

HUMAN RESOURCES FOR HEALTH RESEARCH

This paper reflects on human resources for health research (HRHR) a largely ignored but increasingly important component of the overall strategy to improve the quality, quantity, and stability of human resources for health (HRH) in developing countries. This is an area for which the 'declarations' still have to be developed. Indeed, it is hoped that this contribution will assist in achieving more recognition for this small, but key component of successful sustainable health system improvement.

By Carel Ijsselmuiden*

THE COMMISSION on Macroeconomics and Health, chaired by Jeffrey Sachs, which went on to be the key driver for a focus on the Millennium Development Goals, produced a key report in December 2001. It makes significant references to research in its recommendations:

1. Basic biomedical and health research should be increased, through a new global health research fund, to \$1.5 billion annually;
2. Vaccine and drug Research & Development and research for 'other diseases of the poor, through existing institutions' should be increased to \$1.5 billion annually;
3. Increased operational research, in conjunction with upscaling of essential interventions – 5% of country program funding; *this is difficult to calculate, but for every \$1 billion that the Global Fund spends, this would mean \$50 million, and, in case of the World Bank that funds \$2 billion in the health sector annually, this would mean \$100 million extra for health research in countries;*
4. Expanded availability of free scientific information and connectivity;
5. Modification of orphan drug legislation in high-income countries to include diseases of the poor;

6. Purchase of targeted technologies;
7. Other: promotion of best practices, surveillance, and more.

Ten years before the 'Sachs Report', in 1990, the Commission on Health Research for Development, produced its report to which Switzerland was a major contributor under the clear title: "Health Research. Essential link to equity in Development". This report highlighted the skewed nature of the distribution of resources used in health research to solve priority health problems between the 'North' and the 'South'. Now known as the '10/90 Gap' the report went on to recommend that all countries, no matter how poor, should invest in the minimum health research needed to localise health solutions, identify priorities for interventions and for research, and to optimise the use of scarce health resources (what is now known as 'health systems research'). The Commission recommended countries to spend 2% of health programme budget on health research, and donors to match this with an allocation of 5% of externally provided health programme funding. Switzerland has been and remains a long-standing sponsor of implementation of the Commission's recom-

mendations, which includes funding organisations like the Council on Health Research for Development (COHRED).

Perhaps the most recent Commission to consider is the Commission on Intellectual Property Rights, Innovation and Public Health chaired by Ruth Dreifuss, which is working towards equity and fairness in intellectual property rights in health.

There are many other 'declarations' on health research, usually confined to organisations funding, sponsoring or conducting research in countries, whether these are bilateral, multi-lateral, public-private partnerships, or non-profit organisations engaged with health research. It is beyond the scope of this paper to refer to review all of these in detail, but there are two overarching areas of similarity:

Firstly, Research & Development is key to health, health equity and economic development.

Secondly, neither of the two Commissions nor the more specific organisations and strategies focusing on health improvement and poverty reduction, give any consideration on how this research should be done.

As a result: almost all increases in research activity since 1990 and renewed since the start of international research partnerships like IAVI close to 9 years ago, are located in the 'North'. Although the 'South' is sometimes partnered, most research, certainly the research that is competitively awarded like the 'Grand Challenges' of the Bill & Melinda Gates Foundation, is done in the 'North'.

ABSENCE OF HRHR IN KEY HRH DOCUMENTS AND EFFORTS

In short, Human Resources for Health Research (HRHR) are not planned for in any meaningful manner but are somehow considered to be 'implicit': research is recommended in strategies, declarations, and reports, but there are no systematic plans available nor in preparation to ensure that the personnel needed to conduct such research is available – especially in developing countries. HRHR is not planned for, not measured nor monitored, nor specifically resourced – especially not in the health sector. In the context of efforts towards science, technology and innovation in developing countries, human resource development often features prominently. Not so in the health sector – for example:

WHO's World Health Report of 2006 is focused on HRH. However, 'research' is only mentioned in the context of academic institutions, but human resources for health research are not mentioned at all; The Global Health Workforce Alliance recently outlined its strategic plan, but there is no mention of 'research' nor 'researchers'; The Rockefeller funded Joint Learning Initiative and Joint Learning Initiative Africa reports, arguably the most comprehensive look at human resources requirements in recent years, make no mention of researchers anywhere. (Note: the author claims co-responsibility for this, as he was previously an active member of Joint Learning Initiative Africa) The "WHO – Rapid Assessment Guide for HRH" that encourages countries to assess shortfalls in key health personnel, omits the mention of 'researchers'.

GROWING RECOGNITION OF THE RELEVANCE OF HEALTH RESEARCH TO DEVELOPMENT

Although there are still low and middle income countries in which neither 'science, technology and innovation' nor 'research for health' features near the top end of political agendas, there are other countries, where major investments in science, technology and innovation and in research for health are made. Countries like China, India, South Africa and Brazil are usually mentioned, and the latter three have engaged in mutually supportive actions in this field. In fact, in Brazil is the connection so strong, the Ministry of Health has a directorate of Science and Technology at the level of deputy Director General, and the collective budget for this group is larger than for public spending in science, technology and innovation outside the health sector.

