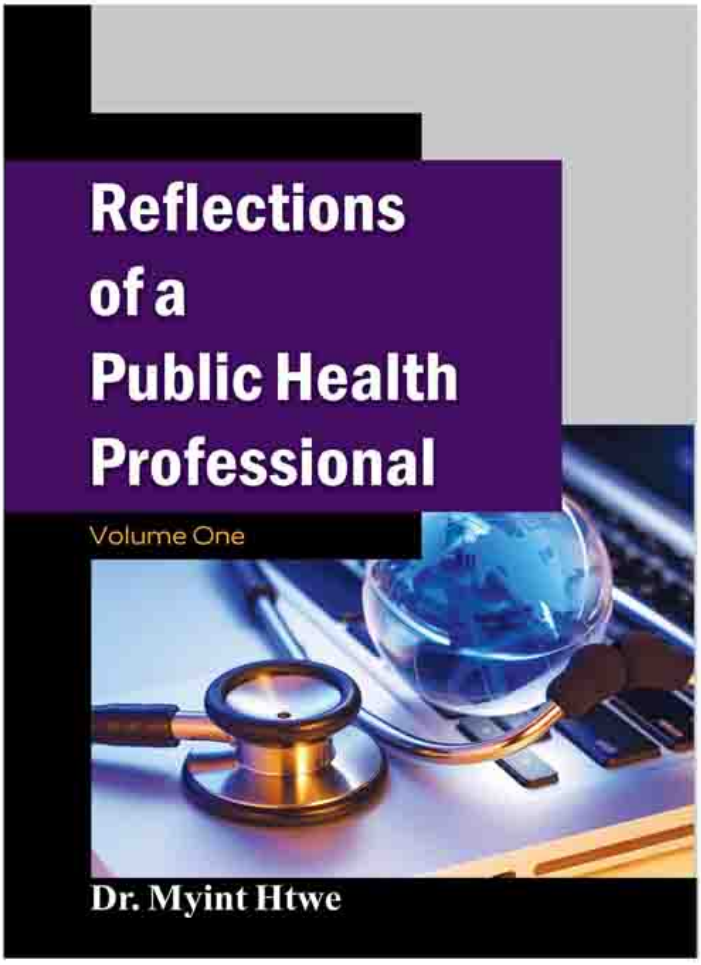
Research Prioritization



Dr Myint Htwe

8. Research prioritization

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Research prioritization is a dynamic process and is usually done at different hierarchical levels of the health research system such as national, institutional, departmental, or programme level. It should be part of the research planning exercise. The prioritized list needs to be reviewed and updated periodically. The determinants and pattern of diseases or conditions and their effect on the population at large are constantly changing. These changes potentially result in inequality in the health status of the people. This entails a reconsideration of the balance and relevance of health research areas in the context of allocation and management of finite resources for research.

Research prioritization must be undertaken within the framework of the overall national policies and goals, national health policies and national health research policies. Actually, research prioritization is one of the key nodal points in the research cycle, i.e., research planning, research priority setting, research strategies and implementation of research priorities, research utilization, research monitoring, and evaluation, (part of the research information system) and overall research management. The final aim of research prioritization is "how best well-balanced research can support and complement the health system to achieve the national goals for health". It calls for a forward-looking research system.

Prerequisites

Certain prerequisites are to be fulfilled before one initiates the research prioritization process. This is to pave a correct path in achieving the objectives

of research system, i.e. well-balanced and relevant priority research domains/ areas/topics. Basic prerequisites can be attained by responding to or exploring the following questions:

- To the extent possible, how should one acquire "valid, reliable and sufficient data and information" necessary for the prioritization process?
- What are the existing national health research strategies?
- What are the practical and technically sound methodologies generally applied for research prioritization? How should one get a consensus on the selection of the best methodology and correct line of approach for research prioritization?
  (It depends on the level of research prioritization to be made).
- What is the budget and time frame available for the prioritization process?
- Who should be the members in the Technical Advisory Group (TAG) to give overall technical guidance throughout the process of research prioritization and how should this group function (Terms of Reference)?
- Who should be the members in the Core Working Group to actually do the prioritization and how should this group function (Terms of Reference)?

