

NATIONAL HEALTH RESEARCH STRATEGY

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Organization**

**Bangladesh Medical Research Council
Ministry of Health and Family Welfare**

Committee for update/formulate 2nd edition of National Health Research Strategy

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Bangladesh National Health Research Strategy developed in 2009, to promote the practice and conduct of research that contributes towards the improvement of human health and welfare of the people in Bangladesh. It attempts to create a framework and environment for health research to contribute effectively to health development, and for evidence to lead strategy formulation on the basis of Sustainable Development Goals (SDGs) of United Nations and 7th five- year Plan of Bangladesh. It constitutes an important document, which in the long run may contribute to the improvement of our health system and inform interventions geared towards a better life for all the people of Bangladesh.

Scientists of Bangladesh working in different institutions and health care settings, both within and outside government, are developing new knowledge by their research. Introduction of Oral Rehydration Saline (ORS), treating malnutrition, discovering transmission pathway of Nipah encephalitis, snake bite and malaria research, etc. are important landmark of our research in Bangladesh.

The research needs for Bangladesh require more coordinated, facilitate a coherent national health research system that contributes to equitable health development. The document is based on health research experiences, knowledge, expertise, available literature, various country experiences and a variety of national and internationally accepted standards and practices in health research. It was stated in this document that the Strategy will be updated after every five years. Accordingly, we have updated this Strategy, however, after eight years. Hopefully it will be again updated after next five years.

We appreciate and thank the National Health Research Strategy committee, review and editorial committee and individuals who contributed to the Strategy. We also thank the second drafting committee, reviewers and individuals who updated the Strategy 2020.

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Background

Health Research Strategy has been formulated formally in 2009. After eight years it is being updated. It is expected that the Strategy will be updated five-yearly from now. It seems quite obvious and apparent that a strategy should be evidence based, especially as scarce resources are to be utilized in implementing the policies. There is therefore an urgent need for a Health Research Strategy aimed primarily for generating information coordinating all concerned stakeholders and using it for determining national priorities for implementing health programs.

Strategic vision

Goals: To generate and communicate knowledge that helps to form the national health plan and guide 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.

Purpose: The purpose of the strategy is to provide an enabling framework for the conduction of research that improves human health and well-being in Bangladesh. The health research strategy for Bangladesh is located in both global and local socio-economic contexts, and seeks to respond proactively to the challenges of the millennium.

Mission: To promote research that contributes towards the improvement of human health and welfare in Bangladesh

General objective: To develop a national health research system that contributes to equitable health development.

Objectives: (a) To promote innovation in health and health related service delivery. (b) To advance through research knowledge that underpins health and equitable quality health care. (c) To develop a coordinated, well-funded agenda for research. (d) To nurture talent and develop capacity to conduct research and utilize its findings. (e) To create a framework for a health research system that would improve the quality, impact, effectiveness and efficiency of conduction of research. (f) To facilitate the integration of research in the health system through establishing the setting of research priorities as a corner stone of the system. (g) To ensure equity by linking finances to national priorities. (h) To build research capacity in all its facets within the community, health services managers, research institutions and decision makers. (i) To develop a communication strategy that will establish mechanisms for the dissemination of information and ensure that benefits of research are systematically and effectively translated into practice. (j) To establish links, collaboration and partnerships both locally and internationally between those involved in health, funding of research, researchers, research institutions and users of research

in public and private sectors and with respect to human health, animal health, environmental health, and food safety in line with One Health Approach.

Key principles:

(a) The National Health Research Plan (b) Priority Setting (c) Responsiveness (d) Integration (e) Multi-disciplinary Linkages (f) Socio- behavioral Sciences and Health Economics (g) Focus on Vulnerable and Disadvantaged Populations

Ethical research: Institutions and research bodies shall have to maintain the ethical standard by following Ethical Guidelines of National Research Ethics Committee. The National Research Ethics Committee shall review the guidelines from time to time. Facilitation of training in research ethics shall be the responsibility of BMRC.

Targeted Financing: Government of Bangladesh will ensure that the allocation and expenditure on health research is at least 2% of the total health expenditure under revenue budget. The Government will make arrangement to allocate more than 5% of WHO and other UN Agency Country Budget to health research. Any program or project under development budget will earmark at least 5% of the total allocation for Research & Development activities. It is expected that the pharmaceutical companies in the country (both national and multi-national) to allocate 50% of their research allocation to be operated by the BMRC following their goals and objectives with due recognition. International funds will also be mobilized in keeping with the national priorities.

Monitoring and evaluation: Indicators will be developed to monitor the development and effectiveness of the health research. Direct indicators of national development, would serve as indirect indicators of the efficacy of health research as a vehicle of development

A national Steering Committee has been proposed

The strategies

Health situation analysis needs to be an integral part of rational priority setting. A comprehensive model that combines amongst others, the health problem approach, health system approach and vulnerability approach should be adapted to the Bangladesh situation

The research priorities must be formally adopted through the governance structures of the different research institutions. The priorities must be formally ratified by the national government:

Health Problem Approach: Looks at the diseases that have the highest impact on morbidity and mortality.

Health System Approach: Looks at the health system as a unit and its effectiveness and efficiency.

Vulnerability Approach: Takes into account health problems of marginalized groups.

This strategy creates clear mechanisms for the re-allocation of government spending according to the health sector research priorities and needs.

1.1. Introduction

In Bangladesh a large number of government departments (Ministry of Health and Family Welfare, Ministry of Science and Technology, Ministry of Agriculture, Ministry of Fisheries & Livestock and different organizations under other ministries etc.) support health research. Research work is carried out in medical universities and colleges, national institutes, BSMMU, IEDCR, NIPSOM, ICMH, NIPORT, IPHN, IPH, BIDS, BCSIR, independent research organizations/institutes such as icddr, BCPS, BIRDEM, Heart Foundation, general universities and international organizations like WHO, UNICEF, UNFPA, WB, in many other academic institutions, pharmaceutical industries, NGOs like brac and by a variety of private organizations. The Bangladesh Medical Research Council (BMRC), an autonomous organization was established under the Ministry of Health and Family Welfare, is the nodal agency responsible for health research in Bangladesh. The Mission of the Council is to create effective and quality health care facilities for the whole population of the country by promoting health research through strengthening research facilities, training and dissemination of research results. The main activities of the Council include: organization, promotion and coordination of scientific research in various fields of health science, training of manpower in health research and dissemination of research results for proper utilization. In addition to BMRC, the Bangladesh Council for Science and Industrial Research (BCSIR), Bangladesh Atomic Energy Commission (BAEC), Bangladesh Bureau of Statistics (BBS) and the University Grants Commission (UGC) are some of the other agencies financing health research. Health has been accepted as a fundamental right of all people by the constitution of the World Health Organization (WHO) and in the International Declaration of Human Rights. The fundamental right to life enshrined in the constitution of Bangladesh, includes the fundamental role of health as an integral component. Bangladesh is investing in health and health research, and a Health Research Strategy had been formulated formally in 2009. After eight years it is being updated. It is expected that the Strategy will be updated five-yearly from now.

