



HEALTH RESEARCH POLICY

Preamble

India is a significant contributor to knowledge on health, with research outputs ranging over the full spectrum, from epidemiology and clinical care to biotechnology and genomics. A large number of government departments (Health, Science and Technology, Atomic Energy, Human Resource Development, Social Welfare, *etc.*) support health research. Research work is carried out in national institutes, autonomous research organizations/institutes, universities and other academic institutions and by a variety of private organisations, including the pharmaceutical industry. The Indian Council of Medical Research (ICMR), an autonomous council established under the Ministry of Health and Family Welfare, is the agency responsible for medical research in the nodal ministry. In addition, the Department of Science and Technology (DST), the Department of Biotechnology (DBT), The Council of Scientific and Industrial research (CSIR) and the University Grants Commission are some of the other major agencies financing health research. There are also other Councils of Research in the Ministry of Health and Family Welfare for *Ayurvedic* and other systems of Medicine.

Health has been accepted as a fundamental right of all people by the Constitution of the World Health Organisation (WHO) and in the International Declaration

of Human Rights. The fundamental right to life enshrined in the Constitution of India, includes the fundamental role of health as an integral component. India is making significant investments in health and health research, but so far a Health Research Policy has not been formulated. In view of the importance of health and the need for research to provide the evidence for the maintenance of health and for formulating rational health care policies, it is essential that a Health Research Policy is laid down to channel efforts and funds in the right direction. In order to formulate the policy it is necessary to examine relevant existing national and international policies and review briefly the current status of health research in India.

National Health Policy

The first National Health policy of 1983 was a response to the commitment to the Alma Ata declaration to achieve "Health for All by 2000". It accepted that health was central to development and had a focus on access to health services, especially for rural populations. While much was achieved in health services infrastructure development, the health service system continued to be plagued by widening inequities in access to health care and the quality of care. The need for an evidence base was not recognised fully. The poorly regulated health system has undergone

dramatic change since 1983, with an emerging for profit corporate health care system, which has further marginalised the development of the public system. A new National Health Policy – 2002 which aims to reduce the overall burden of disease, promote health, encourage intersectoral coordination and improve the service delivery system is now in place. The improvement of education and training and integration of appropriate technology to assure high quality affordable care is a feature of this policy. A high priority has been accorded to research in areas of national and epidemiological importance and futuristic concern. It is therefore timely that a Health Research Policy is enunciated to ensure that these goals are met.

Science Policy Resolution

The Scientific Policy Resolution of the Govt. of India, released on 4th March 1958, clearly identified the role that science and technology can play in the growth and development of the nation, and the advancement, materially and culturally, of the people. The stated aims of the policy, "to foster, promote and sustain, by all appropriate means, the cultivation of science, and scientific research in all its aspects – pure, applied and educational", with a focus on human resource and infrastructural development and scientific freedom, is equally applicable to health research, although it was not specifically mentioned.

Health, Health Research and Development

Health is a key factor in national prosperity. It is a truism that disease is no respecter of national boundaries... At the same time major scientific breakthroughs hold the promise of more effective prevention, management and treatment for an array of critical health problems. Poor health and more broadly poverty and vulnerability, have never received as much genuine political attention as in the recent past. The inherent danger in the powerful and inexorable forces of globalization, and similarly with the revolutionary applications now arising from new genetic understanding, is their potential to accentuate inequality. While their fruits are enjoyed by those nations and groups with the means of access, they are generally not available to the world's poor who, instead, progressively crowd the margins behind barriers that are ever more difficult to penetrate. Despite overall gains in health since Independence in 1947, in many instances, health inequities between rich and poor, have widened. New and re-emerging diseases have undermined gains, and accidents, injuries, mental health problems and non-communicable

diseases pose new challenges even as India tries to cope with the long standing challenges of maternal and infant mortality. Globalisation, trade reforms and the focus on intellectual property rights are additional pressures for India to face. This, therefore, may prove a metaphor for the twenty first century: the choice between an inclusive world focussed on health problems that afflict the vulnerable, or a growing marginalisation of those with the greatest burden from the means to improve their situation (World Development Report, 1995).

Over the past decade or so, there is substantial evidence to suggest that national governments of several countries increasingly recognize that health research has the potential to help reduce the impact of many health problems faced by their populations, and thus contribute to national development. This was emphasized in the World Bank's 1995 World Development Report "*In India, this recognition has been there from even before Independence in 1947 AD, and governmental support to a limited extent has been available.*" It is timely as we are in the early days of a new century and millennium, when India is poised to take its rightful place in the global village, that a policy spelling out the critical role of health research in the country's development is adopted.

