed to place big orders for a wide range of products, the salesmen would no longer find it worth their while to include them on their sales trips. With their drug supplies at stake, the pharmacies were under pressure to stock a wide range of expensive products. As a result sales staff “used the opportunity presented by customers seeking advice to unload products which in many cases would not sell quickly because of their higher prices”. Compounded with this, when the sales staff behind the counter earn a percentage on sales, it is in their interests to sell higher-priced brands.

BY-PASSING THE SYSTEM

There are a number of reports of ways in which sales representatives have been able to get their products bought for the health services when these drugs are excluded from the national formulary. For example, Dr. Yudkin observed these pressurised sales tactics in action in Tanzania: “Doctors above a certain rank are allowed to prescribe non-scheduled drugs at their discretion, and representatives offer to help by taking local purchase orders to the Medical Stores to facilitate ordering. These orders are frequently of great cost but little use; one representative for A. H. Robins persuaded a doctor at a district hospital to order 300 bottles of Dimetane (a cough syrup), 300 of Robitussin (another cough mixture), and 120 of Donnagel (a mixture for treating diarrhoea) with the offer to take the local purchase order to the Medical Stores. The cost of this order .... would supply a dispensary with enough drugs for three years.” (77) (our emphasis)

SAMPLES ABUSE

A major element of sales promotion in the Third World is the lavish distribution of free samples. Whereas guidelines in developed countries stress the need to restrict the distribution of samples to a minimum, in poor countries large quantities are offered and snapped up by doctors who can sell them profitably. For example, the Hathi Commission reported that in India, “Unfortunately, this practice of distributing samples has degenerated into a rat race among manufacturers, each trying to excel the other in the quantity of drug samples distributed to doctors. The scale of distribution of samples ... leads to malpractices. Reports have been received of physicians’ samples being found on the premises of drug dealers.”(79)

There is evidence of the wasteful and dangerous misuse of free samples from many developing countries. A nurse reports from Upper Volta that samples usually contain too little of a drug to provide a complete course of treatment. But this does not prevent them from being used indiscriminately - by people in need of drugs, but not because the free sample is what they actually need. For example, one man suffering from bilharzia was delighted to have been given six different free samples by a friend working in a hospital. He was taking all of them
concurrently. They included two different forms of injectable penicillin (neither sufficient for a full course), two eye ointments, a nasal decongestant and a drug for vertigo. Not one of these free samples was any use for treating bilharzia.\(^{(80)}\)

In North Yemen research carried out in the remote mountainous region of Raymah unearthed ‘free samples’ stocked on the shelves of local drug sellers.\(^{(81)}\) In the capital, the practice of taking advantage of free samples available from drug manufacturers has been institutionalised. Companies are required by law to hand over 20% of all samples imported into the country to the Ministry of Health. They are earmarked “for the stores of the General Office of Pharmaceuticals and Medical Supply in the Ministry of Health to support government drug services”\(^{(82)}\).

From Tanzania, Dr. Yudkin reported that samples have been used by sales representatives as a means of creating demand for their products within the health services. In this way they have effectively by-passed centralised controls on drug purchases. “Along with the donation of a free sample to the doctor usually goes a box or bottle of the drug to the hospital pharmacy, and a message to the doctor that the drug is available in the pharmacy. This may happen whether or not the drug is approved by a Hospital Pharmacy Committee, or even if it is a non-scheduled drug (one which is not included in the Central Medical Stores List). When the doctor prescribes the drug, the pharmacist dispenses it, and will often order more when the doctor continues to prescribe and the free sample has been consumed.”\(^{(83)}\)

**SLEDGE-HAMMER THERAPY**

Overprescribing by doctors, health workers and drug sellers is a worldwide epidemic. But it hits the Third World hardest. There are many causes, including uncertainty over diagnosis, lack of training in alternatives to medicines, patient-demand and, as we have seen, the fact that prescribers often have a direct stake in selling more drugs. In each case advertising aggravates the underlying problems. We know of numerous specific cases of overprescribing from many very different developing countries.

A classic example from North Yemen is that of a patient referred to a doctor in the town of Hodeidah by a rural clinic with a note recommending that his nasal arteries should be cauterised to stop his nose bleeds. *He needed no medicines.* Two days later he returned to the rural health centre. He was still suffering from nose-bleeds. The straightforward cauterity had not been performed. But, over the two days he had spent in the town, he was prescribed 12 different drugs by one qualified doctor. These included a total of 1,000 ml of intravenous fluid (both sodium chloride and dextrose); antibiotic injections (Pfizer’s Terramycin); 3 different brands of vitamin injections and multivitamin tablets (15 of Bayer’s injectable vitamin B-complex, Campovit; vitamins A and C; and Roche’s Cal-C-Vita); two injectables to stimulate blood-clotting (vitamin K and Luitpold-Werk’s Clauden); Otrivin nasal drops, and Hoechst’s painkiller, Novalgin, in *both* tablet and injectable forms. This prescription was not the end of the story. The man returned with a bulging carrier bag full of drugs which also contained a further
four preparations of vitamin and antibiotic preparations, that were not included on the doctor’s prescription, but had been sold to him nonetheless. (84)

The tragic consequences of this overprescribing are easily apparent in poor countries. In Upper Volta a typical prescription for a simple illness like a cough or cold will include a cough syrup, a decongestant, vitamin injections in case the patient is run down and sometimes even penicillin injections. Patients are generally prescribed medicines for a whole range of symptoms, rather than for the specific cause of their illness. An OXFAM researcher writes that "One can often see in the always crowded Ouagadougou pharmacies people forlornly clutching their prescriptions for a number of drugs. The assistant tells them how much each item costs, and then the would-be buyer must decide whether he can afford all the drugs. If not, he must choose amongst them, and generally unless well-informed, or with a friendly assistant, he will select the cheapest one or two." (85) So the poorest are most likely to end up with the multi-vitamins, rather than the vital antibiotic.

