

Tiresome process of developing AIDS vaccine

By Patricia Grogg

Health

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VANA: The discovery of a vaccine that prevents infection with HIV, which led to the deaths of three people worldwide this year, may be just around the corner, but the scientific community opts for caution when asked to predict exactly when the breakthrough will happen.

They are still a long way from an effective vaccine against HIV. Even the most advanced pharmaceutical companies do not appear to have a chance of success, at least in the immediate future," said Carlos Delgado, head of the research team in Brazil that is seeking a vaccine. Within a decade of AIDS research on its belt, Cuba has the longest history in this effort in Latin America.

Scientists from numerous countries are participating in an international conference on AIDS treatments, held ear-

lier this year in Philadelphia, also took a prudent stance, stressing that research is a long, slow process. Norman Levin, with the Harvard Medical School, told the conference that what realistically could be expected in the near future was a vaccine that diminished the presence of the virus.

Later, a better vaccine that prevents infection in some people will be developed, and so on, until scientists figure out how to trigger a protective immune response in all humans, according to Levin. But expectations rise with each new test, leading some to forecast results within two to five years. "Even if this vaccine does not prove effective, I know that this study is an important step towards the discovery of one that is," commented one of the volunteers involved in a clinical trial initiated in Brazil in early

November.

Coordinated by the Pasteur Institute of France and the Pittsburgh and Rochester universities, of the United States, the project in Brazil is testing a vaccine that is a combination of the gp-120 protein, which is found in the surface of HIV, and the Canarypox vector, which holds copies of the virus's genes reproduced through genetic engineering techniques. The Aventis Pasteur corporation in France produces the Canarypox vector, while VaxGen, based in California, makes the gp-120. Both involve the B subtype of the virus.

Scientists identify the different classes of HIV with the letters A through J, each one with its specific genetic characteristics. The subtype A is found largely in sub-Saharan Africa, B in the Americas, Europe, Japan and

Australia, and C in South Africa and India. The experiment in Brazil, which is in Phase II (clinical trials with volunteers), is intended to study each patient's reaction and development of antibodies, according to participants in the project.

Phase III (test of effectiveness among larger populations) is slated for the first months of 2003 in the United States, several Caribbean countries (Haiti, Trinidad and Tobago, and possibly the Dominican Republic) and Latin America (Argentina, Brazil, Honduras and Peru).

But before then, the scientific community will have the test results for a vaccine produced by VaxGen through genetic engineering, based on the gp-120 protein in two versions, corresponding to the HIV subtypes B and E.

The clinical trials to determine the effectiveness of that vaccine proto-

type began in the United States in 1998 and are aimed at the B subtype, which predominates in that country.

Tests of a similar experimental vaccine, based on subtype E, began in Thailand in March 1999. The results of US clinical trials will be known by late next year, and those of the Thailand testing by the next year, says Jos Esparza, coordinator of HIV vaccine initiatives at WHO and at UNAIDS.

The specialist commented that "it is very difficult to determine" which vaccine is the most promising, but that the most advanced vaccine is the one based on gp-120 (produced by VaxGen) to induce the production of antibodies - though it remains to be seen if it will work.

The ideal vaccine for fighting HIV, says Esparza, would be capable of inducing both humoral immunity (antibodies) as well as cellular immu-

nity (cytotoxic T-lymphocytes - C) which is why the vaccines being tested are combinations of the two.

"The best preventive inoculation should completely protect someone from HIV infection, but that could be very difficult to achieve and may diminish the viral burden in the vaccinated persons who become infected," he said.

In Esparza's opinion, such a vaccine, though "imperfect", would be valuable from the individual and public health perspective. But he stressed that the important message is that the future antidote against HIV is going to be the "silver bullet" that replaces other forms of prevention.

Once an effective form of immunization is discovered, said the UNAIDS expert, it would be at least one year before world health authorities approve it. —Dawn/InterPress Service

Diverse signals in health

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Lt.-Gen. (Retd) M. Afzal Najeeb

The Rules and Regulations of autonomy granted to some hospitals in the Punjab in 1998 have not been framed over three years by two successive regimes. The Federal Government has started yet another exercise to formulate a policy to regulate medical education in the country and is supposedly considering a ban on new medical universities. The provinces have been asked to send working papers and suggestions have been invited from the public, and the Ministry of Health will submit proposals to the Cabinet. The Punjab Government has announced the establishment of a Medical University at Sheikh Zayed PGMI, Lahore which incidentally is a Federally administered institution. It has also been decided to open two new medical colleges at Lahore and one at Rahimyar Khan. A ban on private practice is also said to be in the offing. A proposal to create a Medical Education Authority and Medical Licensing Board of its own has been under active consideration of the Punjab Government for the past several years. The Government of Sindh has similar intentions and it is also demanding restructuring of Pakistan Medical and Dental Council with most of its functions delegated to the proposed provincial bodies. The National Reconstruction Bureau wishes to reconstruct health reforms as part of the Distinct Devolution Plan.

All this shows there is no sense of direction or consistent policy. The manifestoes of our political parties are full of clichés and platitudes, only a few are ever implemented. The army has no manifesto, however it does set in motion at least temporary administrative reforms and is able to accomplish some development work. Adhocism has therefore jeopardizing the development of sustainable policies and stable institutions in every field of life.