Health Research and Evidence based Health Policies

It seems quite obvious and apparent that any policy or strategy should be evidence based, especially as scarce resources are to be utilised in implementing the policies. There are several examples of Indian research providing the evidence for the formulation of strategies, policies and programmes (Vitamin A prophylaxis, National Malaria Elimination Programme, National Immunisation Days, DOTS regimen for treatment of tuberculosis). The contributions made by these essentially Indian discoveries to national welfare is unquestionable, but in some instances they had to be rediscovered by international agencies before they were nationally implemented. There is therefore an urgent need for a Health Research Policy aimed primarily at generating information coordinating all concerned stake holders and using it for determining national priorities for implementing health programmes.

International Initiatives Outlining Rationale and Need for a Health Research Policy

In 1990, the Commission on Health Research and Development proposed a set of strategies through which the potential of research could be harnessed to accelerate

health improvements and to overcome health inequities throughout the world. The concept of Essential National Health Research (ENHR) was enunciated by the Commission to describe the health research (and the health research capacity) on which each developing country should concentrate. This incorporated two approaches (i) research on country specific health problems necessary to formulate sound policies and plans for field action; and (ii) contributions to global health research aimed at developing new knowledge and technologies to solve health problems of general significance, which are also relevant to the population of the country. The Commission also recommended that at least 2% of national health expenditure should be invested in ENHR, and that at least 5% of project and programme aid for the health sector from development aid agencies should be earmarked for research and research capacity strengthening. As a consequence of the above recommendations, the World Health Assembly, in 1990, adopted Resolution WHA 43.19 calling for member states of the WHO to undertake health research appropriate to national needs.

In 1993, the World Bank, in collaboration with the WHO, outlined the priorities in *Investing in Health* (World Bank 1993). A follow-on Conference in Ottawa, co-sponsored by IDRC, WHO and the World Bank, resulted in three major initiatives, one of which was an examination of issues relating to and redirecting investment in equity oriented development to health, led by the World Bank. World Bank assisted projects initiated in the 1990s in India reflect the Commission's as well as the Bank's current philosophies.

Another initiative emerging from the Ottawa Conference was an *ad hoc* review of health research priorities (with WHO as the Secretariat), which resulted in a five-step systematic approach being suggested for resource allocation for strategic health research. The third initiative was the establishment in 1997 of the Global Forum for Health Research (GFHR). The GFHR has since identified the inequities in health research financing, where 90% of the investment in health research addresses the problems of 10% of the world's population (the '10/90 gap').

A relatively recent development is the growth in the number, size and financial outlay of philanthropic foundations and international NGOs. While their stated aims and objectives cannot be faulted, in several instances there is cause for concern on their limited or narrow agenda, the likelihood of their diverting national focus or influencing the thrusts and direction. This could be to the detriment of national interests, thus reinforcing the need for national policies.

In India while most of the agencies funding research have plans in general linked to the National five year plans, a coordinated Health Research Policy which could guide the planning and implementation is not yet in place. Some of the conflicts and failures of Indian health research can be attributed to the absence of such an overarching policy.

CURRENT STATUS OF HEALTH RESEARCH IN INDIA

Achievements of Health Research in India

A common criticism of scientific activities in India in general, and of medical research in particular, has been that no significant achievements have occurred, particularly in the post-independence period. Major breakthroughs of the Nobel Prize winning kind require an investment and infrastructure that has been unaffordable by the country. However, there are several instances over the past fifty years that clearly indicate that in spite of the handicaps and difficulties, contributions have been made in the health sector through research done in India by Indians, which have significantly changed the health scenario. Some examples of such contributions would include: the identification of emerging or reemerging infections (Kyasanur Forest Disease, *Vibrio cholerae* 0139, resurgence of leptospirosis, adult variants of measles); development of diagnostics (Japanese encephalitis, dengue, hepatitis A, group A rotavirus, malaria, kala azar, 0139 cholera, hepatitis C); development of vaccines (KFD, cholera, leprosy); major field evaluation of vaccines (leprosy, TB); development and operationalisation of treatment regimens (short course chemotherapy for TB, supervised chemotherapy—now called DOTS—for TB, multi-drug therapy for leprosy, oral rehydration solution—ORS for diarrhoeal diseases, vitamin A prophylaxis for children to prevent nutritional blindness, iron and folic acid supplementation for pregnant women); new drug development (Centchroman, Arteether); development of strategies for delivery of services (pulse polio, DOTS, integrated disease vector control, rheumatic fever / rheumatic heart disease); development of nationally appropriate guidelines (for tubal sterilisation, assisted reproduction); generation of data (on dietary intakes, and nutritional status leading to formulation of recommended dietary allowances for Indians, nutritional value of Indian foods, magnitude of the problems of blindness, hearing impairment, cancer and mental illness, haemoglobinopathies); discovery of a rare blood group (the Bombay Group); preparation of a Genetic Atlas of Indian Tribes; demonstrating the safety, efficacy and cost-effectiveness of *Kshaarasootra*