Meanwhile, manufacturers turn a blind eye to irrational and wasteful drug use. Some even appear to condone this tragic state of affairs. An example of this apparent endorsement of overprescribing is the advertisement reproduced on p. 88: "Some patients treat prescriptions like menu cards: they pick and choose the medicines" ... "Give your doctor’s prescription the importance it deserves. Have faith in it," from Roche, "World leaders in Vitamins". The manufacturer ignores the fact that the poor are forced to "pick and choose".

Roche comment that this advertisement placed in Indian papers during 1980 "was not aimed at doctors and, therefore, was not expected to have any effect on prescribing. The audience would be the literate and the better-off members of the community and the intention was to improve the understanding of, and confidence in, the practising physician by the patient ... Thus we do not think it reasonable (nor do doctors) to regard such an advertisement as an appeal either to over-prescribe or to over-consume." (86) Are doctors not "literate and better-off members" of Indian society? Can patients - above all poor patients - afford to have 'confidence' in doctors' multi-item prescriptions?

Professor Nurul Islam, head of the Dacca Institute of Post-Graduate Medicine and Research, stresses that virtually all doctors prescribe drugs unnecessarily and members of the medical establishment are often responsible for setting a bad example to medical students. Some routinely prescribe seven, eight or nine drugs. (87) For example one of Bangladesh’s leading paediatricians is reported to have used this sledge-hammer approach in prescribing treatment for a 19-day-old baby, suffering from diarrhoea. The prescription included an anabolic steroid (Orabolin), a drug that is "specifically not recommended for children" in Britain. (88) The infant was also prescribed Flagyl (a powerful antimicrobial drug), and two antibiotics: Beecham’s Ampiclox Drops and a tetracycline preparation (a drug not to be given to "children under 12" on the recommendation of the British National Formulary). (89) The baby’s prescription was rounded off with the inevitable multivitamins and Polyvison, Mead-Johnson’s baby vitamin drops. (90)
Do you?
Do you take your prescription with a pinch of salt?
Do you drop some medicines because you believe too many medicines are bad?
Cut down doses at your whim and fancy?
Then you're not on your way to recovering very fast!
Your doctor's prescription is the most compatible and effective combination — of the right medicines in the right doses, to be administered at certain times daily for so many days. If you alter this combination in any way, you are reducing the efficacy of the treatment. And only delaying your recovery or intensifying the ailment.
Give your doctor's prescription the importance it deserves. Have faith in it. After all, you should be the last person to prevent him from getting you well.

World leaders in Vitamins

Advertisement from an Indian general readership magazine.
Prescription from the Yemen Arab Republic. Typical example of overprescribing.
CHALLENGING DRUG DEPENDENCE

The problems arising from promotional practices underline the need for controls on drug marketing practices. But these alone cannot succeed unless they are backed by concerted efforts to change the attitudes of medical students and practising doctors. This is one of the conclusions reached by the recent Indian Council of Social Science Research and Indian Medical Council’s joint report. “One of the most distressing aspects of the present health situation in India is the habit of doctors to over-prescribe or to 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. If the medical profession could be made more discriminating in its prescribing habits, there would be no market for irrational and unnecessary medicines.” (our emphasis)

UNCTAD question whether the all-important area of providing doctors with drug information should be left to drug manufacturers: “It is debatable if the methods used at present are the correct ones. In fact many of the current malpractices in drug consumption are connected with this mode of drug promotion and high-pressure salesmanship, with their many exaggerated claims of the usefulness of the particular products and only a vague mention (if any) of possible side effects. Ideally, this information should be provided only by professional bodies such as medical associations in collaboration with the drug control administration, absolutely independently of interested companies.” (our emphasis) This is of course an expensive task for Third World governments to take on.

However, as a doctor in North Yemen explains, commercial pressures from drug sellers remain a serious obstacle to rational drug use: “It takes a brave doctor to stand against the tide. He may refuse to see the sales representatives or be swayed by promotional literature. But the salesmen still promote their products to the pharmacies. They in turn put pressure on doctors to prescribe a large number and wide range of the products they stock. The pharmacies are, after all, in a position to destroy a private doctor’s livelihood. Patients asking in the pharmacy for the name of a good doctor, could be told: ‘Avoid Dr X. She’s terrible’ (ie she prescribes very few drugs). ‘Dr Y, on the other hand, is excellent’ (ie his prescriptions are usually for six drugs or more).”

The attitudes of patients who expect or even demand to be prescribed drugs add to doctors’ difficulties. Professor Nurul Islam in Bangladesh explains that doctors stake their professional reputation each time they decide not to prescribe any medicine. But no one doubts the judgement of the doctor who doles out multi-item prescriptions. (Professor Islam himself often writes a prescription “No Medicine Required”, to convince his patient that their condition does not need drug treatment.)

Next, we shall explore more of the hidden dangers of doctors always reaching for the prescription pad, and patients rushing to the market to buy medicines.