

FOCUS

Telecommunications, Health and Development

by Dr Mahbub-ul-Haque

THE Human Development Index (HDI), developed by UNDP in order to measure the level of development of a nation is based on three principal variables. These are longevity, knowledge and decent living standards. Life expectancy at birth has been taken as a proxy for longevity, and adult literacy for knowledge. Improved standard of living, however, depends on command over resources like land, credit, income and other variables. Although, information about per capita income is easily available in this regard, the presence of distortions on non-tradable goods and services due to exchange rate anomalies, tariffs and taxes made straightforward per capita income unsuitable for international comparison.

However, healthcare has direct contribution to HDI i.e., the level of development of a nation. Life expectancy at birth directly depends on the healthcare system of a nation; healthier people maintain a better life and live longer for obvious reasons and in fine, healthier people have increased opportunities for having command over resources. Therefore, healthcare system of a nation plays a vital role in national development. And, telecommunications have positive role in developing healthcare system.

Role of Telecommunications in Healthcare Services

Primary healthcare facilities

New British Vaccine An Answer to AIDS?

by John Newell

Immune System

BRITISH scientists have shown that a vaccine made from a virus that causes a form of AIDS, with one gene inactivated to render the virus harmless, completely protects monkeys against infection with the virus. They believe a similar vaccine will do the same for humans. The results of the trials in monkeys are the best obtained with any AIDS vaccine so far, though there will be problems in testing the vaccine which could require a new approach in the areas where it is most desperately needed.

The vaccine has been developed by Dr Jim Stott, head of the AIDS Collaborating Centre at the United Kingdom National Institute for Biological Standards. To be effective, an AIDS vaccine has to protect against Human Immunodeficiency Virus (HIV), the virus that causes AIDS, in two different ways, because the virus can be transmitted in two different forms. One is as a free virus particle, which is the way in which most viruses are transmitted.

But the AIDS virus can also be transmitted as a live virus-infected intact cell. In this form it is very difficult for the immune response to recognise. Dr Stott said: "It really enters the body rather like a Trojan horse. This is the most difficult form of transmission which we have to protect against with a vaccine."

No vaccine has yet been shown to protect against infection with HIV, though several are undergoing trials. Most of the vaccines are made by genetic engineering, used to isolate a single gene from HIV and then to produce the protein that gene is the blueprint for in large quantities. The vaccine is then made from the viral protein. This avoids vaccine-makers having to work with HIV itself. But vaccines made from single viral proteins have turned out not to stimulate the immune system nearly as strongly as conventional vaccines, made from killed or weakened — attenuated — whole virus particles.

The writer is former science editor BBC World Service

ties in developing countries are provided mainly by the para-professionals. They are the people with a few weeks' or months' training as medical workers or about one-year training as assistants. They generally provide for preventive, promotional and curative healthcare services. These include early diagnosis and treatment of common illness including maternal and child healthcare, midwifery, family planning, treatment of injury and referral of patients to higher facilities. Primary healthcare workers may also organise immunisation and mass treatment programme; provide guidance and education on nutrition, family planning, and hygiene; monitor epidemics, water quality and sanitation, and collect demographic and health information.

The second level healthcare service, however, includes those which are a little bit complex. These services are normally provided at larger health centres, district or regional hospitals. Nurses and general practitioners normally treat this type of cases.

The healthcare system of developing countries is associated with many variables.

The system needs services of many dimensions. These require services of practitioners with widely varying levels of expertise. The physicians should be specialists, general practitioners, registered nurses, other nursing personnel and various kinds of

forms of communication. It has been reported on many occasions that patients in the rural areas accept the advice of rural health workers, if the advice is supported by the senior doctors of the district or regional hospitals. The rural health workers may make the consultation smoothly if reliable telecommunications facilities are available.

Telephone access to all medical personnel, computerised patient records that are accessible, on line mobile links with ambulance and other emergency vehicles, and application of telecommunications for training and consultation for developing countries, where resource constraints are more binding, actually ease the healthcare management. The application of telecommunications to primary healthcare services offers a key to maintaining the system — building confidence, providing emergency assistance, allowing consultation, facilitating administration and logistics, maintaining supervision and quality assurance and supplying education and training.

Telecommunications-based Healthcare

The government in 1970 employed cyclone early-warning telephone system consisting of single telephone installations in several coastal areas previously without access to telecommunications.