In view of the importance of health and the need for research to provide evidence for maintenance of health and for formulating rational health care policies, it is essential that a Health Research Strategy is laid down to channel efforts and funds in right direction. In order to present the strategy, it is necessary to examine relevant existing national and international policies and review briefly the current status of health research in Bangladesh.

1.2. Health Research and Development

Health is a key factor in national prosperity. On the other hand, disease has no national boundary. 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, have 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 1971, in many instances, health inequities between rich and poor, have widened. New and reemerging problems have undermined gains, and accidents, injuries, mental health problems and non-communicable diseases such as cardiovascular diseases, metabolic disorder and cancer pose new challenges. Even as Bangladesh tries to cope with the longstanding challenges of population growth, under-nutrition, maternal and infant mortality, shortage of health workforce such as nurses and technologists. Bangladesh is facing widespread arsenic contamination of drinking water which is a major public health problem. Globalization, trade reforms and the focus on intellectual property rights are additional pressures for Bangladesh to face. The paradigm shift for the twenty first century is the choice between an inclusive world focused on health problems that afflict the vulnerable, or a growing marginalization of those with the greatest burden of diseases.

In Health Policy of Bangladesh 2011, it was stated that health research is very much essential to formulate poor-friendly policies for health system and program, health care delivery etc. (p 8). The Policy identified the challenges, as: inadequate human resources, weak financial and institutional capacities. The Policy strategically targets to enhance the quality and perimeter of health research; allocation of adequate financial resources; emphasizing topics of public health, health management and policy, social-behavioral-implementation research; and capacity strengthening of different research institutes & relevant personnel.

In the document “Health, Nutrition, Population Strategic Investment Plan (HNPSIP) 2016-21” of Ministry of Health & Family Welfare, research has been placed as an important component. In component 6.6 of Strategic Framework of the 4th Sector Program, it has called to promote research culture across MOHFW and develop research plan. The action plan of this strategy includes: (a) strengthen key research institutes; (b) strengthen BMRC to play its desired role as the competent focal national health research institution; (c) strengthen NIPORT to play its desired role as the competent focal national FP research institution; (d) strengthen the coordinating role of Planning Unit in DGHS for research; (e) review and update the National Health Research Strategy 2009; (f) mainstream academic/operational research with national health priorities; (g)

build up capacity of policy makers, health managers and health professionals on utilization of data and research findings.

Sustainable Development Goals (SDGs), spearheaded by United Nations, has emphasized research and development, especially in Goals 3 and 9. It has called to support the research and development of vaccines and medicines (Goal 3.b), and as a whole to enhance scientific research and update the technological capabilities of industrial sectors (Goal 9.5). It has also called to substantially increase the number of research and development workers per 1 million people, public and private research and development spending.

1.3. Health Research and Evidence Based Health Policies

It seems quite obvious and apparent that a strategy should be evidence based, especially as scarce resources are to be utilized in implementing the policies. There is therefore an urgent need for a Health Research Strategy aimed primarily for generating information coordinating all concerned stakeholders and using it for determining national priorities for implementing health programs.

1.4. International Initiatives

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 program 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.

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 population (The 10/90 Gap).

WHO Strategy on research for health (2012) acknowledges that health policies and practices globally should be informed by the best research evidence. World Health Assembly (WHA) Resolutions 58.34, 60.15 and 63.21 on health research- (example, at least 2% of national health budget to be on research and research capacity development) emphasizes research for improving health in all dimensions.

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 detrimental to the national interests, thus reinforcing the need for national policies.

1.5. National Initiative

In Bangladesh while most of the agencies funding research have plans in general linked to the Health Policy 2011 and “Health, Nutrition, Population Strategic Investment Plan (HNPSIP) 2016-21” of Ministry of Health & Family Welfare, a coordinated Health Research Strategy which could guide planning and implementation, is not yet in place. Some of the conflicts and failures of Bangladeshi health research endeavors can be attributed to the absence of such an overarching strategy. Over the past decades 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. Resource allocation in health research being an investment (not expenditure) deserves more attention to achieve health development. Much more investment is needed for a new, innovative approach to research on health systems. It is a timely effort, as we are in the early days of a new century and millennium, when Bangladesh is poised to take its rightful place in the global village, that a strategy spelling out the critical role of health research in the country's development is adopted.

1.6. Health Research Challenges

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:

1. Reducing the inequities in health between various segments of the country.

2. Determination of the priorities at national, divisional, district and upazilla levels.
3. Addressing certain current issues, such as demographic and epidemiological transition and their implications for human health, modern biotechnology (including genomics, human genetics and new drug development), environmental and ecological impact on human health, as also emerging and reemerging diseases.
4. Integration of health research system with the national health development plans.
5. Linking of academic research (thesis, dissertation, treatise etc.) with the mainstream of national health problems and research in a consistent continued process.
6. Formulation of adequate ethical guidelines for human subjects and improvement and harmonization with internationally accepted guidelines and principles of ethics.
7. Linkage of Bangladeshi health research system to global, regional and other national research systems.
8. Attainment and retention of a critical mass of researchers in various disciplines affecting health.
9. Sensitization for research among policy and strategy makers, planners and managers, health workers, community groups and others.
10. Financing health research and actions to achieve targets, from both internal and external sources.
11. Availability of resources for research (human, financial and infrastructure) and judicious use of national priorities.
12. Resource allocation and monitoring.
13. Access to national and international research literature and knowledge base, both as contributors and as users.
14. Development of closer links between the research community, health services managers and policy makers to facilitate the utilization of research results in practice, decision making and strategy formulation.
15. Threats posed and opportunities offered by globalization.
16. Creation of research culture within policy makers, managers, researchers and communities to value of quality research; maintaining ethical standards and a research environment which will be supportive of scientists and science.

Health is also now recognized as a fundamental and integral part of national development and a factor that promotes equity. A clearly defined Health Research Strategy therefore is the basis for maximizing the return on investment in this important field.

The contribution of medical research towards improvement of public health is not negligible in Bangladesh. Research organizations of Bangladesh, both within and outside the government, developed research-based knowledge significantly over the years. For the past decades policy makers of Bangladesh Health System has translated research findings into policies and action. Important examples are: introduction of Oral Rehydration Saline (ORS), treatment of malnutrition, hepatitis B treatment, snake bite research, research on Nipah encephalitis, malaria etc.