(an *Ayurvedic* medicated thread) technique as a non-surgical ambulatory technique for management of fistula-in-ano; providing the basis for formulation of new programmes for non-communicable diseases (cancer, blindness, deafness, mental health) and developing the Ethical Guidelines for Biomedical Research on Human Subjects in India (1980 and 2000).

The contributions of the pharmaceutical industry in making available at affordable cost almost all drugs required by the Indian population, is the direct result of the considerable investment in research on alternate processes which are cost effective.

These achievements are not the result of any single agency's effort. Coordinated efforts of a number of agencies of the government, especially in the Ministry of Health (Indian Council of Medical research), the Ministry of Science and Technology (Council of Scientific and Industrial Research, Department of Biotechnology, Department of Science and Technology, *etc.*), the Ministry of Human Resource Development (University Grants Commission) and others have worked together to achieve these results. Clearly a policy driven investment in infrastructure and manpower development and a climate of scientific freedom that fosters initiative as envisaged in the National Science Policy will increase the contributions of health research. This is essential to ensure that health acts as a major catalyst of development. This coordinated effort has developed a number of facilities, which can form the nucleus around which further capacities can be developed.

Constraints and Concerns

The achievements of Indian health researchers could have been greater but for some identifiable constraints. These are a matter of concern and it is necessary to identify them in order to give the necessary impetus to enable health research to be a vehicle for national development.

- (i) Policy makers do not readily recognise the developmental importance of national health research. In fact important current health programmes like the National Immunisation Days and DOTS, which arose from the results of Indian health research, were only implemented when they were given the seal of International acceptance.
- (ii) The crucial role of health research has not been recognised by providing a departmental status to research in the Health Ministry. This is essential for health research to develop the impetus to be a catalyst of development.

- (iii) National coordination of the considerable investment in research in the health sector is currently not done. There is no national plan or consensus on priorities.
- (iv) A 'research culture' and a climate that fosters health research are not present. In fact many scientists feel that they subserve a bureaucratic agenda and procedures.
- (v) Capacity development, for human resources and infrastructure is not recognised as a priority.
- (vi) The medical educational system does not foster a research culture. The glamour of curative care often works as the career guiding principle of medical students.
- (vii) A clear research career structure and productivity related incentives are not in place.
- (viii) Intersectoral linkages are weak and serve primarily for information and not for coordinated action.
- (ix) The tools of modern information technology and biotechnology are relatively inaccessible to the majority of health professionals and researchers.
- (x) The links between health research and health services and programmes are weak and ill defined.

Challenges Facing Health Research in India

Given the achievements made, the constraints faced and the concerns felt, the challenges before the country in so far as health research is concerned are:

- (i) How can health research contribute to reducing the inequities in health between various segments of the Indian people?
- (ii) How are the priorities to be determined, at what level (national, state, district), and how often?
- (iii) How are certain current issues to be addressed, such as demographic and epidemiological transition and its implications for human health, modern biotechnology (including genomics, human genetics, new drug development), environmental and ecological impact on human health, as also emerging and reemerging diseases?
- (iv) How can the health research system be more integrated with the national health development plans?
- (v) Are the guidelines for ethics in human subjects research adequate in India? If not, how can they be improved and harmonised with internationally accepted guidelines? How can the principles of ethics be put into practice?

