

# Need for Appropriate Health Research

by Dr Sadia Chowdhury

RESEARCH and action are complementary. While action is aimed to improve the health of certain people today, research is an investment with multiplier effect; improving the health of many more people in future generations. Research is the essential but often neglected link between aspiration and action.

But research is often perceived as an academic exercise only, unrelated to meeting the urgent health needs at hand. Some feel that research is a luxury which only those with surplus resources can afford. Others feel that the results of research are rarely practical and never timely in dealing with the pressing demands which face the nation. Often research is not among the programmes supported by many donor agencies.

It was the perception that research was being misunderstood and its value greatly underestimated that stimulated the formation of the Commission on Health Research for Development in 1988. This was an international initiative to improve and expand the support for research that has a bearing on the health of people in developing countries.

The Commission consulted with a broad range of experts, interviewed hundreds of people, reviewed numerous working papers specially commissioned for its work, conducted a survey of health research in developing countries and developed its final report 'HEALTH RESEARCH: ESSENTIAL LINK TO EQUITY IN DEVELOPMENT.'

This report confirmed that there is very little health research being conducted in the developing countries. The

search being done was mostly biomedical. The important components critical for promoting health i.e. social and economic issues, were not included in this research; furthermore, this research was often inappropriate to the critical needs of the country.

The results of the research were also seldom utilized by the decision makers in policy formulation. In short, the research work most seriously neglected in these countries is that which might have been very important for informing decision-makers regarding required health actions.

To fill this gap in health research the Commission devel-

opined the concept of Essential National Health Research (ENHR) in the following terms: To understand its own problems; to enhance the impact of limited resources; to improve health policy and management to foster innovation and experimentation; to provide the foundation for a stronger developing-country voice in setting international priorities; the establishment and strengthening of an appropriate health research base in each developing country no matter how poor, is essential.

The Commission emphasized that ENHR is that research which is linked to decision-making, needing to be applied on an ongoing basis to every level of the health services and which should be an integral part of all programme development, planning and implementation.

ENHR, by promoting an inter-sectoral and multi-disci-

plinary approach to research and by strengthening the linkages between policy, action, and research will help develop a situation where all three will share a common interest and work in unison towards the fulfillment of its purpose.

ENHR as envisioned by the Commission, comprises broad categories of research which are different but complementary i.e. country specific and global research. In country specific research each developed country will: 1) identify country specific health problems, distribution and determinants of health conditions and diseases; 2) decide how best to approach the problem.

ENHR and taken up the challenge of establishing country specific ENHR programmes. Bangladesh is one such country which is attempting to translate this concept of ENHR into a process involving researchers, policy-makers and the community for effective utilization of the country's limited resources to achieve equity in health.

National research capability in the health related sectors is currently inadequately developed to meet the policy and planning needs of the government. It would be fair to say that there is no long term coordinated research agenda, and no clearly defined mechanism to utilize research findings for making health policy decisions.

At the national level there was one physician for every 9690 population in 1981, and

one nurse for every 19370 population (Third Five Year Plan). The doctor to nurse ratio has improved - it was 4:1 in 1979 and came down to 2.5:1 in 1985.

But the statistics still continue to indicate a physician centered health care system. (It should be noted here that it is difficult to get an accurate understanding of the number of health personnel active in the country, since available statistics only relate to the government sector).

In terms of skill development, health research is not viewed as a career choice due to very little development prospects. Community health

is still regarded as being peripheral to medical education and has not been fully integrated into the medical curriculum. Health problems and research are mostly viewed as biomedical concerns, with minimal input from other fields, i.e. the social sciences or statistics.

Thus it is not surprising that there is an acute shortage of trained health researchers in Bangladesh. According to an estimate done in 1988, there were fewer than 150 professionally trained community health/public health researchers in Bangladesh with its population of about 120 million (George Rubin, Ford Foundation). There has not been any significant improvement in the situation since then.

The situation in Bangladesh is unique in that the ENHR initiative has been taken up and

is being pushed through by a national NGO namely BRAC and some international agencies, ICDDR,B and UNICEF.

