

Coordinating health research to promote action: the Tanzanian experience

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Developing countries carry 90% of the global burden of disease. Infections such as malaria and HIV are debilitating their economies by killing the young and economically productive workforce. Research is essential for health development, yet less than 10% of the annual global expenditure on health research is allocated to addressing developing countries' problems.¹ Poor countries must face this challenge seriously. It is essential that they create strong national research infrastructures so that they can define priorities for health research priorities; influence national, regional, and global health agendas; and lobby for a more equitable allocation of resources. This paper discusses some of the barriers to establishing coordinated health research programmes in developing countries and describes how Tanzania has developed a new research model to try and overcome these.

Barriers

Lack of a strong research infrastructure is a common feature of many developing countries and is a major hindrance to effective health research. Health resources are often used inefficiently. There is also duplication of effort and little sharing of knowledge and skill. Institutional rivalry and intellectual dependence on the "North" often results in research institutions in the "South" employing external research consultants at high cost when appropriate expertise is available locally.

Although a colonial past and financial dependence on rich donor countries are undeniably important factors behind the failure to establish effective well coordinated national health research programmes, developing countries must shoulder some of the blame. Poor collaboration between research institutions and lack of strong leadership have resulted in few countries being able to define clearly their national health needs and priorities and formulate coherent and comprehensive research agendas. Many policymakers still believe that the best ideas only originate from the North.

The fact that health research is conducted within environments with very different goals is a problem for all countries but particularly those in developing countries because superimposed on scarce resources is the lack of interinstitutional links to allow for the planning and implementation of research. Academic institutions' main goal is to produce high numbers of graduates and good clinical research scientists who will generate original work that can be published in prestigious international journals. Publishing in local journals may arguably be more worth while but is not seen as a priority because it is often invisible to the international scientific community and hence less likely to attract research funds. Medical or health research institutions regard the number of publications and researchers produced over time as achievements. The pharmaceutical industry in turn is driven

Summary points

The failure of the malaria eradication programme in some developing countries illustrates the failure of those countries to coordinate their health research activities

Coordination is needed to use scarce resources effectively but also to identify priorities and communicate these to policymakers and the public

After years of Tanzanian health research institutions failing to collaborate they have now joined in a national health forum

Already the forum has identified research priorities and is setting out an ethical framework for research

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by different goals: the need to make products that will have a market.

Neither academic nor medical and health research institutions in developing countries regard it as their responsibility to communicate their research findings to local policymakers, practising health professionals, or the public. It is optimistically assumed that key national decision makers will access the relevant publications; understand the research language; select useful, locally relevant results; and use them in planning and implementing sound health programmes. This laissez-faire approach to communicating and disseminating results is in stark contrast to the pharmaceutical industry, which ensures that its research initiatives are extended to marketing and advertising products.

The fact that neither the policymakers nor the public in developing countries are adequately informed about the scale or nature of local and national health problems or initiatives to deal with them means that there is insufficient political and professional drive to introduce change or follow "evidence based" policies. Trying to persuade an inadequately informed constituency that costly measures in the short term, such as providing sanitation and safe water to rural communities, will bring long term gain is difficult. An essential ingredient for progress, therefore, is the establishment of a continuous dialogue between researchers and policymakers (and also the private sector) to ensure that the latter are better informed and in a stronger position to be able to formulate and implement sound health policies.

The Tanzanian approach

Although Tanzania cannot claim to have solved all these problems, recent moves to coordinate the country's health research effort give grounds for some optimism for the future.

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An extra box giving details of disease eradication programmes appears on the BMJ's website



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Tanzania now has a national forum to determine its health priorities and focus research

Tanzania currently has four academic and eight dedicated research institutions which undertake basic clinical research. These institutions were created independently and until recently had their own mandates and competed with each other for donor money and other opportunities. In the past any attempt to forge links or propose a common action was rejected for fear of dominance by one centre over another. As a result, repeated attempts by the National Institute for Medical Research (NIMR), the government run institution that was designed to coordinate all medical research in Tanzania, failed.

In 1998 AYY, the newly appointed director general of NIMR, persuaded the institution's management that the only way to improve the situation was to face the problem head on by initiating discussions with leaders of each of the institutions and the Ministry of Health. From the discussions it was evident that the main problem was "ownership." Everyone said they wanted better coordination, but nobody wanted to be coordinated by another institution.

After much discussion a proposal was put forward to create an independent, non-statutory body representative of all the research institutions to act as a non-political and non-religious forum for scientific exchange. It was envisaged that the new body, known as the national health forum, would also act as a consultative and advisory body on health research to the policy and decision makers in the Ministry of Health and wider government. In addition it would facilitate coordination and collaboration between different institutes and

Box 1: Aims of the Tanzanian health research forum

- To promote and support health research in Tanzania
- To develop and periodically revise essential national health priorities
- To approve the work of the national health research coordinating committee and the national health research ethics committee
- To develop and update guidelines for the conduct of scientifically and ethically sound research in Tanzania
- To promote the establishment of networking and coordination of funds for health research
- To provide guidelines for partnership in health research
- To promote and enhance the use of health research results for planning, policy, and decision making

promote the dissemination of results and implementation of research findings. By ensuring that all partner institutions in health research were involved, the forum sought to overcome institutional rivalry and provide a strong independent and impartial collaborative link between health researchers and health authorities, as well as relevant national and international agencies.