- (vi) How can the Indian health research system contribute to global, regional and other national research systems?
- (vii) How can India attain and retain a critical mass of researchers in various disciplines affecting health?
- (viii) How can a demand for research be generated among policy makers, health workers, community groups and others?
- (ix) What targets can be set for financing of health research, and what are the actions that would be required to be taken to achieve these targets, from both internal and external sources?
- (x) How can the resources available for research (human, financial, infrastructure) be accessed and used judiciously to address the national priorities?
- (xi) How would allocations be made and monitored?
- (xii) What actions would be required to increase the access to national and international research literature and knowledge base, both as contributors and as users?
- (xiii) How can closer links be ensured between the research community, health services and policy makers, in order to facilitate the utilisation of research results in practice and policy formulation?
- (xiv) What are the threats posed and opportunities offered by globalisation? How are these to be addressed?
- (xv) How can a research culture be developed wherein policy makers and communities are sensitised to the value of research, and the research environment is supportive of scientists and science?

STRATEGIC VISION FOR HEALTH RESEARCH IN INDIA

National Health Research System

Health research in the country should be developed into a National Health Research System (NHRS) wherein all research agencies, cutting across ministries and sectors identify priority areas of research and coordinate with each other to avoid duplication, fragmentation, redundancy and gaps in knowledge, in order to enable the results of research to transform health as a major driving force for development. The NHRS shall be managed by a National Health Research Management Forum (NHRMF).

Goals of the NHRS

- To generate and communicate knowledge that helps to form the national health plan and guides its implementation, and thus contributes, directly or indirectly, to equitable health development in the country;
- To adapt and apply knowledge generated elsewhere to national health development; and
- To contribute to the global knowledge base on issues relevant to the country

Underlying Values

Health research as an investment

Health research should be considered as a necessary investment for health as well as overall development. Its value as an investment for a healthier population and as a means for cost- beneficial services is recognised and acknowledged.

Equity

A commitment to addressing the problems of the vulnerable segments of the population, in order that the benefits of research are accessible to them.

Ethics

A commitment to the ethical practice of health research. The current guidelines will be periodically reviewed and given legislative approval.

Self-reliance

Self-reliance in financing, human resource development and upgradation of infrastructure and the sovereign right to determine priorities and set out strategies.

Ownership

All stakeholders in the research process will have the right to participate in and have access to the outcomes of the research. The rights of individual citizens to be aware of and participate in the fruits of research shall be protected.

Solidarity

A spirit of solidarity will be promoted among all the stakeholders in the Indian Health Research System

Development of a research culture

It is essential to inculcate a research culture among all concerned with the health sector, in order that the value of research and of researchers is recognised, and a supportive environment for research is created at all levels.

Intersectorality

The essentiality of intersectoral cooperation in health and development will be recognised, and made more effective and meaningful.

Partnerships

Partnerships within the country, and outside would be essential to derive the maximum possible benefit from research endeavours. While strengthening and expanding partnerships the sovereign rights of the country will be protected.

Accountability

Researchers, managers, policy makers and decision-makers will be accountable. The criteria for accountability will not only relate to monetary matters, but also include the translation of research into action.

Operating Principles***The National Health Research Plan***

A National Health Research Plan shall be developed based on a transparent priority setting exercise involving all stakeholders. It shall be a rolling biennial plan, to be reviewed and updated annually in the framework of a five year projection. This shall be the major responsibility of the National Health Research Management Forum.

Priority setting

A priority research agenda will be developed based on national needs, for health to be a vehicle of equity and development and in accordance with the following principles:

Responsiveness

Current and emerging issues such as demographic and epidemiologic transition, emerging scientific developments such as modern biotechnology (genomics, human genetics, new drug development, stem cell research), health system research, health economics, behavioural and social issues, emerging and reemerging infections, *etc.* and the priorities of the national health plan will guide the research agenda.

Integration

The integration of the national research plan with the priorities and aspirations of society is essential for the ready utilisation of the results of research. The linkages of the health system with communities, district and state governments and the central government is essential for developing the data bases necessary for research and service priority setting and decision making. The generation of this data shall be a priority.

Multidisciplinarity and linkages

Health research, in addition to the field of health, intersectorally encompasses education, environment,

ecology, social and behavioural sciences, population, agriculture, trade, commerce, along with the physical, chemical, biological and mathematical sciences. This multidisciplinary will be reflected in the national health research plan.

Social and behavioural sciences and health economics

In order to make meaningful health policies, plans and programmes and to make medical technology useful and accessible to the community, it is essential to understand the community's perception of health problems, health services and health care providers. Social and behavioural sciences and health economics are integral to health research and will be actively fostered.