The question would invariably rise here as to whether non-government private organizations can assist in the advancement of the use of research in Bangladesh.

Some national NGOs have increased the scope of their activities, grown in size and professionalism with considerable support from abroad. With a stable support base, it is foreseeable that this growth is likely to continue for some time to come.

In January 1989, a meeting was organized in Dhaka sponsored by BRAC and CHRD (Harvard). The meeting, attended by eminent and senior personalities from the health profession in Bangladesh, called for urgent measures to promote and foster health research in Bangladesh.

There was explicit recognition that health care research and evaluation are not luxuries but an integral part of the health system with the ultimate goal of improving the health of the target population.

An ENHR Working Group was formed with representation from nine institutions, both government and NGOs. Following several meetings with the Government and other national and international organizations, the Working Group for formally launched the initiative in November 1990 through a workshop attended by representatives from the government, private institutions, from CHRD as well as from several funding agencies.

(Access)

## According to the Population Development and Evaluation Unit of the Planning Commission and the Bangladesh Bureau of Statistics (1988), approximately 600,000 children under 5 die every year in Bangladesh.

how to organize - to take all the pieces of existing knowledge and improve health in the most cost effective way; 3) identify impediments to the successful implementation of these programmes; and, 4) design and evaluate action programmes for controlling the problems, and their distribution.

This expedites efforts for equity by providing better understanding of the way the health services function and identifying gaps in availability, accessibility and coverage.

Country-specific research may give rise to questions which if researched with the input of several other countries, leads to cumulative, transferable results which may be shared with and applied to any part of the world, resulting in global research.

Since the release of the report over thirty countries have shown a remarkable interest in

anism to utilize research findings for making health policy decisions.

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# Targeting Brain Tumours

by G S Mudur

RECENT studies by a team of Indian scientists might ultimately lead to a new way of combating brain tumours that are difficult to treat either through surgery or by chemotherapy with anti-tumour drugs.

Brain tumours pose a major challenge to neuroscientists who have to overcome several obstacles to successful treatment.

One problem in trying to treat brain tumours through chemotherapy is in getting the right amount of the anti-tumour agent into the brain past the blood-brain barrier. This barrier is a semi-permeable membrane that allows some solutions to pass through it, but excludes solid particles and large molecules. The blood-brain barrier keeps the circulating blood separate from the tissue fluids surrounding the neurons or brain cells.

However some drugs do penetrate the blood-brain barrier. But doctors often have little or no control over where the drug will act. In addition to destroying the tumour cells, it could also harm other neighbouring healthy cells in the brain, causing brain damage.

What doctors have been looking for is something that will open up the blood-brain barrier to let the drug in and an agent that will make the drug act only on the tumour cells and not on healthy brain tissues.

Now biochemists at the All India Institute of Medical Sciences in New Delhi believe they have got both these desired effects by coupling two kinds of molecules to each other.

The AIIMS scientists worked on the human glioblastoma multiform tumour. This is a highly malignant and rapidly growing brain tumour that is not controlled easily by therapy. Doctors say its prognosis is poor and it has a high mortality rate.

The researchers first developed monoclonal antibodies for glioblastoma multiform tumours. Monoclonal antibodies can be regarded as "recognizing agents" that are able to

specifically identify these tumour cells. Once inside the body, their job is to seek out and attach themselves to the surface of the tumour cells. The AIIMS team led by Dr Shail Sharma, head of the department of biochemistry joined these monoclonal antibody molecules to artificially-created molecules called liposomes in which was enclosed the anti-tumour drug.

The liposomes are molecules of chemicals called phospholipids oriented in a special manner which enable them to enclose within themselves the anti-tumour drugs.

Laboratory studies suggest that liposomes either fuse with the membranes of the tumour cells and let the drug flow inside the cells or let themselves be swallowed whole by the tumour and then burst inside uncausing the drug which then kills the tumour. The prime advantage of the liposomes, says Dr Sharma, is that they will allow the delivery of very high concentrations of the anti-tumour drugs.