2.1. Bangladesh Medical Research Council (BMRC) Bangladesh Medical Research Council (BMRC) was established in 1972 by the Father of the Nation Bangabandhu Sheikh Mujibur Rahman as an Autonomous Body under the Ministry of Health and Family Welfare (MOH&FW). As per resolution of the Government, BMRC is the focal point for Health Research. The objectives of BMRC are to identify problems and issues relating to medical and health sciences and to determine priority areas in research on the basis of health care needs, goals, policies and objectives.

BMRC has National Research Ethics Committee (NREC) for ethical clearance of research works in the field of Basic Medical Research, Clinical Research and Health System Research. BMRC has “Ethical guidelines for Conducting Research Studies Involving Human Subject” along with “Standard Operating Procedure (SOP)” for maintaining standard ethics practice in research.

BMRC invites research protocol to the researcher from different disciplines like Maternal Health, Child Health, Infectious Diseases, Nutrition, Health System Research, Herbal Medicine, Occupational and Environmental Health, Non-communicable Diseases, Reproductive Health, Mental Health, Health System research and Biomedical research etc. each year. Research funds provides on the basis on availability of the fund and consider the merits of the protocol. It publishes internationally recognized indexed journal “BMRC Bulletin” quarterly from 1975. This journal is internationally indexed in PubMed and Scopus. Articles are publishing in BMRC Bulletin from basic sciences, clinical sciences, health system Research and others. BMRC provides various training courses on Research Methodology, Data Analysis, Project Development and Report Writing, Biostatistics, Scientific Writing, Health System Research, Ethical Issues in Health Research, Computer programming about Research (SPSS) etc. with technical support of WHO and other partners.

BMRC arrange dissemination program on various scientific research with policy makers, relevant professionals, and stakeholders. BMRC is going to establish “Bangamata National Cellular and

Molecular Research Center (BNCMRC)” and also taking initiatives develop modern library for the researchers with digitalization.

2.2. Institute of Epidemiology, Disease Control & Research (IEDCR) is the government mandated institution for disease surveillance, outbreak investigation and response, research, and manpower development. The research experience of IEDCR is rich. Since 2009, the major areas of research and survey conducted by IEDCR were: National Tuberculosis Prevalence Survey 2014-15; HIV Seroprevalence Surveys; Influenza Survey; Chikungunya and Dengue Survey; Entomological Surveys; Clinical Trial on Miltefosine and Liposomal Amphotericin B; Oseltamivir Drug Trial; studies on Nipah, Anthrax, Antimicrobial Resistance, Hospital Infection, Hepatitis E virus, Mobile Technology Platform for Diarrhoea Treatment, Climate Change, Mass Sociogenic Illness, Efficacy of Rabies Vaccine, Assessment of Core Capacity for Implementing International Health Regulation; Prevalence of Soil-transmitted Helminths; Non Communicable Diseases (NCDs)

2.3. Bangabandhu Sheikh Mujib Medical University (BSMMU) conducts research mostly for academic requirement. Post-graduate students have to conduct data collection in a short period to write thesis. The Institute of Pediatric Neuro-disorder and Autism (IPNA) has conducted several important studies.

2.4. Institute of Public Health Nutrition (IPHN) conducts survey and research usually in collaboration with UN bodies, other government and non-government research organizations. Recent surveys included National Micronutrient Status.

2.5. Institute of Public Health (IPH) conducts research on Polio, food microbiology. IPH houses a state-of-the-art food safety laboratory

2.6. The Medical Colleges, specialized institutes, NIPSOM who runs post-graduate courses conducts research mostly for academic requirement. Post-graduate students have to conduct data collection in a short period to write dissertation to fulfill their requirement for degree awards. The post-graduate institutes include National Institute of Cardio Vascular Diseases (NICVD), National Institute for Diseases of Chest and Hospital (NIDCH), National Institute of Cancer Hospital and Research (NICRH), National Institute of Ophthalmology (NIO), National Institute of Neuro Sciences and Hospital (NINSH), National Institute of Mental Health and Hospital (NIMHH), National Institute of Kidney Diseases and Urology (NIKDU), Bangladesh Institute Tropical & Infectious Disease (BITID) etc.

2.7. Planning Unit of DGHS, different disease control programs, like National TB Control Program (NTP), allocate fund for research to strengthen specific disease control capacity

2.8. National Institute of Population Research (NIPORT) conducts national surveys and research in demographic and behavioral aspects, programs and operations, human resource, and

population and development. Every year NIPORT conducts/commissions 6-10 studies in priority research areas to further strengthen HPN programs.

2.9. The icddr,b is a statutory, autonomous, non-profit and international health research organization established in 1960s, has become a Centre of Excellence for national and international research. The icddr,b's work has had profound impact on health policy and practices both in Bangladesh and globally which include development of Oral Rehydration Solution (ORS) to treat symptoms of diarrhoeal disease and conducting related landmark studies.

2.10. Centre for Global Health Research for Diabetic Association of Bangladesh/ BIRDEM conducts epidemiological and clinical research of diabetes and related topics. Bangladesh University of Health Science (BUHS), a sister institution, also conducts research, mainly for academic requirement of post-graduate students.

2.11. National Heart Foundation conduct research on prevention, management and other related topics on cardio-vascular disease and other non-communicable diseases (NCDs). The Foundation also conduct research for post-graduate students.

3.1. Vision

To generate and communicate knowledge that helps to form the national health plan and guide 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.

3.2. Underlying Values

3.2.1. 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 recognized and acknowledged.

3.2.2. 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.

3.2.3. Ethics

A commitment to the ethical practice of health research. The scientists of Bangladesh are contributing in many fields of health research nationally and internationally. A good number of international organizations are conducting research in Bangladesh in collaboration with reputed institutes here. The people and government of Bangladesh welcome and cooperate such joint endeavors. The BMRC has come a long way to reach present position. Policy makers are now more aware of the role of BMRC in coordination, ensuring best ethical practice and institutionalization of this institute. Still BMRC will have to go further to achieve world-class standard. Ensuring ethical issues for health research was at a primary stage at the early years of BMRC. So an environment of relaxation prevailed in the research arena for ethical issues. But BMRC is now more professional to update ethical guidelines, regulation and Standard Operating Procedures (SOPs) vis-à-vis international standards. Ethical guidelines of BMRC includes research on clinical evaluation of drugs/devices/diagnostics/vaccines, epidemiological research, human genetic research, transplantation research, maternal, new born and assisted reproductive technology, alternative medicine, stem cell research and regenerative medicine, animal research, research related to autopsy and biotechnology and nanotechnology. However, the current guidelines will be periodically reviewed and updated as per necessity. BMRC emphasizes to

coordinate, ensure ethical approval of all health research on human including all collaborative research. Sensitive issues like, human sample transfers outside the country, bio-bank, stem cell research etc. are required to be approved and monitored by BMRC. In this age of bioterrorist threat, BMRC must ensure professional standard for global health security.

