

Editorial

Linking research and development to strengthen health systems in Africa

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Better co-ordination and greater linkages between research and development agencies are essential to improve health in Africa and increase impact on the Millennium Development Goals. The European and Developing Countries Clinical Trials Partnership's (EDCTP's) research funding requires partnerships between European and African research institutions and for substantial amounts to be allocated to networking and African capacity development (Mgone & Salami 2009; Zumla *et al.* 2010). The original goal of EDCTP at its inception in 2003 was to accelerate research and development of intervention tools against HIV/AIDS, malaria and tuberculosis in sub-Saharan Africa, but an expansion of this is now under consideration. In June 2010, EDCTP organised a meeting of representatives of research funders and development agencies from 20 countries. Here, we report the opportunities and challenges for collaboration between these groups.

A principal aim of development agencies is to improve the capacity of the health system to deliver effective health services. There is an important need for research in Africa to determine how health services should be organised and services delivered. For example, health care worker shortages have reached crisis point (WHO 2008) – how should health care workers be trained, supervised and supported in the field? How should programmes be integrated or decentralised nearer to the community and involve lower cadre clinical workers, even lay workers? Which new cadres of workers might increase health service efficiency? How should chronic care be delivered? What are the costs and benefits of different health care service models? What level of monitoring and information systems should be integrated into health services delivery? What are the optimal health management strategies? Research in this area is common in high-income countries (Haines *et al.* 2004) but rare in Africa (Ranson *et al.* 2010). Answers to

these questions could have a major bearing on health and development and impact on the Millennium Development Goals relating to child mortality, maternal health and diseases of poverty.

Research in Africa tends to be focused on the evaluation of drugs, vaccines and other products. Whilst this is valuable (Isaakidis *et al.* 2002; Siegfried *et al.* 2005; Holmes *et al.* 2010), total research outputs are very low: the number of research publications in peer-reviewed journals from the African continent is smaller than the number of research publications produced individually by several countries in Europe (Adams *et al.* 2010). The majority of the publications are generated by researchers from a few countries in northern Africa and South Africa, and relevant research from West, East and much of southern Africa is sparse. Some research studies, particularly randomised trials, set up parallel structures, which may take staff away from the health service and produce results that are difficult to apply to the normal health service setting. There is a particular shortage of African research led by African groups using funds held in African institutions. Consequently, some of the (limited amount of) research output from Africa does not have local relevance (Karim & Karim 2010) or may not come to the attention of policy makers even if it does have policy relevance.

If health research in Africa is to advance science, improve health and healthcare and promote economic and social development, certain measures need to be implemented. These include avoiding waste in research (Chalmers & Glasziou 2009), focusing research on high priority problems in line with Millennium Development Goals (Swingler *et al.* 2005), making better use of information that is already available, national governments taking more responsibility for funding research, encouraging research

collaboration (Matee *et al.* 2009) and measuring impact of investment in research.

It has been widely recognised that Africa needs stronger health systems, but strengthening health systems must involve health services research to inform the targeting of resources and optimise service delivery. This is particularly important for the continent where resources are so scarce. A significant proportion of EDCTP funding in the last few years has supported Africa-led research in collaboration with European partners (Matee *et al.* 2009), and research funding initiatives are increasingly being made available by a number of European national research bodies and other funders, which are targeted at African researchers. This represents an important opportunity to turn the tide in African research and use research to bring about sustainable improvements to health systems.

There are two areas where development agencies may play an important role. First, to develop and strengthen capacity in people and institutions. Capacity is needed in a broad range of areas. African policy makers need training in research so that they can have greater appreciation of the role of research in developing effective health systems and have a greater ability to interpret research findings. Development of African researchers who can lead policy relevant research studies is needed in a number of disciplines, especially in epidemiology, social science and health economics. Increased capacity is needed also across the board including strengthening ethics committees, grant procurement and management, upgrading laboratories, engaging communities, communicating research findings and translating knowledge into action. EDCTP has been developing capacity in these areas although more efforts are needed. It is critical that capacity building is fit for purpose and sustainable.

Second, more funding for health services/optimisation research and more input into research programmes from the development perspective are needed to address some of the bigger long-term health services questions. Research needs to be integrated into health programmes so that there is ongoing monitoring and evaluation with immediate feedback and benefit to health services. There also needs to develop a culture of evaluation of health initiatives introduced by development agencies (Oxman *et al.* 2010). In all likelihood, the investment in research will bring about far greater returns than the cost of research programmes, as is evident in developed countries. It requires long-term vision, planning and investment.

There are challenges to integrating research into African health services. It is critical that capacity is made available to accommodate the research as otherwise research activity will simply add to the already high workload of health services staff. Attracting high calibre

researchers will be a challenge. Many researchers are reluctant to work with health services that they perceive as being chaotic in organisation and unable to fulfil the demands of research. Health services/optimisation research also has an image problem among some as being intellectually lacking, and some researchers prefer to stick to proof of concept studies of drugs or vaccines. However, health services research offers the opportunity of influencing public health quickly with very little funds. In the eyes of some development agencies, research has had an image problem, perceived as being an additional demand on overburdened services and taking many years to produce results that have little immediate relevance. A few high quality large-scale studies are needed to overcome the myths held by selected researchers and development agencies and demonstrate that there are significantly increased benefits to a more synergistic approach. Bringing together, both research funders and development agencies funding health services to foster collaboration and co-ordination will be critical in progressing towards the Millennium Development Goals.

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