The proposal was approved at the Fifth African Essential National Health Research Meeting for Africa held in Ghana in October 1998 and discussed at national level at a research strategy workshop in Bagamoyo in December 1998, where all key national partner institutions were represented. At a further workshop in February 1999 a set of terms of reference for the forum was agreed (see box 1), the first office bearers were elected, and the newly formed forum suggested a set of national health research priorities.^{2,3} Details of the process by which the priorities were developed are given elsewhere.³ Briefly, a questionnaire was sent to all 113 districts in Tanzania asking for information on the major disease, health service, and social problems affecting the health of their communities. The districts were asked to assess the importance of each problem and provide statistical figures to support this. Data from 45 of the districts, which responded with adequate information and were both geographically and economically representative of Tanzanian districts, were used to develop the priorities using criteria developed through consensus in the workshop (see box 2).

Box 2: Tanzanian criteria for setting research priorities

- Magnitude of the problem
- Avoidance of duplication
- Feasibility
- Focused
- Applicability of results
- Add to new knowledge
- Political acceptability
- Ethical acceptability
- Urgency

The workshop culminated in the formal launch of the forum by the Minister for Health in February 1999. Currently the forum is composed of 20 member institutions including the ministries of health, education and community development, women's affairs, and children. Although the cost of establishing and running the forum for one year is modest (about \$50 000 or £33 000), it requires strong leadership and individual commitment from the representatives of the participating institutions.

Progress so far

The forum has managed to forge unity among its members by providing a means by which they can work together to set the national health research agenda. Partner institutions are also discussing the development of common guidelines for conducting and collaborating on research. For the first time national health research priorities have been drawn up

and national health and social problems identified (box 3). A draft of guidelines for research ethics are being discussed.

In addition the forum supports the publication of a twice yearly bulletin, the *Tanzania Health Research Bulletin*, which disseminates health research results at a national level. The bulletin is produced in English, but there are plans to produce it in both English and Kiswahili. Copies are sent to all regional and district medical officers, the Ministry of Health, members of the forum, and district and child health coordinators. In the future we hope to publish some abstracts in local newspapers and make the bulletin available to the general public.

Box 3: Main health and social problems identified for Tanzania

Diseases

- 1 Malaria
- 2 Upper respiratory tract infections
- 3 Diarrhoeal diseases
- 4 Pneumonia
- 5 Intestinal worms
- 6 Eye infections
- 7 Skin infections
- 8 Sexually transmitted diseases
- 9 Anaemia
- 10 Trauma and accidents

Health service problems

- 1 Lack of trained staff
- 2 Lack of equipment and drugs
- 3 Lack of transport
- 4 Underfunding
- 5 Ignorance and low health education
- 6 Impassable roads
- 7 Lack of rehabilitation facilities and buildings
- 8 Lack of water supply
- 9 Poor environmental sanitation
- 10 Inadequate health facilities

Social and cultural problems

- 1 Food taboos in pregnancy
- 2 Poor latrine use
- 3 Poor economic status due to alcoholism and laziness
- 4 Polygamy
- 5 Ignorance and high illiteracy
- 6 Sex inequality
- 7 Witchcraft
- 8 Inheritance of widows
- 9 Low acceptance of family planning and high fertility
- 10 Use of local herbs

Getting research into practice

Two disease eradication programmes—one a success and one only a partial success—show why mechanisms of implementation at a national level are so important. Both onchocerciasis and malaria were given global priority for eradication, with global, regional, and national commitment in the form of political backing and financial and technical resources. Yet, while onchocerciasis eradication is a success and children born in the 1990s have no risk of river blindness, malaria is still a problem in developing countries (see extra box on the *BMJ*'s website). A key reason for this has been the failure of some countries to coordinate the malaria programme. As a result industry and the private sector have not been engaged in the programme. The fact that insecticide

Box 4: Essential elements for putting research into action

- Strong national research promoting and coordinating mechanism
- Establishment of updated national health research priorities
- Strong national political, financial, and technical commitment
- Effective strategies for dissemination of research results
- Involving the private sector and industry in health research and advertising (learning from commercial publicity)

impregnated bed nets have been proved to be effective in reducing deaths from malaria⁴⁻⁸ has not been enough to ensure their use.

In Tanzania recent concerted efforts by the scientific community, including the forum, and the Population Services International Social Marketing Group as well as other partners has resulted in the removal of taxes for bed net materials. This has promoted the local production and distribution of bed nets and there are now two companies producing 2.3 million bed nets annually. In addition 23 million nets are treated with insecticide in the community every year.⁵ The price of bed nets has been reduced by half, and the current challenge is to provide sufficient insecticide to maintain impregnation.

Conclusion

To ensure that research results are translated into action national and regional mechanisms must be put in place to determine national research priorities, coordinate research, and promote the effective dissemination of research results (box 4). The mechanism must also be able to exert leverage at national and international level. Onchocerciasis control had all these elements and has become a success,^{9, 10} whereas malaria control lacked national commitments and sustainability.¹¹ The promotion of use of bed nets in Tanzania is gaining ground because it has all the above elements. We hope that the national health forum will provide a sustained mechanism for Tanzania and promote the uptake of research findings into practice.

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