

From Bangkok to Mexico: towards a framework for turning knowledge into action to improve health systems

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As a follow-up to the International Conference on Health Research for Development that took place in Bangkok, Thailand, in 2000, WHO convened a Ministerial Summit on Health Research to be held in Mexico City in November 2004, to review progress to date and reflect on emerging opportunities in the global field of health research.

In 1990, the Commission on Health Research for Development recommended that all countries should undertake essential national health research; it stipulated that international partnerships are the foundations for progress and that financing for these efforts should be mobilized from both international and national sources (1). In 1996, WHO's Ad Hoc Committee on Health Research Relating to Future Intervention Options outlined a five-step priority-setting approach to decide how health research funds should be allocated. It identified "best buys" for the development of products and procedures in several key areas, including childhood infections, malnutrition, microbial threats, noncommunicable diseases and health systems. Overall, progress has been slow and there is much more to be done to deal with major health challenges (2).

In 2000, the International Conference on Health Research for Development reviewed achievements but noted great differences between countries in capabilities, performance and constraints (3). Four key challenges were identified: values, sustainable health research systems, research environment, and knowledge production and application (4). The conference participants also noted that expectations have not been met, that the environment has changed

and that the same key problems identified by the Commission on Health Research for Development in 1990 — weak human resources, institutional infrastructure, and financing — are still major constraints in low-income countries. They articulated a vision and an agenda for action based on equity, evidence, excellence and the view that knowledge is a "global public good", one of the key points of the agenda being the need for a coalition to promote better global coordination of health research for development.

There have been many changes since 2000 and research is especially needed to accelerate the achievement of the health-related Millennium Development Goals (MDGs). It is clear that improved drugs and effective vaccines against HIV/AIDS, tuberculosis and malaria, for example, will go a long way towards achieving these goals. The pharmaceutical industry and innovative public-private partnerships clearly have a key role to play in the development of these interventions. Indeed, it is worth remembering that 42% of global spending on health research and development is made by the pharmaceutical industry. It has also been emphasized, however, that achieving the MDGs will depend, in particular, on knowledge being applied to strengthen health systems (5, 6): in the words of Lomborg, "knowledge saves lives" (7). In the most recent attempt to prioritize global best buys through the Copenhagen Consensus project, some of the world's leading economists identified the four top developmental priorities, three of which are directly related to health — HIV/AIDS, malaria and malnutrition. The panel rated proposals in these areas as not just

"very good" but "extraordinarily good", as measured by the ratio of social benefit to cost, with benefits exceeding costs by a factor of ten or more (8). At the same time, the pursuit of global health priorities poses the risk that human and financial research resources are directed only at globally defined priorities, yet the health priorities in many developing countries do not conform to global averages and cannot, therefore, be adequately covered by global best-buy recommendations only.

Despite major investments (and impressive advances such as the human genome sequence), a huge imbalance exists in the way in which health research is performed. The imbalance lies in our inability to bridge effectively the gulf that exists between what is known and what is done in practice, between scientific achievement and health realization. For example, the landmark Bellagio Child Survival Study estimates that two thirds of the 10.8 million childhood deaths annually in the developing world can be prevented by implementing available, effective and low-cost interventions such as vaccines, vitamin supplements and insecticide-treated bednets (9).

The gap between knowledge and action has two dimensions. The first is the translation of knowledge into useful interventions and the second — often neglected and poorly resourced — is the critical need to translate knowledge into health decision-making and action to ensure that the interventions are of benefit to communities and populations. Increased financing alone will not achieve the laudable objectives of the MDGs; from the experience of recent major thrusts such as WHO's 3 by 5 Initiative (to deliver antiretroviral therapy

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to 3 million people by 2005), the Global Fund Against HIV/AIDS, Tuberculosis and Malaria (GFATM) and the Global Alliance for Vaccines and Immunization (GAVI), financing must be directed at the building and strengthening of health systems and at the research needed to generate and apply the necessary knowledge in order to improve health systems.

