

Feature

Health

How to Develop Health Policy

With 85 per cent of its 110 million population living in rural areas and a Gross National Product (GNP) per capita of US\$ 186, Bangladesh presents a unique situation and poses a big challenge to policy makers and planners. Nonetheless, adoption of a health policy for Bangladesh, a vital issue of national importance, can no longer be delayed, because formulation of health development plans and translation of such plans into action in a cohesive and continuous manner is very much dependent on a formal health policy.

Health and Development

The South Asia subcontinent has a centuries-old heritage of health sciences, and as such in addition to the allopathic system of medicine, traditional systems of medicine are widely practiced particularly amongst the rural communities. Although the allopathic system of medicine has made major impact on the approaches to health care and the pattern of development of health services infrastructure, there exists scope for further development and integration of traditional system of medicine into the delivery of primary health care services.

Development is a process of economic growth plus social change. As a process it may be considered as a means to achieve well being. On the other hand, well-being can be considered as a state, wherein the individual or society enjoys a sustained higher level of living which from an economic standpoint implies the capacity to pay for and consume goods and services and the availability of the same.

In a developing country like Bangladesh, the low levels of living cause low output and efficiency of labour which in turn are among the causes of low income. The relationship between health and development can be considered as health is both a means and an end to development. In the analysis of social system, health falls under levels of living. As such, it is affected by change in other components of the levels of living (e.g. nutrition, food consumption, education, housing, conditions of work, clothing, recreations etc.).

All countries — developing and developed — have the desire to move from their present level to the next higher level of development. To be able to do this it is necessary to analyze conditions, such as, income or output, conditions of production, levels of living,

attitudes, institutional conditions and policies. The relationships of these conditions with each other are so close that changes in one almost always lead to changes in others. A plea for higher allocation to health sector and other related sectors contributing to positive health is based on the stipulation that investment in health while generally considered 'consumption investment' are clearly also 'production investment'. Attention to major health problems affecting rural poor, urban slum dwellers and labour forces, particularly women and children will result in more productive population. Just as sophisticated curative medical facilities have been developed in response to urban-elite demand and have paid political dividends, so too the primary health care will elicit political support from its special target groups. This large number could amount to considerable political clout.

Health Scenario of Bangladesh

It is well-known that in a developing or underdeveloped country it is difficult to correctly assess the status of health development due to the fact that the health information system there is in the process of development. However, the socio-economic scenario of Bangladesh may be characterized by high birth rate, high morbidity and mortality rates, high rate of population growth, low adult literacy rate (34 as against 91 in Sri Lanka and 86 in Myanmar) and low per capita income.

The health development efforts made during the past three successive Five-Year Plan periods have brought about some improvement in health status and health care services. The life expectancy at birth increased from 50 years in 1985 to 55 years in 1989, the infant mortality rate (per 1000 live births) declined from 125 in 1985 to 110 in 1989 while the maternal mortality rate did not show any significant change. The crude birth rate (per 1000 pop.) declined from 39 in 1985 to 36 in 1989, and the crude death rate (per 1000 pop.) came down from 15 in 1985 to

13 in 1989. While some improvement is obvious from the above statistics there is still a long way to go to reach an acceptable level of health status of the population. This will be apparent from a comparison of the health status of the people of Bangladesh with those of a few neighbouring countries which are shown in the table.

Malnutrition is widespread in Bangladesh, and about 70% of all the households are deficient in calorie intake. Studies have indicated that nearly 50% of the children suffer from malnutrition. Nutritional intake over the years has declined from 2094 kcl in 1975 to 1900 kcl in 1989. Prevalence of vitamin A deficiency (night blindness, xerophthalmia), iron deficiency anaemia, iodine deficiency goitre, protein-calorie deficiency are on the increase.

Morbidity and mortality due to communicable diseases are still very high; predominant amongst causes of morbidity are diarrhoeal diseases, acute respiratory infections, tuberculosis, tetanus, intestinal worm infestations, and some parasitic diseases (Malaria and Kala-azar). Among the non-communicable diseases, diabetes, cancer, mental illnesses and drug dependence are on the increase.

Health care facilities

The primary health care facilities so far developed have been able to cover only around 55% of the population of the country and the availability of essential drugs and vaccines for public health services has reached nearly 50% of the total requirement.