3.2.4. Self-reliance

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

3.2.5. 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 sharing the fruits of research shall be protected.

3.2.6. Solidarity

Though many research organizations are promoting the solidarity while collaborating with each other, a spirit of solidarity will be promoted among all the stakeholders in the Bangladeshi health research community.

3.3. Development of a Research Culture

It is essential to inculcate a research culture among all concerned within the health sector, in order that the value of research and of researchers is recognized, and a supportive environment for research is created at all levels like as different research organizations including icddr,b have already adopted such a culture.

3.4. Inter-sectorality

The essentiality of inter-sectoral cooperation in health and development will be recognized, and made more effective and meaningful, like as different research organizations are already practicing. One Health concept promoting collaboration between human health, animal health, environmental health, and food safety is to be reflected in research.

3.5. Partnerships

Partnerships within the country, and outside would be essential, like as different research organizations are already practicing, to derive the maximum possible benefit from research endeavors. While strengthening and expanding partnerships the sovereign rights of the country will be protected. Health manpower producing institutions should be integrated in such a manner that academic and research should be highly complementary and supplementary. Research should be linked with economy and market so that the fruit of research can be translated into products of earning for the national exchequer. Pharmaceutical industry should be particularly

in the loop, so that medicine and vaccine development, clinical trial may be conducted in line with good practice.

3.6. Accountability

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

4.1. Purpose

The purpose of the strategy is to provide an enabling framework for the conduction of research that improves human health and well-being in Bangladesh. The health research strategy for Bangladesh is located in both global and local socio-economic contexts, and seeks to respond proactively to the challenges of the millennium. It attempts to create a framework and environment for health research to contribute effectively to health development and is envisaged as an integral part of long-term health development aimed at improving health and quality of life of all Bangladeshis and reduces inequalities within the system. The research system should be based on a series of shared values with clearly defined and articulated goals. An agreement on the values will lead to an improvement in quality, effectiveness and efficiency of the research system. The system needs to integrate the concerns and views of the community and policy makers, managers, basic and community-based researchers and the national and global research priorities.

4.2. Mission

To promote research that contributes towards the improvement of human health and welfare in Bangladesh.

4.3. Goal

To develop a national health research system that contributes to equitable health development.

4.4. Objectives

- To promote innovation in health and health related service delivery.
- To advance through research knowledge that underpins health and equitable quality health care.
- To develop a coordinated, well-funded agenda for research.
- To nurture talent and develop capacity to conduct research and utilize its findings.
- To create a framework for a health research system that would improve the quality, impact, effectiveness and efficiency of conduction of research.
- To facilitate the integration of research in the health system through establishing the setting of research priorities as a corner stone of the system.
- To ensure equity by linking finances to national priorities.
- To build research capacity in all its facets within the community, health services managers, research institutions and decision makers.

- To develop a communication strategy that will establish mechanisms for the dissemination of information
- Ensure that benefits of research are systematically and effectively translated into practice.
- To establish links, collaboration and partnerships both locally and internationally between those involved in health, funding of research, researchers, research institutions and users of research in public and private sectors and with respect to human health, animal health, environmental health, and food safety in line with One Health Approach.

4.5. Key Principles

4.5.1. 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 certain national and global norms and practices. The priority agenda will be determined applying research evidence.

4.5.2. 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, behavioral and social issues, emerging and reemerging infections, global health security etc. and the priorities of the national health plan will guide the research agenda. We have good example of icddr,b who already follows such practices.

4.5.3. Integration

The integration of the national research plan with the priorities and aspirations of society is essential for the ready utilization of the results of research. The role of the health information system and surveillance is essential for developing the data bases necessary for research and service priority setting and decision making. The generation and utilization of this data shall be a priority.

4.5.4. Multi-disciplinary Linkages

Health research, in addition to the field of health, inter-sectorally encompasses livestock and fisheries, agriculture, food, environment, ecology, education, social and behavioral sciences, population, trade, commerce, along with the physical, chemical, biological and mathematical sciences. This multi-disciplinary nature will be reflected in the national health research plan.

4.5.5. Socio- behavioral Sciences and Health Economics

In order to make meaningful health policies, plans and programs 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 behavioral sciences, medical anthropology, and health economics are integral to health research and will be actively fostered.

4.5.6. Focus on Vulnerable and Disadvantaged Populations

Equity in services and development shall be the cardinal principle in the health research system. There shall be a special emphasis on vulnerable groups, e.g., 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 and resource generation such as user fees, and the economic burden of disease in vulnerable groups and its impact on national development are key issues.

4.6. Ethical Research

Maintaining ethical standard shall be mandatory in conducting all research involving human subjects. Autonomous institutions having statutory base may maintain the ethical standard of their research by adherence to their own Ethical Guidelines. Other institutions and research bodies shall have to maintain the ethical standard by following Ethical Guidelines of the National Research Ethics Committee (NREC). It shall review the guidelines from time to time. Facilitation of training in research ethics shall be the responsibility of BMRC.

4.7. Targeted Financing

Government of Bangladesh will ensure equity in resource mobilization and allocation of public funds. It shall endeavor to ensure that the allocation and expenditure on health research is at least 2% of the total health expenditure under revenue budget. The Government will make arrangement to allocate more than 5% of WHO and other UN Agency Country Budget to health research. Any program or project under development budget will earmark at least 5% of the total allocation for Research & Development activities. It is expected that the pharmaceutical companies in the country (both national and multi-national) to allocate 50% of their research allocation to DGHS following their goals and objectives with due recognition. International funds will also be mobilized in keeping with the national priorities.

4.8. The National Health Research Plan

A National Health Research Plan shall be developed based on a transparent priority setting exercise involving all stakeholders. It will be a rolling plan, to be reviewed and updated annually in the form of an annual operational plan.

4.9. 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. BMRC and DGHS will further strengthen their procedures for reviewing proposals, monitoring ongoing projects and research reports by the research organizations under the MOH&FW. BMRC and DGHS will develop explicit policies and procedures for evaluating the output and impact. Indicators will be developed to monitor the development and effectiveness of the health research to capture the contribution of research in reducing inequities.

A coordinated, coherent national health research system, contributes to equitable health development through improvement in quality, effectiveness and efficiency of research. Investing in improved health is essential for global economic development. The most important contribution to advancing the broad vision of health is to reduce the burden of disease and disability. The document further focuses on the contribution of research in reducing this burden of disease.

However, the single most important determinant of an effective health research system is the issue of governance and leadership. Governance within the context of the health research strategy relates to the means and actions by which the broad research community organizes itself in the pursuance of its mission of promoting research that has the potential to improve human health and welfare. Weak inter-sectoral linkages between the health sector and others such as environmental affairs, education and finance, are another major hindrance to effective health research. In addition, the burgeoning number of actors and initiatives within health research must be moderated by enhanced co-ordination and collective decision-making and action.