Focus on vulnerable and disadvantaged populations

Equity in services and development shall be the cardinal principle undergirding the health research system. There shall be a special emphasis on vulnerable groups, tribal populations, unorganized labour, women, children, adolescents, and the aged who remain in the periphery of society and the larger health sector. Data on expenditure on health on these sectors, problems on delivery of health care and the potential impact of innovations in public sector financing/ resource generation such as user fees, and the economic burden of disease in vulnerable groups and its impact on national development are key issues.

The private sector in health research

The private sector, pharmaceutical industry, biotechnology and biomedical technology oriented industries, private educational institutions, hospitals and nursing homes, research foundations and institutions, private practitioners, NGOs and community based organizations (CBOs) working on a not-for-profit basis, *etc.* are now major stakeholders in health care research and delivery. The National health Research System recognises their important role in health research and shall foster their participation in the system as partners.

International linkages

In the current global scenario international collaborative efforts are recognised as one of the factors in successful research because of the complementarity of technology transfer, capacity building and access to diseased populations. There are a large number of potential partners and in the choice of partners the priorities of the National Health Research Plan and national interest shall be paramount. Linkages with international developmental partners and WHO and other UN agencies shall be further developed and strengthened.

Ethical research

The Ethical Guidelines for Biomedical Research on Human Subjects (ICMR 2000), along with the guidelines being developed by the Deptt. of Biotechnology for Human Genetics Research and the Guidelines for Research and Experimentation on Animals of the Government of India, shall be mandatory for all research. The Health Research System shall review the guidelines from time to time, and harmonise them with International guidelines. Facilitation of training in ethical research shall be the responsibility of the system.

Targeted financing

The National Health Research System shall be responsible for ensuring equity in resource mobilisation and allocation of public funds. It shall endeavor to ensure that the allocation/expenditure on health research is at least 2% of the allocation/ expenditure on health. International funds will also be mobilised in keeping with the national priorities,

Monitoring and evaluation

To ensure that resources are used efficiently and in line with agreed priorities there is a need for continuous monitoring and evaluation. The health research system will develop explicit policies and procedures for reviewing proposals, and for monitoring and evaluating the output and impact. Indicators will be developed to monitor the development and effectiveness of the health research system. Indicators would also be defined for assessing health status, health system effectiveness, efficiency and affordability, in order to capture the contribution of research in reducing inequities. Direct indicators of national development, would serve as indirect indicators of the efficacy of health system research as a vehicle of development.

Currently Identified Research Priorities

The Indian Council of Medical Research is in the process of identifying the research priorities in a major national multidisciplinary effort. This will form the basis on which the National Health Research Management Forum will update the priorities from time to time. For the present, the priorities identified for the tenth Five Year Plan shall guide the national health research system.

SUGGESTED ARCHITECTURE OF THE NATIONAL HEALTH RESEARCH SYSTEM

The Present Status

A large amount of research is carried out in India by a multiplicity of organisations and institutions and sponsored by a variety of governmental agencies and international sponsors. There is no agency for coordination of this large endeavour and avoidable duplication and unhealthy competitiveness is an unfortunate feature. The Ministry of Health and Family Welfare is the nodal ministry for health and is primarily considered as a social sector ministry and not a science sector one. The reality of the necessity for a scientific evidence base for the optimum delivery of health care essentially requires research. Further, the rapid advances in modern biotechnology in the medical science means that unless India is able to respond effectively, the role of health as an engine of development will remain as a dream in our country. The key to future success in this field is dependent on a coordinating role for the nodal ministry with the willing cooperation of all others concerned to develop a National Health Research System (NHRS). Efficient coordination, planning and financing of the NHRS requires the establishment of a National Health Research Management Forum.

The National Health Research Management Forum

The Health Research Policy envisages a system wherein all present and prospective players have their own space. However, an overarching National Health Research Management Forum is proposed, having representation of all key stakeholders, the ICMR as its secretariat, and the following functions/ terms of reference:

- (i) Advise on and evolve national health research policies and priorities and to evolve mechanisms and action plans for their implementation;
- (ii) Develop a five year projection of the plans for health research and to prepare a biennial rolling national health research plan;
- (iii) Review the output from the national health research plan annually and prepare the plan for the next biennium;
- (iv) Promote the development of health research activities in the country;
- (v) Review biomedical and health research management, and suggest strategies to overcome problems in implementation of policies;
- (vi) Suggest mechanisms to nurture a scientific environment to attract talent and to develop human resources for biomedical and health research.