Out of a total of 460 Upazilas, 351 Upazilas have so far been covered by Upazila Health Complexes (according to plan each Upazila will have one Health Complex). At the Union level, 1317 Health Sub-Centres/Rural Dispensaries (under the Health Services) and 2383 Health and Family Welfare Centres (under Family Planning Services) are operating. However, there are anomalies in the distribution and functioning of these

giving doctor-population ratio of 1:5,143 and nurse-population ratio of about 1:10,000. However, these ratios will look further gloomy if we take into account the loss due to emigration, retirement, and death; but unfortunately these figures are not available.

With regard to the strengthening of health infrastructure in support of delivery of primary health care, it will appear from the above that lots remain to be accomplished in the near future in order to achieve the cherished goal of 'Health for All by the Year 2000'.

Decision-making in Health Development

In the communities there are various groups with differing values and views some of which may clash with others. But these do not pose a significant obstacle in the determination of policies and programme since the improvement of the well-being, reduction of mortality and/or morbidity are acceptable to all groups although stated in different ways. However, when deciding approaches to achieve these objectives proves conflicting, rational decision is a difficult matter.

Over the past decades, there has been a rapid growth in knowledge and technology so much so that existing ones may become obsolete in a short period. Technologies that are developed may be complex and/or expensive. This would require proper choice of what to adopt or apply considering the capacity to absorb them and the feasibility of their application. If the policy-makers and planners insist on adopting such expensive technologies as a measure of progress, this may lead to depletion of scarce resources that are so vital for the delivery of primary health care. Ill conceived, ill-planned and inadequately supported super specialized services are ineffective, and frustrating both the consumers and service providers. Moreover, it is not rational to invest the scarce resources towards high-technology services while the infant and maternal mortality rates in Bangladesh are still very high as compared to those in other countries. It seems that the public sector in a developing country like Bangladesh has no other alternative but to put more emphasis on the preventive and promotive aspects of health care at the present time rather than investing heavily on the curative services.

One must realize that in a developing country, while it is difficult to increase resources, it is still possible to improve the health scenario by making optimum use of available resources based on the principles of efficiency and effectiveness. Political decision makers do not always subscribe to utilizing political pressure as the sole basis of their action. They too, as other managers, require facts, want to understand implications of their decisions. So, it is the responsibility of the bureaucrats and technocrats to keep the politicians well informed about HIFA strategy to which the country is committed. In the formulation of a national health policy correct assessment of the health and health services situation, identification of priorities, definition of objectives and selection of appropriate programmes and projects to tackle such priority health problems are very important steps.

(The writer is a former medical officer of World Health Organisation)

Amongst the front-line community health workers, there are 21,000 Health Assistants (HAs) employed by Health Services and 23,500 Family Welfare Assistants (FWAs) employed by the Family Planning Services operating at the ward level. This means that for about 1000 houses there exist one HA and for about 850 houses one FWA. Thus a fairly large number of work force is available at the community level.

Around 34,000 hospital beds (27,050 under public sector) for a population of 108 million gives a hospital bed-population ratio of 1:3176. Nearly 21,000 doctors and 11,000 nurses have so far graduated in the country, thus

