

SEA-AIDS-114

Regional Priorities in HIV/AIDS Research

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1. INTRODUCTION

Since AIDS was first diagnosed in 1981, progress in research has been quite remarkable. The causative agent has since been identified, its gene mapped and analysed. Various drugs have been developed which reduce viral loads to undetectable levels. Many candidate vaccines are now at various state of development.

The HIV/AIDS epidemic is presently in different stages. While Africa and parts of Asia are hardest hit, in some areas such as the United States and Western Europe, there are indications that the epidemic has started to level off and even decline. In the South-East Asia Region, where HIV came late, it is spreading rapidly and poses an unprecedented threat to the health and socioeconomic development. While the epidemic is at an advanced stage in Thailand, Myanmar and India, HIV prevalence still remains low in many other countries. Even within countries, HIV is not uniformly distributed. The epidemic is composed of many outbreaks, attributed largely to the extent and intensity of risk factors and the vulnerability in different areas and among various population groups.

The diversity and dynamic nature of the epidemic globally and in the South-East Asia Region underlines the importance of research in developing policy and in designing interventions for HIV prevention and providing care for those living with HIV/AIDS. The Advisory Committee on Health Research in its meeting in Myanmar, in April 1999, also recommended that "WHO convene a task force or an expert group meeting to review the research needs, including community-based interventions on HIV/AIDS with a view to strengthening the prevention and control of HIV/AIDS epidemic in the Region". Accordingly, the WHO Regional Office for South East Asia organized a meeting of experts in New Delhi from 15 to 17 December 1999. The meeting discussed the needs for, and priorities in HIV/AIDS research and how research could be strengthened in the Region. The objectives of the meeting were:

- (1) to review of the current status of HIV/AIDS-related research in the South-East Asia Region, including the progress made and constraints faced by researchers;
- (2) to identify priority research needs and issues to be addressed in the future, relating in particular to interventions at the community level, and
- (3) to develop strategies to enable countries undertake HIV/AIDS research including steps needed to address the main research priorities and ways in which WHO can facilitate these steps.

Experts belonging to different disciplines and from various countries participated in the meeting (see annex for list of participants).

2. HIV/AIDS EPIDEMIC: THE GLOBAL AND REGIONAL SITUATION

The number of people infected with the human immunodeficiency virus worldwide continues to increase rapidly. According to WHO and UNAIDS estimates, 33.4 million adults and children were living with HIV by the end of 1999. Every minute, 11 men, women and children get infected; 16,000 a day or 6 million new cases a year. Infections in women are becoming more common and according to current estimates, they accounted for 43% of the new infections in adults in 1998. Persons below 15 years accounted for 10% of the new cases; nearly 1.2 million children are now living with HIV, mostly acquired from their mothers. Since the beginning of the epidemic, nearly 14 million have already died and 2.5 million died in 1998 alone.

As of 1 March 2000, more than 135,000 AIDS cases had been reported from the South-East Asia Region. It is estimated that nearly 5.5 million people are infected with HIV – 18% of the world total. Beginning with people whose lifestyles and behaviour were conducive to the spread of a sexually transmitted infection including HIV, and in many countries heralded by injecting drug use, the epidemic is spreading into the general population. Given the latency period of 7-10 years, it is clear that the number of patients with AIDS will continue to rise in the new millennium. This will have a

considerable health and socio-economic impact in the Region, particularly on the already fragile health systems in many countries and leading to premature death among young people during their most productive years of life.

3. THE ROLE OF RESEARCH IN HIV/AIDS PREVENTION AND CARE

Over the last two decades, considerable progress has been made in HIV/AIDS research leading to a better understanding of the disease, contributing to disease prevention and care programmes. For example, through epidemiological research, the three modes of HIV transmission have been identified, the factors that promote the risk of HIV transmission have been determined and the natural history of infection with HIV understood.

Biomedical research contributed in the preparation of antibody and antigen tests for diagnosis of HIV infection/AIDS and associated microbial infection, and towards development of antiretroviral drugs and candidate vaccines. Through social behavioural research, an understanding has been gained of behaviours which can place persons at risk of HIV infection. Also, the emotional needs of persons with HIV/AIDS and their families have been identified and the impact of HIV/AIDS on society has been assessed. More research on these aspects is needed, particularly in the context of different geographic and socio-cultural groups. HIV infection continues to spread, its pace determined by the risk behaviour prevalent in various geographic areas and in different sub-populations.