To facilitate utilisation of research results the NHRMF will be chaired by the Minister of Health and co-chaired by an eminent health researcher. The secretariat shall be in the Indian Council of Medical Research and the Director General of the ICMR shall be the Secretary. The NHRMF shall take all steps which are necessary to discharge its functions based on the underlying values and principles outlined under Strategic Vision for Health Research in India.

The NHRMF will have special responsibility for the following functions:

Stewardship

This would encompass a range of activities for the national health system intended to ensure quality leadership, productivity, strategic direction and coherent action. Sub-functions would include strategic vision, policy formulation, priority setting, performance and impact assessment, promotion and advocacy, and the setting of norms, standards and frameworks for the sound practice of research.

Financing

The essential functions of the system as regards finances would be to address issues related to resource generation, targeted allocation and judicious utilisation. On the basis of recommendations of the National Health Research Management Forum, funds would be allocated in ways that are generally consistent with national priorities. External partners would be apprised of these priorities, while a national capability to monitor where and how research funds are being spent, and the quantities involved, would be created and put in place. Efforts would be made to invest at least 2 per cent of national health expenditure in research and research capacity strengthening.

Knowledge generation

The research system would generate knowledge relevant to the Indian health situation, appraise the measures available for dealing with health problems, and suggest the actions likely to produce the greatest improvement in health.

Utilisation and management of knowledge

The research system fully endorses the principle that the research process does not end with knowledge generation, but includes the translation of results into policy or action, or absorption into the existing knowledge/technology base. For this to happen, links will be strengthened between researchers, policy makers, health

and development workers, non-governmental organisations, and communities. Vertical and horizontal connectedness will be improved upon. More specifically, for better utilisation and management of knowledge, an information culture would be fostered, supported by enhanced use of information technologies currently and likely to be available.

Capacity development

A long-term approach to the development and maintenance of research capacity will be adopted. Efforts will be focussed on both the quantity and quality of skills available/ needed, including research techniques, research priority settings, research management, use of research (demand side), policy and systems analysis, communications, development of partnerships, *etc.* A situation analysis, followed by a phased and realistic plan would be prepared to ensure constructive and sustained capacity development. Thus, both the 'Supply' and 'Demand' sides of the research system needs will be addressed.

STRATEGY FOR ASSESSMENT OF THE SYSTEM

In view of the plurality of the health research system, the strategy for assessment must have a much broader perspective in dealing with multiple stakeholders of research funding agencies, leaders, managers and research investigators in the system. The proposed research architecture is expected to contribute to the strategic vision and goals of the health research system that can be assessed against a set of criteria. The following criteria are proposed :

Robustness

The architecture of the health research system should be such that it should advance health research for development. All the organizations within the health research system should pay attention to the goal of equity. The National Health Research Management Forum should ensure the comprehensiveness of the national research architecture.

Competence and Effectiveness

The structure should allow the formulation of a coherent strategy for achieving reasonable scientific goals. The system should have competent technical advisory committees and ethics committees to ensure the achievement of the goals and means. For quality research, there should be mechanisms to review protocols objectively through peer review processes. There should

be research committees to monitor the progress of the research. Further, every research organization must have its own research, administrative and audit system adapted from well-tested practices and experiences of others. Apart from using research for policy and programmes, emphasis should be given to publication of research findings in internationally peer-reviewed scientific journals.

Credibility and Accountability

The research system should be responsive and sensitive to the concerns of various stakeholders. For this, appropriate mechanisms would be developed to get feedback and disseminate evidence among stakeholders of the health research system. The research system should hold forth the promise of achieving the goals of equity and development through not only good quality research, but also cost-effective research. There should be good financial auditing of research to ensure fiscal responsibility and accountability. The health research system should provide a high standard of stewardship.

Ability to Champion the Cause of Health Research for Development

The research structure should be able to articulate effectively the significance of health research for development at various levels. Such an effort should start at the National Health Research Forum and move down to community level.

Ability to Generate Research Funding

There should be a conscious effort to set aside a significant proportion of funds of health programmes for health research. Research organizations should be able to attract funding through their credibility from international funding agencies. Government should provide tax and other incentives for the private sector setting aside research funds.