Currently, health research is conducted, managed, and financed by a diverse number of organizations with very little co-ordination, accountability and impact analysis of the research on the critical health needs of Bangladesh. A need exists for strengthening of the coordinating structure of BMRC. The national leadership and coordination structures should be based on the following key issues:

Key Issues:

1. The national leadership should be an inclusive body representing all members of the broad research community.
2. The leadership should champion health research for equity and social justice.
3. Provide advice on the research agenda and the financing of that agenda to the various funding institutions and departments.
4. The national body should receive information on the quality and impact of the research.
5. National priorities and goals should become an integral part of the international research agenda.

5.1. Institutional Set Up

Bangladesh Medical Research Council was established in 1972 by the order of the Honorable President of the People's Republic of Bangladesh, as an autonomous body under Ministry of Health and Family Welfare (MOH&FW). The objectives, rules and regulations of the Council were

formulated by a resolution of the MOH&FW in 1974 and 1976. As per resolution of the Government, BMRC is the focal point for health research in Bangladesh. Recently BMRC has approved a new organizational structure and formulated 'BMRC Act'. Both of these are now under active consideration of the government.

In the health research system of Bangladesh, BMRC is the central organization for promotion and coordination of health research, while the research implementing organizations are all Medical Colleges, Post-graduate Medical Institutes, BSMMU, other medical universities, BIRDEM, NIPSOM, IEDCR, NIPORT, general universities, health research related institutions including NGOs etc. BMRC will fund research to be conducted by the researchers of mainly institutions and organizations, which are part of the Health Research System. In addition to funding research, BMRC will ensure strengthening research capacity and dissemination of research results involving all the stakeholders mentioned.

Directorates of Ministry of Health & Family Welfare (DGHS/DGFP/DGDA/HEU) will act as strategic management organization for health research and facilitate linkages among research implementing institutions, research coordinating organization-BMRC and the Ministry of Health and Family Welfare. DGHS/DGFP/DGDA/HEU will develop annual operational plan for research, allocate research budget and distribute resources for research to relevant institutions mainly through BMRC. All health research institutions and organizations will forward their technical and financial reports to the DGHS/DGFP/DGDA/HEU. BMRC will forward a list of all completed research studies along with financial statements implemented by the individual investigators and all research institutions. DGHS/DGFP/DGDA/HEU will develop capacity in research management to cope with the entrusted responsibility.

Ministry of Health and Family Welfare will approve research strategies, policies and plans. It will provide administrative approval for conducting international collaborative research. MOHFW will provide support to DGHS/DGFP/DGDA/HEU and BMRC in research management related issues. It will facilitate utilization of research findings and transformation of knowledge into practice. MOHFW will generate research fund and allocate to different institutional level through equitable distribution.

5.2. Role of BMRC in research coordination

1. Mapping of research activities/products in health institutions/ organizations/ societies/ individuals and allied institutions/ organizations of Bangladesh
2. Co-ordinate health research by liaising with all research stakeholders
3. BMRC will assist the government in the development of health research priorities.
4. Review of preliminary and final research reports and give advice on strategic implications of completed research projects and send review reports to the Directorate General of Health

Services, Directorate General of Family Planning, Directorate General of Drug Administration, Health Economics Unit.

5. Provide advice on all health research related matters to government departments and international agencies.
6. Facilitate co-ordination among the organizations and institutions at various levels so that the health research strategy operates in a coherent manner rather than a collection of fragmented and uncoordinated activities.
7. Any health research to be conducted by the research organizations under the MOH&FW or those organizations that do not have any statutory autonomous status in Bangladesh has to be registered with BMRC as a pre-requisite for any funding (national or international).
8. All health-related research projects will take Ethical Approval from National Research Ethics Committee (NREC). BMRC will act as secretariat of NREC.
9. All IRBs shall be registered by the NREC. An annual report from all IRBs will be submitted to NREC.
10. Institutional Review Board (IRB) of different institutions, only given ethical approval for the post-graduate students' proposal (except PhD).
11. BMRC would advise Government on the gaps, synergies and overlaps that exist as well as on the appropriateness of the research work, its budget, achievements and emphases.
12. The National Research Ethics Committee-NREC (functioning under the BMRC), should set standards, advise the Departments and the Ministry of Health and Family Welfare on the management of research ethics for Bangladesh and arbitrate on the matters of ethics.
13. The NREC will be responsible to review all clinical trials of both non-registered medicinal substances in Bangladesh and new indications of already registered medicinal substances.
14. The NREC will advise the Directorate General of Drug Administration (DGDA) in ensuring that the drugs available in the country fulfill the necessary requirements for safety, quality and efficacy and that the decision to register a drug is in the interests of public health. Clinical trial of all imported medicine and appliances, at least phase 4 trial, will be conducted in Bangladesh. For this purpose, existing laboratory capacity will be further strengthened.
15. Research issues having religious or social sensitivity should be approved by NREC.
16. International collaborative research involving Bangladeshi population to be conducted by the research organizations under the MOH&FW or those organizations that do not have any statutory autonomous status will have to obtain ethical approval by the NREC, while the administrative approval shall be given by the Government.
17. BMRC will sponsor and co-ordinate multicentric commissioned research on areas of national importance.
18. Establishment and further strengthening of BMRC sponsored research institutions and centers for conducting research studies on national priority research areas.

19. BMRC will take initiative to strengthen linkages with all stakeholders involved in health research.

5.3. 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, professional organizations, NGOs and community based organizations (CBOs, e.g., BMA, OGSB, BSRO, EPAB) working on a not-for-profit basis, are now major stakeholders in health care research and delivery. The National Health Research System recognizes their important role in health research and shall foster their participation in the system as partners.

5.4. International Linkages

In the current global scenario international collaborative efforts are recognized as one of the factors in successful research because of the complimentary technology transfer, capacity building and access to diseased population. 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 research centers shall be further developed and strengthened keeping national interest, identity and sovereignty supreme.

5.5. National Steering Committee for Research

Chairperson: Honorable Minister for Health & Family Welfare

Co-Chairperson: Chairperson, BMRC

Member-Secretary: Director, BMRC

Members not according to seniority:

Representative of University Grants commission (a Professor)

Additional Secretary (Medical Education), Health Education & Family welfare Division, Ministry of Health & Family Welfare

Chairperson, NREC

Director General of Health Services

Director General of Family Planning

Director General of Drug Administration

Director General of Nursing and Midwifery

Director General of NIPORT

Director General of Health Economics Unit, MoHFW

Representative of Medical Universities (a Professor)

Chairperson, BMDC

Director, NIPSOM

Director, IEDCR

Director, Planning and Research, DGHS

Director, Medical Education, DGHS

Two Principals of government Medical Colleges nominated by BMRC

Three academicians nominated by BMRC

Three scientists nominated by BMRC

Two representatives from Professional organizations/ Civil Society nominated by BMRC

6.1. Priority Setting

A coordinated well-funded research agenda should be based on shared values to underpin equitable health and development. Due to the transformation of the health care delivery system and the need to address the pressing health and development challenges in the country, it is imperative that health research priorities be determined for Bangladesh in short, medium and long term. It is vital that the country identifies priorities based on equity and social justice. The priority setting process should be an inclusive process and determined in consultation with all stakeholders.