The first, central element of a framework to strengthen health systems is the development of a sound health research and implementation policy in countries. This must be based on a rational structure that acknowledges the roles played by the entire spectrum of actors along the axis of research, which spans the biomedical sciences and applied and operational research, and that involves both the producers of research and the users of knowledge: policy-makers, practitioners, other researchers, people in civil society and communities. Parallel to global health research priority setting and resource mobilization, countries should define their own research agendas to ensure that national and international health research is appropriate to all health needs in countries, not just those priorities that are visible at a global level. At the heart of such a structure lies the national health research system, composed of the people and institutions whose primary research purpose is to generate high-quality knowledge that can be used to promote, restore or maintain the health status of populations; it should include the mechanisms adopted to encourage the utilization of research (10). As proposed previously, such a system has, as its goals, not only the advancement of knowledge but also the attainment of health and health equity. Essential to achieving correct targeting is that all countries, no matter how poor, invest in health research to ensure that national priorities are adequately taken into consideration. The Commission on Health Research for Development suggested that at least 2% of health budgets should be spent on health research (1). Doing this in the context of strong national health research systems is a key to achieving the health objectives of the MDGs. Several countries that were, until recently, dependent on international funding for a large part of their health research have become major producers and exporters of pharmaceuticals and health technologies through their own well-focused

investments in research, research infrastructure, and research governance. Arguably, good health research will occur in the context of strong and sustainable health research systems.

Secondly, in the construction of a framework to strengthen health systems, emphasis must concomitantly be placed on another, complementary axis: the key processes that underpin the success of the research endeavour — sustainable financing, capacity building, institutional strengthening, priority-setting, ethical principles, incentives for innovations, a strong equity focus in research, access to knowledge, and knowledge translation and utilization. The revolution in information technology and innovative partnerships have immeasurably improved access to knowledge for many people in the developing world (11, 12) but, at the same time, capacities must be built to share and use knowledge if it is to be effectively applied for health improvement. Knowledge synthesis and dissemination in a manner useful to all stakeholders, and national capacities for this activity, become especially important in view of the knowledge “explosion” — there are at present 20 000–30 000 health and medical journals, 2 million scientific articles are published annually, and 500 000 citations are added to Medline every year (13).

The key to bridging the gap between what we know and what we do in practice is the effective use of knowledge through a knowledge management framework in public health (14). Knowledge management can be defined as the optimization and strategic integration of the generation, dissemination, translation and application of knowledge for organizational effectiveness and problem-solving. Bridging this “know–do” gap calls for an alignment of motivation, investment and accountability between key stakeholders. Knowledge management emphasizes innovation, shared learning and effective action as a social coproduction. The scaling up of knowledge management efforts in public health will be crucial for translating research and evidence into policy, practice and social transformation.

In recognition of the fact that all aspects of the global health research agenda are closely interconnected, governments, international organizations and the supporters and funders of research

must work together with policy-makers, practitioners and civil society to push the agenda forward in a new direction. The Mexico Ministerial Summit on Health Research, to be held in November 2004 (5, 15), together with the planned launch of the *World report on knowledge for better health*, will be an opportunity for the key players in health research to respond to the call for better global and national health research governance by collectively launching a global drive to ensure that knowledge is translated into actions that foster health equity and strengthen national health systems. To achieve this goal, it is essential that all those who pursue health research for development or for the alleviation of specific conditions join with WHO to maximize the impact and sustainability of the Mexico Summit's resolutions.

Placed firmly within the framework of an enabling research policy environment described above, specific initiatives and targets will be announced during the Mexico Summit; they will focus on helping countries to perform the critical tasks of deciding on health system research priorities at national and district levels, supporting evidence-based decision-making at national and regional levels, and improving access to relevant information. WHO will ensure that the call for sound health research policies is transmitted to all its Member States and that its adoption is urged. The time to act is now, “the status quo is not an option” (5). Mexico can build on Bangkok and trigger a movement to generate, share and manage knowledge for better health, globally and locally. ■

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