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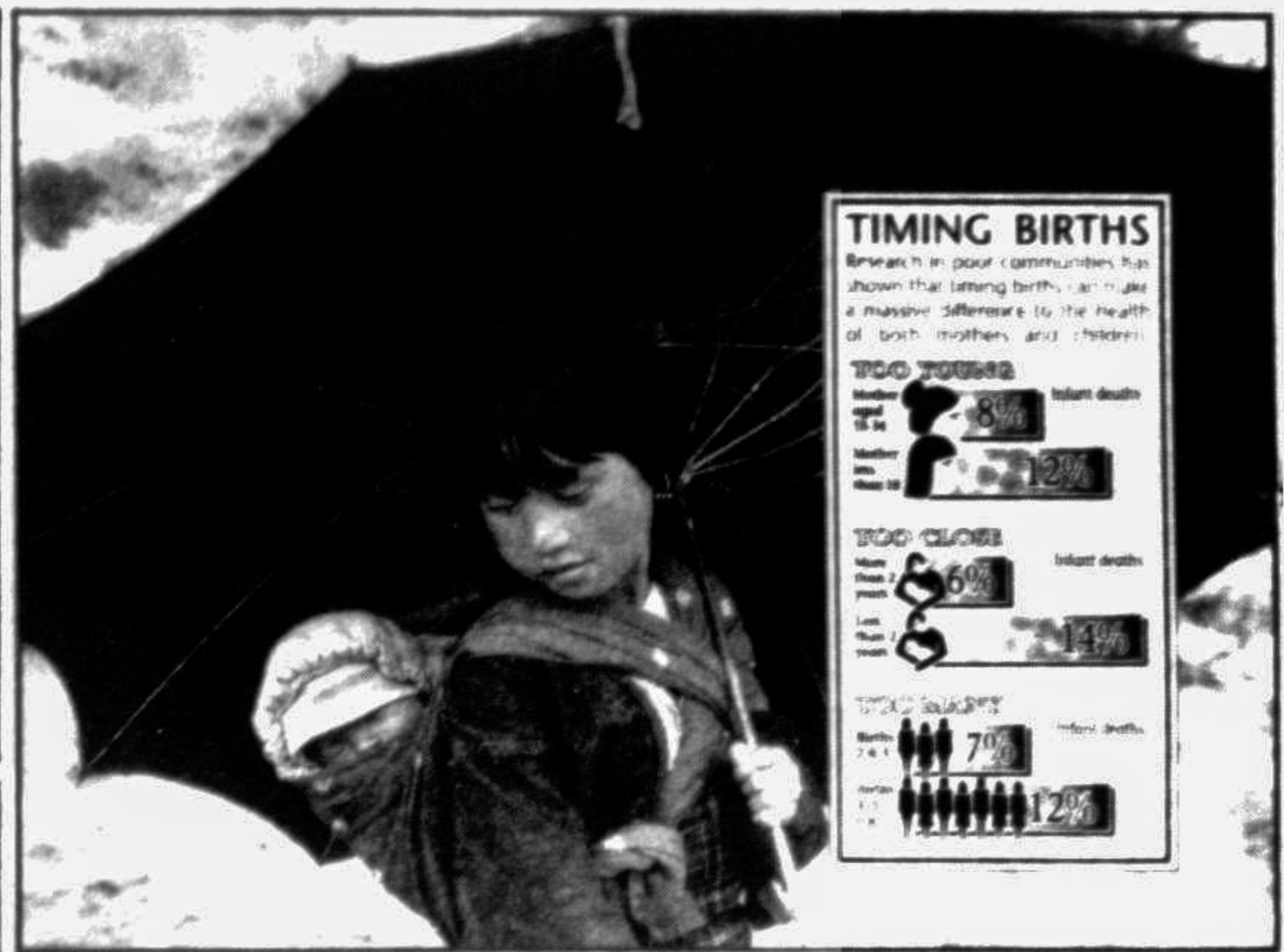
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Gene Therapy Hope for Haemophiliacs

HOPES of gene therapy for haemophilia have risen following a new technology that helps to incorporate healthy cloned genes into the cells of people suffering from the blood disorder caused by a defective gene.

Haemophilia in general refers to all genetic disorders caused by a deficiency of some blood coagulating factors — a series of proteins named Factor II, Factor VIII and so on.

The deficiency can lead to profuse bleeding both internally and externally either spontaneously or from relatively minor injuries.

There are two major forms of haemophilia: haemophilia A caused by deficiency of Factor VIII, and haemophilia B due to lack of Factor IX.

Haemophilia A, also known as classic haemophilia, is the more prevalent of the two disorders, while haemophilia B, known as Christmas Disease after the person first described with this condition, accounts for 15 per cent of all haemophilia cases.

In patients with haemophilia B, the gene that codes for Factor IX is missing or defective and the body is unable to produce adequate quantities of the clotting proteins.

A new innovative Anglo-US technology now offers the prospect of incorporating cloned healthy genes into haemophilia B patients so that they can continuously make their own supplies of Factor IX.

The technology combines work on the haemophilia B gene carried out by scientists at Oxford University and the University of Washington in Seattle, according to a report from London.

Current treatment of haemophilia involves intravenous injection of Factor VIII or IX, depending on the case, prepared from human blood donations.

The development of Factor VIII concentrates in 1960s has significantly modified the mortality and morbidity, with the average life expectancy of a haemophiliac now approaching that of a normal individual, says a report by Alan Giles and David Lillier from the department of pathology and

injuries and minor surgeries require 15 to 30 per cent replacement with Factor VIII in haemophilia A patients, major surgeries require 40-50 per cent Factor VIII replacement and 60-100 per cent replacement is needed in cases of life-threatening bleeding, including some elective surgical procedures.

However, Factor VIII concentrates sometimes cause a few complications, chiefly, viral infections and the development of inhibitors, besides a few minor allergies.

The most dangerous of the viral infections that can arise are human immunodeficiency virus (HIV) and hepatitis infections from contaminated blood used for preparing the clotting factors.

Inhibitors to the clotting factors arise in about 10 per cent of treated haemophiliacs, leading to a diminished response to treatment. Doctors are still not sure of why these inhibitors develop, but say the tendency is inherited.