6.1.1. Areas of National Importance

Health Policy reflects the importance of health research as envisaged in Sustainable Development Goals (SDGs). Target 3.b of SDG calls to support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries. Health Policy of Bangladesh (2011) also stressed the importance of health research. In the Strategy 17 of National Health Policy calls for enhancing quality and extent of health research. The strategy emphasizes importance on public health, health management and policy, socio-behavioral and applied research. The important areas may include Universal Health Coverage, identifying health problems, health care financing, health policy implementation challenges.

Key Issues:

1. The broad-based participation of various groups such as researchers, communities, policy makers, and the users of research must be a non-negotiable parameter of priority setting. Special attention will be given to include the poor, women, children and people with disabilities.
2. Health research priority setting must be an interactive and continuous process. Dynamic and changing nature of health and disease situations necessitate that integration and flexibility be built into the process through periodic monitoring and review of the agenda.
3. The priority setting should consider burden of diseases, socio-economic impact, political sensitivity and vulnerability of the population and ensure equitable resource input and outcome.
4. The upward synthesis of the national priorities to the global level should be pursued through articulation at regional and global forum.

Actions:

1. Conduct the five yearly priority setting process.
2. Conduct the mid-term priority setting process
3. Health situation analysis
4. The process should be initiated at district level and culminate with a national workshop.
5. The participants of the process must represent stakeholders involved in healthcare and health research. They should include health professional organizations, community groups and NGOs, departments involved in health and development, providers of service, industry, and the researchers.
6. Health situation analysis needs to be an integral part of rational priority setting. A comprehensive model that combines amongst others, the health problem approach, health system approach and vulnerability approach should be adapted to the Bangladesh situation.
7. The research priorities must be formally adopted through the governance structures of the different research institutions. The priorities must be formally ratified by the national government:
 - a. Health Problem Approach: Looks at the diseases that have the highest impact on morbidity and mortality.
 - b. Health System Approach: Looks at the health system as a unit and its effectiveness and efficiency.
 - c. Vulnerability Approach: Takes into account health problems of marginalized groups.

6.2. Capacity Development

Strengthening research capacity is one of the most effective and sustainable way of advancing health and development. Research capacity strengthening is a tool to help a country deal with its national health problems as effective and efficient manner as possible. It is, therefore, part of the national health system and should be integrated into a comprehensive national health plan for the promotion of health and the delivery of health services to the country. The aim is to nurture talent and develop capacity to conduct and disseminate research.

The research capacity developed in Bangladesh over the last 38 years has been highly selective and limited. Present undergraduate (even postgraduate) medical curriculum lacks due attention on research methodology and ethical issues, which provide strong justification for training of health professionals in research and ethics. The BMRC conducts short term training programs for multidisciplinary participants to develop capacity in health research. Limitation of resources is an obstacle to organize substantial training programs for research capacity strengthening. As a result, Bangladesh lacks a critical mass of research experts. Prevailing circumstances warrant appropriate attention to human resource development in health research.

Important decisions based on objective scientific analysis of available data and on the results of well-designed and executed scientific research is crucial for urgent reform in the health sector. The most powerful and sustainable means of achieving this paradigm shift in advancing health and development is through the development of research capacity.

To reap the required benefits, the range of institutions that would be developed for the implementation of the research strategy goes beyond the traditional research and academic institutions. The additional groups would include the community, professional organizations, NGOs, health services facilities, government organizations and industries.

Key Issues:

1. Increase the skill base in terms of the range of activities and create critical mass of researchers.
2. Increase demand for research through development of research skills and culture of evidence-based decision making. These skills would include leadership and management, research priority setting and communication.
3. Utilize skills in multinational partnerships that address national research priorities.

Actions:

1. Institutionalization of BMRC- Physical structure
2. Institutionalization of BMRC- Human resource
3. The Directorate General of Health Services, Directorate General of Family Planning, and Directorate General of Drug Administration will develop a coordinated human resource plan for research with technical support from BMRC.
4. BMRC will continue to conduct short term training programs on topics related to research methods and should venture for substantial and innovative trainings for capacity strengthening.
5. Need and competency-based training programs for academic and research community, e.g., research managers
6. Capacity will be increased within the academic and research community, e.g., research managers, through need and competency-based training programs.
7. Improve institutional capacity to manage research and increase the number and critical mass of skilled researchers.
8. Integrate research methodology curriculum in undergraduate and post-graduate medical and allied education including nursing and health technology.
9. To create a critical mass of PhDs in health research through a formal action plan.

6.3 Dissemination and Utilization of Research Result

A communication strategy is that disseminates information and ensures that the benefits of research are systematically and effectively translated into practice. The true value of health research in development has not been fully realized and utilized. The lack of impact of health research in a developing country context could be attributed to two major factors. The major issue is the lack of involvement of various stakeholders in the initial planning phase and at the other end of the research cascade, a lack of communication and dissemination of the results.

Key Issues:

1. Knowledge is both a key input and output information and communication technologies create an information culture.
2. Collaborative networks and alliances will be communication among the various role-players.
3. Researchers need to communicate effectively among themselves and with other stakeholders.
4. The management of information and its role in communication strategies will be strengthened.
5. The need to protect the intellectual property rights generated through research will be counterbalanced with the duty to share information in the interest of public good. In international collaborative studies due recognition will be given to both local and international partners.

Actions:

1. Dissemination of the research results
2. Priority setting workshop: to communicate past outputs
3. BMRC and research institutions need to establish mechanisms that support researchers in identifying and submitting papers to high quality refereed journals
4. Mechanisms will be in place to access and utilize information generated in other countries
5. Workshops for decision-makers (annually)
6. The exchange of resources and personnel by institutions
7. Informative and accurate health journalism on knowledge-based reporting
8. Development of a network of media and communication specialists in health sector
9. All research projects must include information on how the results will be disseminated and how it will be used in decision making. The dissemination of information will be funded as part of the funding of a research proposal. For dissemination of the research results all sources including press and electronic media will be utilized.
10. Public understanding of research and science would be an integral part of health promotion campaigns.