Research Governance and Management

A responsive and responsible governance and management structure needs to be developed in every research institution. This may be in the form of governing bodies or oversight bodies or auditing mechanisms. While facilitating the goal of development and equity, it should also show the responsibility and accountability to the

stakeholders in terms of quality of research and financial accountability. Such a body will also strictly monitor the ethical aspect of health research.

Cost-effectiveness

Stewardship, quality assurance, administrative and financial audit should be in place to ensure increased yields in research productivity and financing as well as in meeting the broader goals of health research for development and equity. Timeliness of conducting research should be ensured.

THE HEALTH RESEARCH POLICY STATEMENT

Health is a fundamental right of all people. An evidence base developed by appropriate research should be the basis of Health Systems and Services. The global imbalance in the allocation of resources for health research, the 10/90 disequilibrium, has resulted in a low priority for research on the pressing health problems of much of the developing world. India is fortunate that significant resources are allocated for research and that funds are available in a diversity of fields and disciplines to be used for health research.

Health is also now recognised as a fundamental issue in National Development and a factor that promotes equity. A clearly defined Health Research Policy therefore is the basis for maximising the return on investment in this important field. This policy aims to facilitate this process by:

- 1. Generating the evidence base for Health Systems and Services, so that they will be significant promoters of equity and contribute to national development.**

Health is not merely the absence of disease and a healthy population is the basis of national equity and development. The aim of research is to produce the evidence base necessary for optimum Health Systems and Services. In addition to active in-country research, this would involve critical review of the global evidence base, its adaptation for national conditions and communication to policy makers.

- 2. Establishing linkages between health research and national health programmes to facilitate the operationalisation of evidence based programmes and to obtain feedback for the optimisation of health research.**

The evidence available for health strategies should be operationalised. The operational research necessary for this, based on a full understanding of national programmes, is one of the responsibilities of the researchers.

3. **Encourage the development of fundamental research in areas relevant to health, such as physiology, biochemistry, pharmacology, microbiology, pathology, molecular sciences and cell sciences, to ensure that a national critical mass of scientists who can contribute the benefits of modern technology to health research is developed.**

A critical mass of health researchers can only be built up by developing a research culture in the educational institutions.

4. **Ensure that the optimum benefits of modern technology are harnessed to promote national health.**

This would include in the area of biotechnology, the development of a national vaccine policy, genomics based drug development, and the optimal utilization of molecular biologic developments for diagnosis, therapy and prevention. Other areas are the utilisation of remote sensing data and geographic information systems in health, appropriate animal experimentation facilities, microbial containment facilities, and gene and tissue banks.

5. **Build and integrate capacity for research in national health programmes, research institutions and in the private sector (profit and non-profit organisations) utilising as far as possible areas of excellence already available in the country.**

The technological, information and research excellence already in the country should be recognised and should form the basis of a major capacity building process to enhance the quantum of relevant research carried out in the country. Where essential, International resources should be judiciously used for capacity building.

6. **The optimal use of information, communication and networking (IC&N) technology to ensure that the global knowledge base is available for national programmes, and that research is channeled in relevant directions without unnecessary duplication.**

There is a large volume of research results available globally and it is essential to ensure that national research does not unnecessarily duplicate available evidence which only requires operational research to be implemented in national programmes. The optimal use of modern I, C & N technology is essential for this.

7. **Managing global resources and transnational collaborations optimally to ensure that collaborative health research primarily facilitates the development of National Health Systems and Services.**

The world is developing into a global village, but there is a danger that in all research sponsored transnationally, priorities may not be focussed on national needs. The policy would require that the paramount nature of the priorities of the National Health System and Services is ensured.

8. **Health research should be truly intersectoral and harness the resources in areas such as social sciences, economics and traditional systems of medicine.**

Health is not just the concern of modern medical science. Health research should be holistic and ensure that resources in anthropology, sociology, economics and education are optimally used to solve the real problems of the people.

9. **Optimum harmonisation of national policies in a variety of areas (education, social sciences, population, agriculture, nutrition, trade, commerce, etc.) is essential to facilitate intersectoral collaboration and partnership, so that maximum developmental returns can occur from health research.**

Health as a developmental mechanism is truly intersectoral and harmonisation and coordination is essential for realising its full potential.

10. **A National Health Research Management Forum should be established as the body responsible for evolving, harmonising and evaluating the implementation of the Health Research Policy.**

This write-up has been adapted from the publication "Health Research Policy" brought out by the ICMR, New Delhi.

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