In a related development, scientists have prepared Factor VIII from non-human plasma sources, of which pig's blood has proved to be the most promising.

Purified porcine Factor VIII is probably the most effective currently available treatment for life-threatening bleeds in haemophiliacs, especially those who have developed inhibitors.

However, doctors caution, since there is a risk of heterologous antibodies developing to the pig proteins, the approach should be reserved for those cases in which other measures have failed.

While small bleeding

PTI Science Service



Cigarette Advertising Puts Women in the Picture

"WOMEN", predicted a 1987 editorial in the leading tobacco trade journal Tobacco Reporter, "are a prime target where any alert European marketing man is concerned."

Faced with falling cigarette sales among the adult men of the world, who have for generations been its traditional customers, the Western world's tobacco industry has been cleverly tailoring its advertising campaigns during the last few years to induce women to smoke.

Recent statistics reveal that in many countries today, more teenage girls are smoking than teenage boys.

In the nations of the European Community, as many as a third of women aged 15-24 are now smoking — and as many as 40 per cent of pregnant women smoke.

This increase in smoking among women is reflected in an increase among them of smoking-related diseases such as high blood pressure, heart attacks, strokes and lung cancer. Female death rates from lung cancer are climbing, more women are now dying from lung cancer than from breast cancer.

One of the main ways by which the tobacco companies have succeeded in putting the Tobacco Reporter's advice into practice is by reaching their target audience through women's magazines — those glossy, popular periodicals that have enormous readerships and are read by females from all social backgrounds and age groups.

A recent survey of 71 of the most popular women's magazines in Europe revealed that they have a total readership of 50 million women in Europe alone.

These magazines are equally popular throughout the world, where women often copy what the European woman wears and does because she represents what is modern and fashionable. Such a huge captive audience is ripe for influencing through cleverly designed advertising.

Unfortunately, the European Community currently has no clear-cut policy on tobacco

advertising. This month, the European Council of Health Ministers meets in Brussels to vote on a proposal that will ban virtually all tobacco advertising (except advertising at the point of sale) throughout the European Community.

Much debate has gone on about this proposal, which has

been before the European parliament for some time — especially since World Health Organisation (WHO) statistics have shown that as many as 450,000 people die each year in the EC from smoking-related diseases.

There is growing pressure on the Health Ministers to vote in favour of the ban, particularly after the recent release of reports from countries such as Canada, Norway and New Zealand revealed that cigarette consumption fell in those countries after advertising was prohibited.

The most striking experi-

ence has been that of New Zealand, which banned cigarette advertising in December 1990 — and found by the middle of 1991 that cigarette sales had fallen nearly 10 per cent.

Targeting their advertising campaigns at women and children can easily produce the desired results as tobacco marketing people well know — if you catch a child young enough, she will get hooked for life. The British Medical Association's figures show that 60 per cent of smokers started their habit by age 13.

Says Vasso Papandreou, Social Affairs Commissioner of the European Community, "If the European tobacco industry wants to maintain its share of the market, it has to recruit 5,000 new smokers every day from among the young people of Europe."

Edinburgh University, who surveyed the popular European women's magazines, found that only five of them followed a policy (like the world's most read magazine, Reader's Digest, does) of voluntarily refusing cigarette advertising.

Many of the others seemed to be actively helping spread the message that it is right for women to smoke.

This is done not only through direct, paid-for advertisements, but also in a more subtle way by using photographs of fashion models or famous personalities smoking — which projects the positive impression that smoking is the popular and trendy thing to do.

None of the magazines would dream of showing a popular personality injecting herself with heroin or sniffing cocaine — but they think nothing of publishing pictures of prominent female models indulging in the very act of tobacco abuse.

The futility of limited bans on advertising is shown by the fact that in Britain and Sweden (where restrictions are placed on cigarette advertising in magazines aimed at young women), there is nothing to prevent tobacco ads being placed in magazines for older women.

Millions of women in Europe (and all over the world, wherever Europe's popular women's magazines are read) are being exposed to positive favourable images of smoking through these magazines.

Dr Amanda Amos, lecturer in Health Education at Britain's

In a detailed analysis, the New Zealand Department of Health concluded that cigarette advertising definitely increases the total number of people who smoke (and does not merely encourage "confirmed smokers to change brands" as tobacco companies like to claim).

Magazines are a fertile medium in which to spread a promotional message.

They transcend national barriers — and the women's magazines of Europe have for several years provided the alert marketers of the tobacco industry with a large captive audience to whom they could freely spread their message.