6.4 Research Environment

Most developing countries do not have an environment conducive to health research, Bangladesh is not an exception. Science based decision making is usually deficient in many cases and absent in developing countries, affecting the development of conducive research environment.

The creation of health research culture should begin at the levels of basic and high school education. Research practices will also be introduced as part of graduate and post-graduate education. There is also a need for recognition and to raise the profiles of researchers through various incentives and motivation. Appropriate research careers will be established. The health policy makers and decision makers will also demand evidence-based information for policies and plans.

Key Issues:

1. Institutionalization of medical & health research
2. Creating an ethos of evidence-based decision-making amongst policy makers, clinicians and managers so that evidence-based decision making is widely practiced.
3. Research would be treated as a tool for health planning.
4. Provision of reward & recognition for research.
5. Research career development plan needs to be established.

Actions:

1. Creation of BMRC as a separate autonomous Directorate
2. Development of 'Research System'- BMRC plus improve institutional linkages to collaboration between medical colleges, institutions, universities and other organizations
3. Yearly reward and national recognition for achievements in health research
4. The number of decision-makers that have a research background (evidence-based decision making) amongst policy makers, program managers, clinicians
5. To increase professional competence: financial assistance (travel grants, scholarships etc.) for participation of researchers in various seminars, conferences both at national and international levels
6. Career opportunities: enrollment in PhD programs
7. Development of long-term perspective for health sector research needs in Bangladesh
8. Develop a culture of evidence-based decision making amongst policy makers, program managers as well as clinicians by increasing the number of decision-makers that have a research background.
9. Improve institutional linkages and lower persisting barriers to collaboration between medical colleges, institutions, universities and other organizations.

10. Ensure provision for career opportunities (promotion, placement, preference in recruitment, financial compensation, opportunities for international training, etc.), in recognition of outstanding services in research.
11. Creation of research cell in each academic institute and large health facilities under the MOH&FW. Assigning Honorary Professor in each of the cell. These research cells will maintain linkage between BMRC and academic institutions. BMRC will approve their structure and provide manpower.
12. Develop regional centres of BMRC at each Division
13. Institutional Review Board (IRB) of different institutions will have formal linkage with BMRC, they will share their outputs regularly.

6.5 Finance

The limited human and financial resources within developing countries have led to a mismatch between funding and health needs, and the inappropriate concentration of research expertise. It is imperative to ensure equity by financing national priorities. The poor economic performance of the poor countries has resulted in a decline in the real value of research funding. On a global scale the inequitable nature of health research is characterized by the '10-90 Gap' that is, less than 10% of health research funds was spent on 90% of the global burden of disease. The appropriate utilization of the limited financial resources is further hampered by the paucity of coherent information, gaps in information on health status of the population and unreliability of health and health related information. This information is currently collected by a variety of disparate agencies such as science councils, government departments, universities, NGOs and international donor agencies.

Although on an average 5.2% of the total allocation is earmarked for research in the countries of the South East Asian Region of WHO, the distribution of resources for research in individual countries indicated distinct disparities; the research budget ranges from 2.7% to 9.4% of the total country allocation. In formulating its own programs for countries, WHO strongly advocate for allocation of at least 5% from the country budget for research and research related activities.

Key Issues:

1. The majority of national and international funds available in the country will be allocated to national priorities based on equity and social justice.
2. Adequate fund for BMRC to develop it's capacity to an international standard.
3. Financial resource flows for health research will be based on prioritization of research activities.
4. The health research governance would be respected by international collaborative efforts.

5. To reduce the 10-90 funding gap at least 2% of the regular budget and more than 5% of development budget of all UN Agencies, international organizations, donor agencies etc. will be earmarked for health research.
6. The research budget will also be utilized to promote a research culture and to strengthen research institutions and research management.

Actions:

1. BMRC will provide support to the Government, international organizations and donor agencies on the allocation of all health research funds.
2. The allocation for health research will be raised to at least 2% of total health expenditure under revenue budget and be directed to the BMRC. Fifty percent (50%) of the allocation to be earmarked to maintain and retain institutional capacity. Of the other 50% allocation, at least 60% will be utilized for conducting research.
3. The development budget will have a component titled Research & Development (R & D) and at least 5% of the total development budget will be allocated for this component to implement programs related to research capacity strengthening and to identify, articulate, conduct and disseminate priority researches. R & D component will be implemented by the Line Director, Research & Development (DGHS), mainly through BMRC.
4. Allocation of fund to BMRC for its manpower, research activities and infrastructural development would be incremented over the years for next 20 years. To function with full capacity, legal shortcomings would be covered by framing appropriate laws, rules and regulations.
5. The WHO, other UN Agencies and development partners will earmark more than 5% of the total country budget and extra-budgetary fund for research.
6. Research funded by the pharmaceutical companies need to be approved by the Government. Monitoring of resource flows and expenditure will be maintained by the Government and the capacity to monitor resource flows and expenditure will be strengthened.
7. The output and impact of research studies will be evaluated through appropriate indicators to capture the contribution of research to human development.
8. All the Directors or Line Directors will channel their research fund through the concerned Director responsible for Research of DGHS/DGFP/DGDA/HEU and accordingly concerned authority will provide research funds to all related institutions, majority through the BMRC.
9. Research fund allocated to different activities under country program and extra-budgetary fund of WHO and other UN agencies will channel through the concerned Director responsible for research of DGHS/DGFP/DGDA/HEU and accordingly concerned authority will provide research funds to all related institutions, mostly through the BMRC.
10. Financial norms and guidelines will be developed for transparency in resource allocation and efficiency.

The health related activities in Bangladesh are delivered through a number of defined program within the directorates of health and family planning in addition to newly formed directorates (drug regulatory authority and directorate for engineering/construction) under the ministry of health and family welfare: essential health care (also called primary health care, community clinic based care), maternal and child health care, hospital services, mycobacterial disease control, Communicable disease control, medical education, MIS, health education, national eye care, planning and research, traditional medicine, health education etc.

The medical research are planned by Director Planning and Research (DGHS), conducted by different public and private institutions/organizations and overseen by Bangladesh Medical Research Council (BMRC). BMRC is also the national organization for providing permission for ethical aspects of studies. There are also institutional ethical board in different institutes and organizations. A number of postgraduate institutes and medical colleges are also conducting small scale research through the faculty and students as part of academic requirements. A recent document of the job description of the medical teachers provided emphasis on conducting collaborative research, although guidelines for facilitating such collaboration are yet to be developed. The different programs under the ministry also perform operational research or translation research required or prioritized from time to time by the ministry. Despite absence of formal facilitation of medical research there are examples of conduction of quality research in the public health sector. Few examples of such acclaimed studies are: Malaria research, kala azar research, nipah research, snake bite study, poisoning studies. Some of those studies generated evidence through the existing public health system and are used for the national, global and regional use. Having the provision of infrastructure and human resources Bangladesh health sector has a reasonable country wide-network, that can contribute in evidence generation for the country, region and globe using the public sector in an innovative way.