Several Alaskan villages are connected with earth stations that are used for the medical communication service. The medical network is a shared audio conferencing system that includes health aides and sometimes provides in-service training. Each day during a scheduled "doctor call", a physician at the regional hospital contacts each health aide to discuss current cases, to provide advice on diagnosis and treatment of patients and to authorise evacuations. The Alaskan satellite network is also used for 24-hour emergency monitoring by pressing a button. A health aide in village can activate an alarm at the nearest regional hospital, if necessary.

In Guyana, "medix", a health team, use a two-way radio network to communicate with headquarters to check the drugs delivery position and receive advice on health problems. They may also follow up patients' conditions referred to the hospital. The medix members with one year of training use their radios for advice on difficult or complicated cases. In Guyana, the dedicated radio telephone network is used most frequently for health administration problems that took longer time to resolve by mail or in person. The scope to contact the health workers of other villages reduces the feelings of isolation and improves the sense of security and the morale of health workers.

Medical services in some countries use small planes to take physicians to field site rather than bring patients to central hospitals. This approach known as Flying Doctor began in Australia in 1928. People living in remote stations used two-way high frequency radios to contact

regional flying doctor bases.

Flying doctor services use two-way radio networks to link nurses at rural clinics with headquarters in East African countries. The operation of aircraft used to transport doctors to the clinics and to evacuate seriously ill patients are coordinated by radio network. Two-way radio is a vital support for the service with radio telephone communications linking the headquarters with all field hospitals and clinics and with the airplanes.

Health-net, an organised telecommunication network for health services, has been organised, in recent days, in Cambridge, Massachusetts. The objective of this network is to arrange flow of information about medical research from the developed countries to the developing countries. The network also provides an electronic mail service which may be used by the developing countries to collect information and data from the developed countries which cannot communicate otherwise due to want of good telecommunications facilities.

The world health organisation used the weather forecast satellite network to summon medical teams during epidemic in the South Pacific region. Cellular phones were used for disaster relief activities in San Francisco during the earthquake of 1989.

Studies show that about 5 per cent of total calls are being made for medical reasons

Healthnet: sharing medical knowhow



In a few developing countries, these calls saved lives and helped improve the condition of the patients.

Conclusion

It needs no mention that health care facilities are a ba-

sic issue for development of a nation. No country in the world shall be identified as developed country unless it can ensure basic health care facilities for the people. This is necessary not only from the social point of view but from the economic considerations as well. But the health care facilities in Bangladesh is inadequate both in quantity and quality. The country needs to undertake major programmes in order to extend primary health care facilities to all its population.

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In view of the above, the first requirement is to conceptualise in reality by the authorities concerned, the role of telecommunications in helping the management of healthcare facilities. And then to attach appropriate priority to the telecommunications sector. At a later stage, the country's tele-network need to be planned and developed keeping also the particular aspects into consideration, in addition to the existing ones. As a matter of fact, in order to implement

the proposals there should be fundamental research at the aggregate level covering particularly the health and telecommunications sectors, for obvious reasons.

The writer is a Director of Bangladesh T and T Board.

Snorers Tune in to Good Vibrations

Medical practitioners are constantly coming up with new ways to treat the widespread problem of chronic snoring. Now, a Scottish doctor says sufferers can sing away those night-time blues.

Rupert Butler writes from London

PEOPLE who snore loudly are being told they can help cure themselves by singing. This is the latest advice for the many noisy warblers whose nightly crescendos can harm health and ruin relationships.

Medical science has already devised a number of treatments for chronic snoring, ranging from breathing through masks to sniffing homeopathic sprays and donning special adhesive strips.

Now, Edinburgh-based Dr Elizabeth Scott, who specialises in treating sleep disorders, has hit on a musical method. She got the idea for the singing treatment from her job as consultant to the Scottish Chamber Orchestra.

Dr Scott explains: "As we get older, the soft upper palate in our mouths gets flabby and vibrates, causing snoring. Singers widen and strengthen their upper throat and soft palate through exercises. And it works. Professional singers hardly ever snore."

As a result of her research, a cassette tape has been produced, which includes exercises for snorers to try. These consist of popular melodies sung by soprano Elizabeth McKeon, of Sydney, who devised a method of curbing apnoea by use of an oxygen mask — a method he calls Continuous Positive Airway Pressure.