Several factors make it important that countries of the Region continue to invest in HIV/AIDS research and development. These include the dynamic and evolving nature of the epidemic; the fact that the epidemic will continue for many years as dictated by the varying health, social and behavioural determinants in the countries; the economic and public health consequences of the disease; and the great importance of finding solutions to the problem. A comprehensive approach to research which would provide evidence to strengthen HIV/AIDS prevention and care strategies and plans in the Region is therefore urgently needed.

4. REGIONAL PRIORITIES IN HIV/AIDS RESEARCH

4.1 Basic Sciences

Various areas for research in basic sciences include characterisation and typing of HIV strains; development of vaccine through establishment of cohorts, manpower and infrastructure development and testing of vaccine concepts; establishment of a regional network on molecular epidemiology, development of rapid and simple STI diagnostic tests and HIV testing strategies. However, the following areas need priority attention:

- Vaccine development: Involving various steps including identification of specific clades prevailing in a country; developing and testing candidate vaccine specific to the local situation and development of cohort; capacity building in epidemiological, behavioural aspects including networking of regional and national laboratories; and clinical evaluation of the candidate vaccine through phase I to III trials. Partnerships are needed not only with the scientists, but also among the National AIDS Control Programme managers and potential vaccine manufacturers/industry at an early stage to make the vaccine both appropriate and affordable and also to prepare the ground for the eventual use of a vaccine in the national programme.
- Developing and evaluating new drugs and agents including antiretroviral drugs and of microbicides.
- Developing new diagnostic tests for sexually transmitted infections (STIs) such as chlamydia and chancroid that are rapid, simple, reliable and affordable; producing indigenous HIV test kits; and evaluating HIV testing based on biological materials other than blood.

4.2 Epidemiology and Prevention-related Research

Areas of research in epidemiological and prevention aspects include understanding of risk factors for HIV transmission including mother-to-child transmission; interaction between HIV and other infectious diseases such as tuberculosis and sexually transmitted infections; the effectiveness of

microbicides in prevention of HIV transmission and evaluation/implementation of HIV/AIDS and STI surveillance. In this regard, the following specific areas were identified as important priorities:

- Defining the natural history of the disease, particularly disease progression in the countries of the Region and the pattern of opportunistic infections;
- Identifying factors that promote HIV transmission including risks associated with other sexually transmitted infections;
- Assessing the feasibility of implementing interventions to prevent mother-to-child transmission including provision of antiretroviral drugs, expansion of voluntary counselling and testing programmes and issues relating to breastfeeding and alternative feeding systems;
- Estimating the burden of STI through prevalence surveys among different population groups and monitoring of gonococcal antimicrobial resistance, and
- Evaluation of HIV/AIDS surveillance programmes with a view to streamline and further strengthen epidemiological surveillance.

4.3 Social and Behavioural Research

Patterns of behaviour are amongst the most important determinants of HIV infection. The prevention of HIV infection is generally based on attempts to change behaviour. Research is required not only into patterns of risk behaviour in the community, but also into the efficacy of different interventions to change behaviour including use of condoms. There are many unanswered questions regarding the efficacy of counselling in changing behaviour, especially in those infected. Answers to such questions can improve programme performance. Specific priority areas for research include the following:

- Identifying and describing risk behaviours and cultural and social contexts that place individuals at risk of HIV infection and linking such studies with the development of interventions among specific population groups;

- Evaluating various approaches used to promote and provide condoms including social marketing approaches and evolving effective ways of empowering women to negotiate condom use;
- Studying health seeking behaviour, particularly among women in using services at Government STI facilities in comparison to private practitioners and variously qualified health care providers from different systems of medicine, and
- Assessing the socioeconomic impact of HIV/AIDS at individual, community and national levels and quantifying the needs of families in providing emotional and health care support, and otherwise cope with HIV/AIDS among family members.