Present day 'evidence-based medicine' demands persistent/continued generation of newer evidence through research. Development of newer drugs is a continuous process which requires engagement of a group of scientists. Many countries are developing human resources and infrastructures for conducting Clinical Trials which also is being considered as an industry. Bangladesh is yet to develop such a process and infrastructure for conducting clinical trials although we have great potentials.

Conducting research in medical science is not a luxury rather an essential activity for the health care professionals, and the MOHFW. Medical research in Bangladesh is fragmented and not in

the priority agenda. There is no formal priority selection and adequate fund allocation for medical research in the country nor there is any coordinated endeavor for medical research. A number of international organizations are operating in the country who are also conducting a wide variety of medical research using the Bangladeshi subjects, facilities and territory. They attract fund using name of Bangladesh but no whole hearted and continuous track of involvement of the public sector in such research is visible. There is no formal record system or inventory or evaluation of the research conducted by the public sectors, and various national and international organizations.

BMRC was set up in 1972 with the mandate to oversee the medical research in the country. It does not have necessary physical infrastructure, human resources and network, and adequate funding to cater the need of the medical research required for the country with huge health related problems and potential for improvement. In consonant with other similar country and resources BMRC need quick upgradation and provision of funding to cater the need of medical research of the country. One can go for a commission to design the plan for such up-gradation. Some thoughts could be - to have a separate directorate general like Indian Council of Medical Research, Kenyan Medical Research Council. A central organization with several regional centres can be set up with the mandate from the National Authority (Parliament). Currently an environment of improved funding is prevailing in the health sector by different partners due to impressive achievements of the country in achieving the goals of MDGs. We have entered SDG after 2015 when we are addressing the new health related problems and human resources with the idea of Bangladesh is going to enter into the group of middle-income countries. Through medical research guided by the leadership of an upgraded national organization (BMRC) we will be able to monitor the progress in newer areas of health goals of SDG 2015-2030.

This strategy provides an enabling framework for health research in Bangladesh. It seeks to ensure that the national research portfolio responds effectively to critical health and development challenges. In addition, the strategy seeks to ensure that the evolving Bangladesh research system tackles persisting gaps in the management and coordination of health research.

In order to have a structured research organization keeping in mind the need and opportunities relevant for the time we need to have this strategy:

1. This strategy creates clear mechanisms for the re-allocation of government spending according to the health sector research priorities and needs.
2. This strategy establishes channels for capacity building and readdressing of inequities in health research. Introduces a long-term perspective for health sector research needs to introduce new management approaches to health research in Bangladesh.
3. Inventory of the research facilities and organizations and human resources available particularly in public sector.

4. To re visit the funds allocated in different medical research with advocacy for future increase
5. Quick initiative for the development of existing national medical research organization (BMRC, for example) in consonance with need and time (and with Road map).
6. Guidance for setting up collaborative facilitative environment for medical research with greater involvement of public sector
7. To hold a national workshop for the agenda setting for improvement of medical research in the country
8. Institutionalization of BMRC - example Myanmar- a definite institutional set up with structure, HR, and regional centre
9. A National Action Plan with costing should be the first priority to implement this strategy

-END-

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(English Translation)

Government of the People's Republic of Bangladesh

Ministry of Health and Family Welfare

Medical Education and Family Welfare Division

Policy & Act

Memo No:

Date:

Subject: Regarding Approval of National Health Research Strategy

I hereby directed to inform you that the proposed draft of updated National Health Research Strategy developed by the Bangladesh Medical Research Council (BMRC) harmonizing opinions from professionals of relevant government & private stakeholders has been approved by the Ministry.

Therefore, you are requested to take subsequent necessary measures in this regard.

Sd/-

Senior Assistant Secretary

Tel:

Director

Bangladesh Medical Research Council

Mohakhali, Dhaka

Copy forwarded for necessary information:

1. Personal Secretary, Secretary, Ministry of Health and Family Welfare.

Annex 3. Abbreviations and Acronyms

BAEC	Bangladesh Atomic Energy Commission
BBS	Bangladesh Bureau of Statistics
BCSIR	Bangladesh Council of Scientific and industrial Research
BIDS	Bangladesh Institute of Development Studies
BIRDEM	Bangladesh Institute of Research and Rehabilitation on Diabetes, Endocrine and Metabolic Disorders
BITID	Bangladesh Institute of Tropical and Infectious Diseases
BMA	Bangladesh Medical Association
BMRC	Bangladesh Medical Research Council
BSMMU	Bangabandhu Sheikh Mujib Medical University
BSRO	Bangladesh Society of Radiation Oncologists
BUHS	Bangladesh University of Health Sciences
CAS	Current Awareness Service
CBO	Community Based Organization
DGDA	Directorate General of Drug Administration
DGFP	Directorate General of Family Planning
DGHS	Directorate General of Health Services
ENHR	Essential National Health Research
EPAB	Epidemiological Society of Bangladesh
FP	Family Planning
GFHR	Global Forum for Health Research
HEU	Health Economics Unit
HIV	Human Immunodeficiency Virus
HNPSIP	Health Nutrition Population Strategic Investment Plan
HPN	Health Population Nutrition
ICMH	Institute of Child and Mother Health
IDRC	International Development Research Centre
IEDCR	Institute of Epidemiology, Disease Control & Research
IPH	Institute of Public Health
IPHN	Institute of Public Health Nutrition
IPNA	Institute of Pediatric Neuro-disorder and Autism
IRB	institutional Review Board
MoHFW	Ministry of Health and Family Welfare
NCD	Non-Communicable Disease
NGO	Non-Government Organization

NICRH	National Institute of Cancer Research and Hospital
NICVD	National Institute of Cardio Vascular Disease
NIDCH	National Institute for Diseases of Chest and Hospital
NIKDU	National Institute of Kidney Disease and Urology
NIMHH	National Institute of Mental Health and Hospital
NINSH	National Institute of Neuro Science and Hospital
NIO	National Institute of Ophthalmology
NIPORT	National Institute of Population Research and Training
NIPSOM	National Institute of Preventive and Social Medicine
NREC	National Research Ethics Committee
NTP	National Tuberculosis Control Program
OGSB	Obstetric and Gynaecological Society of Bangladesh
ORS	Oral Rehydration Solutions
PhD	Doctor of Philosophy
R&D	Research and Development
RICH	Research Information and Communication on Health
SDG	Sustainable Development Goals
SOP	Standard Operating Procedure
UGC	University Grants Commission
UN	United Nations
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
WB	World Bank
WHA	World Health Assembly
WHO	World Health Organization

Members who reviewed the draft at dissemination meeting

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