Core working group and technical advisory group

The core working group is the one actually doing the prioritization process. Sub-groups can be formed for undertaking specific tasks, e.g., measurement and tool group, criteria selection group, research domain/area/ theme identification group, logistic and coordination group. These groups should meet as and when necessary throughout the process. The team leader of the core working group must be a senior person who is not only technically sound and administratively competent but also possesses leadership quality. It is extremely important to have a cohesive and team-spirited core working group.

The group members should comprise of professionals from different disciplines and with technical expertise in specific areas.

The leader of the core working group should ensure that there will be no domination during the discussion by any group member. Participation, discussion modalities, logistics and group dynamics must be carefully worked out and properly managed. A senior facilitator may be required for each sub-group. The role of the facilitator is just to facilitate but not to direct. The facilitator must have broad experience in fostering group interactions, and also be well versed in techniques employed in the priority setting process. The main task of the technical advisory group is to give overall guidance on the prioritization process in the context of health and research policy issues.

Process

The whole process of prioritization should be well documented for future reference or ironing out any controversial issues that may emerge later. The rationale, different schools of thought put forward, the justification for selecting a particular measurement tool or approach should also be noted. The process differs depending on whether it is done at the national, institutional, departmental, or programme level.

While considering the overall process for developing a conceptual framework for prioritization, the following issues may be taken into account:

1. *To ensure that all leading agencies responsible for funding, major research players, research institutions, and senior programme managers of the Ministry of Health (MoH) are involved to the extent possible. If it is not feasible, they should, at least, be consulted or communicated with for information exchange throughout the process. This participatory approach is essential in order to have informed decisions and high probability of*

implementation of priority research areas thus identified.

2. *To emphasize the process for technical soundness rather than the outcome.*
3. *To ensure that the process should be information-driven with supporting facts and justifiable opinions.*
4. *To ensure that consultation is as much as possible objective and transparent.*
5. *To ensure that the process itself has a built-in monitoring or assessment mechanism.*
6. *To solicit the experience of those who have already undertaken the process using similar approaches and methods.*

Methodology

Method/measurement tool

The selection of an appropriate *method or measurement tool* is the most crucial part of the whole process of research prioritization. One should be aware that each method has its strengths and weaknesses. Placing too much emphasis on theoretical issues is usually counter-productive. The following points must be given due attention:

- No one method is superior to the other. It is all relative and depends on the requirement of the prevailing situation.
- The methods vary in complexity, flexibility, rigor and other characteristics. No one method is best suited for all situations.
- In selecting the methodology on measurement tool, a compromise is usually to be made between the theoretical or technical requirement and the practicability or feasibility of applying the method.
- Whatever method is selected, it is beneficial to obtain concurrence from the gatekeepers or research policy makers through the advisory group on the prioritization process.
- The pitfalls of prioritization must be made known and discussed amongst

the core working group members who do the research priority setting.

- Qualitative methods can provide useful information when quantitative methods cannot be effectively done. One should not hesitate to use qualitative methods. As quantitative information is usually incomplete or insufficient in developing countries, it may sometimes require expert judgement or opinion.
- The method selected must be flexible enough to adapt to the prevailing scenario, yet maintain its robustness. This also implies that the method must be able to entertain new opportunities and challenges that may emerge.
- The selected method or measurement tool should be subjected to sensitivity analysis. This involves changing or shifting weights on parameters or criteria to know the robustness of the results of priority setting method, i.e., the degree of its insensitivity to changes in assumptions. It can be accomplished through group analysis and discussion or by means of mathematical procedures. The sensitivity analysis is possible for single criterion methods as well as for multiple criteria methods.
- Priority setting method or measurement tool or methods may themselves be compared by applying certain criteria in order to get the best method or measurement tool.