Liposomes cannot by themselves pass the blood brain barrier. But the AIIMS team has used a well-established medical trick to open up the barrier for a short while to let the drug-enclosed liposome coupled with the monoclonal antibody into the brain.

The barrier can be opened up temporarily by injecting a concentrated solution of mannitol, a kind of sugar. Once inside the brain, the monoclonal antibody attached to the liposome takes it to the site of the tumour where the liposome interacts with the tumours, releasing the drug to destroy the tumour cells.

The experiments have so far been conducted in laboratory mice. The AIIMS group now plans to induce glioblastoma cells in laboratory animals to determine the efficacy of the coupled molecules in finding and destroying the tumours. The next phase of the experiments will involve monkeys, a crucial step before the new approach can be tested out in humans.

(PTI Science Service)

# For That Morning After Feeling

by Dr Cooke

In this exclusive series, Dr David E. Cooke offers some pointers to relieve the pain and punishment of excessive seasonal imbibing.

should be carried on to-day in a sophisticated business community is arguable, but I can sense a chorus of disapproval arising at any Scrooge-like questioning of the ancient customs. Still discussing methods of getting over the worst effects might be entertaining.

It is not generally realised that alcohol is not a stimulant but a depressant. The attractive member of the opposite sex at the office X'mas party looks even better, and more available, after a few drinks because one's inhibitions have been suppressed. The morning after may also produce the all too familiar feelings of depression in full force.

If you think that the writer of this not too learned article has a suspiciously detailed knowledge of the condition you are not far wrong. Age may or may not bring wisdom but it brings a heightened sensitivity to the grog and its side effects, so I am more circumspect these days.

The hangover of Boxing Day

is a sorry consequence of the festivities. The blurry feeling, the headache, the stomach that feels that a tribe of savages is trying to roast you from the inside. What to do? Here is a quick First Aid guide.

The headache responds to Paracetamol. Better not to use aspirin because it may do drastic things to the lining of the stomach.

The indigestion responds to antacids like Mylanta or Mucaine but avoid the aspirin containing preparations. You may have to use fairly large doses, but it is important to neutralise all the excess acid.

If you have a friend who is in a really bad way and vomiting a lot, then Sternett by in-

jection may have to be given - but this is for the unfortunate who does not respond to simpler measures.

The best cure is prevention. Try alternating soda water with the hard stuff at the Office Party. Alcohol is a diuretic and actually makes you thirstier. So pouring down the soda water will keep you feeling better and yet you are still perceived to be the life of the party. You will of course make more use of the executive washroom but that is a small price.

The less you drink the better you feel the next day so it will pay off. Remember that alcohol can be a killer. It directly accounts for three thousand deaths in Australia annually not including the road toll.

What do you do when you arrive home in a state of euphoria from the office party to be greeted by a spouse who is less than enchanted by the prospect of a night playing nurse-maid? Flowers, protestations of undying affection and other more tangible proofs of your deep and undying devotion are the traditional stand-bys here.

Better not have any lipstick on the collar, though. It tends to spoil the effect. Better to abandon the shirt and invent a story of a hair-raising encounter with a death-dealing Triad gang from which you only just escaped. Spouses are never fooled by these tales but you may get points for originality.

More difficult is the hostess whose grand piano you wrecked by delighting the company with your inebriated but hilarious impression of a dentist. You extracted too many of the ivory keys with the fire irons - that was the mistake.

Try a large box of the most expensive chocolates and an even larger cheque for the piano repair man - who will certainly seek punitive damages for being called out at the festive season.

For those not locked in Holy Wedlock (or Unholy Deadlock) a condom is a necessary accessory to any amorous adventures.

With the HIV virus rampant - not to mention the Hepatitis in various A, B and C variants - it is wise to avoid the scenario of a Day with Bacchus, a Night with Venus and seven years with lingering Misery before release.

A word should be said about the dreaded cholesterol which is a big component in too much of the traditional X'mas fare. Stick to turkey breast and politely decline the ham and puddings.

In the late 1970s, when vaccines reached only about 10% of the developing world's children, the international community set the ambitious target of 80% immunization by the end of 1990. The charts show the result of that ten year effort.

## SUCCESS STORY