4.4 HIV/AIDS Care

The health impact of HIV/AIDS is likely to be enormous in the future, when a large number of individuals will require care and support. Research in this area along the continuum from health institutions to the community and home is therefore very important. The following are some priority areas for research:

- Assessing the needs, attitude, practices and skills of health care providers in managing patients with HIV/AIDS and providing quality care;
- Developing models through analysis of country experiences, on provision of care at community level including cost-effective way of establishing voluntary counselling and testing services, especially for those who need it;
- Identifying ways that various programmes such as TB, etc. could collaborate to manage HIV-associated opportunistic infections as a part of general health services;
- Developing antiretroviral drugs suitable for and affordable by the member countries, and
- Developing protocols to systematically test the efficacy of alternative therapy and herbal medicine through randomized double-blind clinical trials.

5. FROM RESEARCH TO POLICY FORMULATION AND IMPLEMENTATION: ISSUES AND CHALLENGES

During the course of the discussions, the following points emerged:

Research, on its own, is fascinating and important in the long run. However, research without its appropriate application for policy formulation and implementation is a luxury that developing countries cannot afford. But research relating to programme needs is a necessity that no country can do without. It is important, therefore, that research findings are implemented at the earliest opportunity. This incorporation of country-specific research findings into programme formulation and implementation is the only way of improving the relevance and efficiency of the national programme.

It is essential therefore that a feedback mechanism be established in all countries that encourages a regular dialogue between researchers and national programme managers. This can, on the one hand, make research more relevant and topical by keeping researchers aware of field problems. On the other hand, the findings and insights gained by researchers would expeditiously come to the attention of the programme managers who would have "ownership" and ensure that research findings, especially operational research findings, are speedily reflected in programme implementation. To be used quickly for programme purposes, the research, particularly operational research should be carried out quickly so that findings are available within six months.

There are many similarities in the situations faced by programme managers in different countries of the Region. It is important, therefore, that research findings are shared between different countries of the Region. Mechanisms such as a regular newsletter, a web-based information source etc. can also be used effectively. This is an area where WHO can serve a very useful function. The dissemination of research information can be undertaken by WHO, perhaps by adding a page or two to its existing newsletter on HIV/AIDS.

Another useful area of cooperation between countries is the networking of laboratories and scientific expertise. The strengths of individual countries and scientists can be expanded beyond their national boundaries. WHO can serve a useful function by developing a directory of skills and resources for the Region.

6. FOLLOW UP ACTIONS

6.1 By Member Countries

- (1) The national programme should promote research in HIV/AIDS programme development and evaluation. Research carried out by different institutions should provide evidence that can be used for planning, implementing and monitoring national programme activities.
- (2) HIV/AIDS research should be viewed as a tool for policy formulation and form an integral part of the overall country plan of action. Funds should be routinely earmarked and mobilized, if necessary, for implementation of HIV/AIDS research.
- (3) A mechanism should be established for regular dialogue between researchers and programme managers, in order to facilitate use of research findings.
- (4) Research capacity should be consciously strengthened in all countries. Partnerships should be developed between individuals, institutions and programmes for carrying out and using research for programme purposes.
- (5) National Information Centres should be established for HIV/AIDS-related information including those emanating from studies. Countries should initiate steps to develop an inventory of HIV/AIDS research conducted in the country and document "best practices".
- (6) A network of laboratories and institutions within the country should be established to exchange experiences and to share research data including the national programme.

6.2 By WHO

The World Health Organization should actively encourage research in priority areas in the Member Countries. The following measures should be taken:

- (1) Consider setting up a special Programme on HIV/AIDS Research and Training with adequate capacity to provide support to Member countries.

- (2) Promote HIV/AIDS research as a priority and encourage countries to set aside some resources, say 10% of the national programme budget for conducting operational research to support and strengthen programme planning and implementation.
- (3) Develop generic protocols/guidelines on priority research areas and encourage/support research activities using these generic protocols.
- (4) Initiate steps to mobilize resources at regional and country levels from multilateral and bilateral agencies for HIV/AIDS research.
- (5) Encourage and facilitate research collaboration between the countries in the Region and organize, on an annual basis, regional consultations on HIV/AIDS research to monitor activities, follow-up progress and identify emerging priorities.

Annex

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