Criteria

Criteria for priority setting should be logically related to the stated policy, objective or mission statement of the research organization or institute. Selection of criteria usually underpins the process of prioritization. Each stage of prioritization may require different sets of criteria. Sufficient attention must be given to identifying criteria reflecting the impact on economic and societal aspects, e.g., the monetary cost of treating the disease, the years of productive

life lost due to a particular disease or condition. Criteria should be clearly spelled out and must be independent of each other. The weight given to criteria must be thoroughly discussed and consensus obtained among the core group members.

The aim is that criteria must be used in a balanced way. It is also beneficial to consider knowledge-based criteria or non-numerical criteria which call for human expert judgement. The criteria for selection of priority areas of regional research used by the South-East Asia Advisory Committee on Medical Research (1976) are mentioned in the Annex.

The following issues usually serve as an important input in developing criteria:

- Will the issue to be addressed have a significant impact on the current and future health status of the people with respect to mortality, morbidity, quality of life, the cost of health service?
- Will the outcome of the proposed research have a significant impact on the issue to be addressed?
- Is there sufficient research capability and capacity so that the issue can be addressed with confidence?

Classification

Expected prioritized research areas should be classified in order to facilitate implementation by certain organizations or groups. It can also be classified according to five major domains of global health e.g., disease conditions and health impairments, health care system, environmental determinants, food and nutrition, socio-cultural characteristics. The following generic areas may be used for classification (the list is not exhaustive):

- Thematic areas
- Technologies-and methodologies-related areas
- Management and organization of a system

- Disease-specific
- New interventions/ methods development
- Effectiveness and efficiency of current and past interventions
- Social and community needs-related

Conclusion

In the research prioritization process, the different interest of researchers and end-users should be well balanced. It can be achieved through intensive consultation throughout the process with those who have experience and knowledge in research prioritization. The basic requirements for research prioritization are sound reasoning and unbiased judgement coupled with analytical capacity. In order to create a sense of ownership, delineation of the boundaries of research domains must be made. A broad-based priority setting exercise can guide and promote long-term growth of research and scientific enterprise.

Research prioritization is a dynamic process which needs to be reviewed and updated as and when necessary. The timing of the review process is closely related to any change in the overall national policy or national health research policy or national health policy or framework and *modus operandi* of the national health research system. The priority setting process is usually complex and multi-tiered, possessing both quantitative and qualitative components. The issue facing us is the political weight *versus* scientific weight in making the final decision on prioritized research areas and also for allocation of funding among the research areas identified. This poses a challenge to most of the researchers in a research system. The caveat is that the research prioritization process should not be put solely into the hands of research scientists. Last but not the least, the outcome of the priority setting process should be widely disseminated to the concerned foci in the Ministry of Health and related ministries.

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Annex

Criteria for selection of priority areas of regional research (SEA/ACMR:1976)

1. The research area should relate to a priority health problem in the countries of the Region.
2. The problem should be of major importance in terms of its relationship to the socioeconomic development of the countries of the Region.
3. The problem should have a demonstrable potential for solution or clarification and there should be a strong probability of the solution being applied within a reasonable time and at a reasonable cost.
4. The solution or clarification of the problem should lead to the development or improvement of a broad national health programme destined ultimately to strengthen national and/or international health development involving large numbers of people.
5. The research should lead to the development of new scientific knowledge and/or adaptation of knowledge in various national contexts.
6. The problem should require regional collaborative efforts taking into account, for example, one or more of the following:
   a) Variations in the frequency and distribution of a disease in different geographic areas;
   b) Differences in ecological settings that influence manifestations of a disease as well as its response to health intervention; and
   c) The opportunity it would provide for pooling together the resources of the countries of the region for studying common problems.