The results are obvious — loss of half of the country, population explosion, poverty, illiteracy, class exploitation, erosion of cultural values, religious radicalism, unemployment, rampant corruption and deteriorating law and order situation. The economic mess created by managers imported from international agencies has assumed horrendous proportions.

to ban new colleges and universities. In this context it may be enquired if there are any future projections regarding the requirements of doctors on the basis of which three new colleges are being opened in Punjab. What are the motives for raising Sheikh Zayed Postgraduate Institute to the status of a university bypassing King Edward Medical College, which was being considered for the purpose for decades. The reasons for bickering between the Ministry of Health and the Provincial Health Departments resulting in conflicting decisions at times need to be sought. It is not understood why after years of demand for a revision of PMDC charter in the end only a vague insignificant amendment was made.

Innumerable committees, commissions, boards, task forces, symposia, seminars and conferences with participation of foreign experts and Pakistani expatriates from abroad have discussed upon the problems relating to health care year after year. Their reports and recommendations gather dust in the archives and are often not retrievable after a couple of years when a fresh meeting has been convened on the same subject. A Board was nominated by Ministry of Health in January 2000, its mandate was not divulged and as yet its deliberations, if any, are a secret. Yet again the Ministry of Health has been recently charged with the task of preparing proposals for presentation to the Cabinet in two months time. Since the exact mandate has not been revealed to the public the invitation to send suggestions could only be an exercise in futility. In any case such communications to the authorities are hardly ever acknowledged let alone given any weightage.

It may not be a biased assessment to state that significant development work was carried out in the health sector during the Ayub and Zia eras and some of it was enduring despite the retrogressive policies adopted by their successors. The present Government too is committed to carrying out reforms but the absence of any tangible results so far betrays a prevailing confusion in policy making. The monitoring scheme has failed even as a short-term measure as the very concept is flawed. The mechanism should be inherent in the system rather than imposed through

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tor too has been a casualty to this chaotic situation. There is no national health policy and the basic issues regarding the mode and conduct of health delivery system are unresolved. Health remains a concurrent subject between the federation and the provinces despite commitment to the contrary, the sectoral development of curative and public health as well as primary secondary and tertiary care is uneven, the role and quantum of public private partnership in health care is undecided, and both are mismanaged and unregulated. The Punjab experiment of autonomy to some hospitals has virtually failed. The only outcome has been a rise in the cost of treatment in these institutions and their increasing inaccessibility to the poor, due to preoccupation to market the facilities to patients who can afford to pay. Medical education the cradle of the profession at all levels — under graduate, postgraduate paramedical — is in a quandary.

The quality of education imparted is far from satisfactory due to a variety of reasons. Admission on reserved quotas still persists in some colleges and the recent fiasco of willful absence for the whole year of a professor posted at Peoples Medical College Nawabshah — running a private clinic at Hyderabad in the meantime — is neither an extreme nor an isolated example. There is a mushroom growth of private medical colleges/universities. The PMDC, College of Physicians and Surgeons of Pakistan and University Grants Commission have limited statutory powers, are incompetent, and lack coordination among them and with the Universities.

Health and education are the last priorities of any Government, both conceptually and financially due to lack of commitment to social sector and diverse preferences. The present regime cannot be an exception. It is, therefore, no wonder there are diverse, confusing and controversial signals emanating from various quarters. Having been a witness to contemporary history in Pakistan one tends to become immune to surprises. However one cannot refrain from commenting on them.

It would be pertinent to investigate as to why the Rules and Regulations of autonomy to the hospitals have not been framed for three years, why one of the chief executives has resigned in protest and the others are frustrated. What was the alleged hidden agenda and how the scheme has been sabotaged. What are the reasons for not carrying out a third party evaluation of the scheme and if one has been instituted why its report has not been made public? How has the PMDC recognised so many medical colleges and others are allowed to function without recognition, one of them at Lahore has affiliated a teaching hospital with 20 beds with no infrastructure of any kind. Is there a uniform stated policy on the basis of which a university charter is granted and were the conditions fulfilled by so many newly-established universities and if so why has it become expedient now

external agencies. The District Devolution Plan deals with only a minor portion of the health care problems and the piecemeal approach is bound to be fruitless unless the whole system is dealt with in its entirety.

A sustainable comprehensive National Health Policy should have a sense of direction with short, medium and long-term goals based on fundamental structural reforms. The Government may be well advised to make a concerted effort to achieve this goal, to earn the lasting gratitude of its people. The primary objective of a health policy is equitable access to health care to every citizen. The basic issues to be addressed are definition of the respective roles of the federal and provincial governments, declaration of intent regarding the extent and mode of public private partnership in health delivery system and mechanism to regulate both of them with proper autonomy of institutions, balancing the relative development of curative/public health and primary/secondary and specialized care based on estimates of actual needs of the community. Medical education at all levels and of all categories has to be redesigned according to valid projections of requirements of each. The much denounced private practice can only be controlled by recasting the service structure of doctors both teaching and non teaching, nurses and paramedics and providing incentives adequately comparable to their market value and enforcing strict accountability at all levels. The profession must be given due recognition which in turn should rise up to the expectations of the nation by a process of self-regulation.

The challenges thrown up by ever-changing demographic and socioeconomic realities, dramatic technological and biomedical advances and information explosion, call for major shifts in the paradigms in teaching and practice of medicine.

The vision required for radical reforms cannot be expected to be found among the bureaucratic set up in the ministry and departments of health. They will require massive extramural inputs from informed quarters. They will have to induct autonomous "cells for health policy planning and development studies" with major participation of private resource persons and groups. The institutions like PMDC, PMRC and UGC should be strengthened with revision of their mandate, constitution and composition to enable them to play a worthwhile role.

Implementation of policies is the most important part of good governance. Many a policy fail due to faulty implementation. Qualified high calibre medical managers fortified with requisite infrastructure support should be entrusted with the responsibility of carrying out the dictates of the policies.

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