By putting women into their pictures in today's tobacco advertisements, the tobacco industry is putting women into tomorrow's picture of high blood pressure, heart attacks and lung cancer.

Says Dr Amos: "What we need today is a Europe-wide ban on all tobacco promotion."

With smoking killing more than 100,000 women each year in the EC, and at least double that number in Europe as a whole, it is to be hoped that Europe's Health Ministers will vote to stop subjecting Europe's women to all this exposure.

(Dr Sanjiva Wijesinha trained as a medical specialist in Sri Lanka, England and Australia. Now based in Hong Kong, he is a regular writer on health issues.)

The latter are equally popular among younger age groups, and are freely read by thousands of women in their teens and twenties.

Says Dr Amos: "There is clear evidence that tobacco advertising particularly influences young children. Women's magazines are full of tobacco advertisements, and lots of young girls are exposed to them."

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Peruvians find Anti-Malarial Control

A research team led by microbiologist Palmira Ventosilla has developed an innovative, cheap and safe method to control malaria in Peru, right next to the breeding place of Anopheles mosquito larvae.

Researchers from the Alexander von Humboldt Institute for Tropical Medicine have discovered that coconuts are the perfect incubator for a micro-organism that kills the larvae of the insect that transmits malaria. According to Ventosilla, coconut water has the amino acids and the carbohydrates the bacteria need to reproduce, and the bark of the fruit protects them during incubation.

In countries such as Peru, over one third of the population are in grave danger of contracting this disease. As a consequence, its effects on the economy are devastating. Owing to malaria, there is a high rate of absenteeism among workers, and students who suffer it are unable to concentrate, have learning difficulties, and frequently miss lessons. Often, malaria patients do not die of this disease; however, they are weakened by the constant high fever, which brings down their defence mechanisms and makes them vulnerable to other diseases.

Scientists have discovered medicines that fight the symptoms of malaria, but in general, they are too expensive for the population. Besides, mosquitoes are very adaptable, and they have developed resistance to chemicals.

In the past, the method used to eradicate mosquito larvae was to spray pesticides, but very few countries in the developing world can buy commercial products of this type on a large scale. Besides, it has been determined that many of the liquids used for spraying

are dangerous when they come into contact with the skin, or when they are ingested or inhaled by cattle or humans.

The use of harmless pest control methods is not new. In India, the Malaria Research Centre of Gujarat eliminated Anopheles mosquitoes by introducing fish and shrimps

Peruvian scientists have discovered a way to control malaria, a major scourge in the Third World, by using a kind of bacteria that thrives in coconuts — a safe and cheap alternative to deadly pesticides.

which feed on the larvae into the swamps and stagnated water where the mosquitoes breed. Similar results have been obtained in Spain using an algae, Chlorella.

The micro-organism used by Ventosilla in her research, *Bacillus thuringiensis var. israelensis* H-14 known as Bti, has existed for a long time. It was discovered by Israeli scientists some 20 years ago when they found great quantities of dead mosquito larvae in the water of certain lakes.

When they analysed the water of the lakes in the Peruvian Amazonian region. Scientists isolated the spores of Bti, which is the perfect pesticide, as it causes the death of mosquitoes and gnats, while being harmless for cattle and humans. Larvae go through four stages of development, during three of which they ingest the bacteria together

with algae. In turn, Bti eats the inner layer of the larvae's stomach, thus killing them.

Up to now the use of the bacteria had been rare in underdeveloped countries because of its cost. In order to eliminate this barrier, in 1988 the Peruvian research team started a study to try to multiply Bti spores, by fermenting them inside several types of locally-grown produce. As fermentation is a technique commonly used in Peru, researchers thought that teaching this technology to peasants would be relatively easy.

Very soon, the study showed that if you placed Bti spores in coconut water held in special laboratory boxes at room temperature, they multiplied in three days from an initial 100 per millilitre to a maximum of a million per millilitre. In turn, if you inoculated bacteria in whole coconuts the spores multiplied up to one million per millilitre.

Simultaneously, in New Zealand, microbiologist C N Chilcott reached similar conclusions, which made it possible to demonstrate the efficiency of coconut water as a means to grow Bti spores.

Thirty-seven per cent of the Peruvian population are in serious danger of contracting malaria. The risk becomes higher in the northern Amazonian regions and along the northern coast, where flooded paddy-fields provide good breeding places for mosquito larvae.

At present, Ventosilla aims to create an awareness in health officials, to teach them the technique, and to make it possible for this knowledge to reach other places.

— Third World Network Features/Informa Bulletin (Rhoda Metcalfe is a Canadian journalist)