Dr John Shneerson, director of the Sleep Centre at Papworth Hospital, Cambridge, England, explains: An air pressure machine unit is the size of a small box and has an oxygen mask. The oxygen level in the blood is measured, then air is pushed through the nose and into the throat of the apnoea sufferer to keep the passages open."

The devices are being made lighter and more user-friendly. Dr Shneerson adds: "They can be used quite comfortably at home and can even be part of hand luggage abroad on an aircraft. I have one patient who has travelled with the equipment to up to 40 countries."

Another relatively new treatment for snoring is a laser technique to scar and ultimately stiffen the vibrating uvula, the fleshy part of the soft palate at the back of the throat.

But if you are snorer, there are some fundamental self-help steps recommended before you sing a note of Dr Scott's songs or try any of the other techniques.

First, lose weight. Then cut drinking, as alcohol does nothing to improve the soft palate or fat neck tissue. And then, perhaps, join in a chorus of two of the Christmas carol Silent Night. — GEMINI NEWS

* The British Snoring and Sleep Apnoea Association, The Steps, How Lane, Chipstead, Surrey CR5 3LT, England.

About the author: RUPERT BUTLER is a London-based freelance journalist.

A Health Sector Priority in the "New Medieval Ages" Need for Nationwide Survey of Psychiatric Disorders

by Dr Rezwana Quaderi

As these, every attempt for an "improved, life-friendly" future should be genuinely and effectively chosen and followed.

Now mental health requires more care and due attention, as individual members of the society are more sensitive or susceptible to the stresses of the "NEW MEDIEVAL AGES" and its changes. Mental health, above all, is the most neglected aspect of the new sciences, that has been largely ignored or "overlooked" in our country by superstitious reasonings. However, most of us can sincerely feel that the impact of mental health on a country's economy, growth and development and geo-political status is significant and undeniable.

According to the World Health Organisation (WHO) definition, mental health is a part of the concept of what is called "Health" which means physical, social, psychological and spiritual well-being of an individual. In spite of its importance, this area remains largely neglected. This negligence, shortage of service facilities, specialised manpower and logistic support altogether do not leave any scope for a wide and extensive survey of the state of mental health in the country.

Systematic ethnographical studies and cross-cultural studies are much needed for policy-makers and planners whenever someone is talking about a country's health policy. At the same time, for the man on the street, this cloud of negligence and unavailability of scientific data and information continue to nurture ignorance, prejudice, superstitions and myths about mental

per cent of any geographically defined population suffers from severe mental disorders and at least 10 per cent will be thus affected at some time in their lives.

Now, here are some statistical figures:

(1) Community Survey: Village: Dasherkandi (Population: 1181).

15/1000

(a) Major mental disorders: (Psychosis, severe depression, epilepsy, mental retardation)

50/1000

(b) Neurotic and psychosomatic disorders: (Psychiatric and physical illnesses combined)

29/1000

(2) Surveys on General Health Services: (Mainly neurotic and psychosomatic disorders)

29%

(a) General practice in Dhaka

31%

(b) Specialist practice: (A survey of 33 specialists' case records)

13-16%

(c) Medical OPD at IPGM&R: (purely psychogenic) 1

5%

(mixed physical and psychological)

31%

(3) WHO Estimate for Bangladesh, 1994:

84 lakh (7%)

(a) Total number of mental patients: 12 lakh (1%)

72 lakh (6%)

(b) Major mental disorders: 1%

of total children's population.

None of the surveys include prevalence studies or figures for drug dependence, women abuse and child abuse which are the burning issues of today.

Epidemiological studies are also essential to define and evaluate strategies to prevent and control mental disease and disability and to help in overall planning and evaluation of mental health programmes on both a local as well as a national level. For such extensive works, appropriate administrative effort, appropriately trained manpower, research institutes and service facilities along with other logistic supports are of incomparable value.

The studies done above are not representative of the nation and not done recently

attention. The developed countries and most of the developing countries have done nation-wide surveys in mental health and instances can be seen in Sri Lanka, India and Pakistan.

The development of mental health services simply cannot reside only with the doctors or with any single section of a population. The responsibility must be shared, cohesively, and the government, the health planners, and the society at large, specifically the social scientists and the media, have very definite roles to play.

The writer is Assistant Professor (e.c.), IMHAR, Dhaka Medical College, and a practising psychiatrist.

James Bond

BY IAN FLEMING

DRAWING BY HORAK



TOM and JERRY

TUFFY BROUGHT HOME
A FISH I CAUGHT, AND
I WANT IT BACK!