And there are other examples from the health sector that show the growing importance of health research in development thinking both in the 'North' and in the 'South': for example:

- The Mexico Summit on 'Knowledge for Better Health' in 2004 stressed health systems research as a key area for development;
- With the Abuja Declaration in June 2006, many African countries confirm their interest in supporting health research, and commit to spending 2% of health programme budget in this field;

- The Alliance for Health Policy and Systems Research receives a new infusion of funding from the United Kingdom, and integrates itself into the WHO; (*unfortunately, it lost its majority membership by developing country residents in the process*);
- EVIPNet, WHO's latest effort in health research, attempts to promote systematic reviews as a tool to get health research evidence into health policy making and practice;
- The Cochrane Collaboration, long the only group focusing on addressing health problems through globally conducted systematic reviews, has now developed a task group to improve the link with health research problems in developing countries; and
- The organisation of a Pan Latin American meeting on national health research systems was started in 2006, following a 10-country consultation on health research that COHRED initiated; depending on funding availability, this meeting will be held in 2007 or 2008.

Examples also abound in the general science, technology and innovation environment, where health is often included under headings as 'biotechnology', for example:

- The Juma Commission considered – and recommended – substantial investments in science, technology and innovation for the achievement of the Millennium Development Goals (*interim report 2004*);
- Both the African Union and the New Partnership for Africa's Development have made major efforts in advocating for science, technology and innovation by African countries, including at the Addis Ababa conference of the African Union in January of this year in which 2007 was declared 'Africa Science & Technology year';
- The president of Rwanda is regularly in the news, emphasizing Research & Development as a key for development in Rwanda and in Africa;
- Nigeria apparently allocated \$25 million to fund the first site of the African Institute of Science and Technology, using its own oil-revenues;
- The World Bank's President, Paul Wolfowitz, emphasizes renewed interest of the Bank in supporting science, technology and in-

novation during the meeting "Building Science, Technology, and Innovation Capacity for Sustainable Growth and Poverty Reduction" that was held in Washington in February this year.

HUMAN RESOURCES FOR HEALTH RESEARCH: HOW TO MOVE FORWARD?

Ironically, but not surprisingly, the research that tells us we are not going to meet the Millennium Development Goals by 2015 is done mostly in the 'North', as was the research showing that 'Millennium Development Goals' were the key to help in our current drive for poverty reduction and development, as is much of the research done as part of achieving Millennium Development Goal targets and as part of a critical understanding of the constraints of the current Millennium Development Goal focus. In fact, developing countries are largely spectators in the critical field of research for health that is essentially about them – their health – their development – and their autonomy. Unless we start explicitly and pro-actively with human resource planning for health research in developing countries, they (we) will remain spectators in the decisions, the prioritization, the funding allocations, the conduct and interpretation, and, indeed, in the institutional, economic and social benefits of research for health. That is why this topic is so important to sustainable development.

There is currently no coherent framework for planning for health research, let alone for deciding what types, numbers, or balance of researchers would be needed. However, there are some pointers that need to be taken into consideration before embarking, yet again, on what is feasible in the 'North' rather than what is required to solve problems in the 'South.'

RESEARCH CAPACITY STRENGTHENING

After 25–50 years of 'training support', there is actually lots of capacity in Africa and elsewhere (*South Korea, India, South Africa, Brazil ... and others*) but, in spite of this, 'research for health' is not really living up to expectations. There are 'centres of excellence' in various countries. Switzerland funds two well known institutions in Tanzania and Ivory Coast, for example, but there are no models for scaling up to national health research systems. A "system's view" is key to identifying where effec-



Ethiopian Health and Nutrition Research Institute (EHNRI)

tive HRHR building needs to be done. COHRED distinguishes four levels that need to be included in order to make Research Capacity Strengthening effective, namely:

Research Capacity Strengthening at individual level: this translates into researcher training, has been done for many years, has lots of 'models', best practices, progress evaluation, and very little impact assessment; in other words: training is required, but on its own will not substantially change health practice in developing countries with rare exceptions; most aid from the 'North' has focused on this aspect for many years; WHO/TDR has provided over 1000 doctoral and masters students over the course of its existence, for example, and few, if any, School of Public Health in the 'North' does not have a fellowship scheme; in Switzerland, the Swiss Tropical Institute is a prominent player in this field;

Research Capacity Strengthening at institutional level: strengthening institutional capacity is becoming recognised as a key aspect in health; of course, in the field of agricultural research, this has been done for many years and with great success; in health, however, we have lots of intentions, little actual experience, and very few models and best practices; Switzerland's KFPE group is one notable exception, that has tried to work for good partnership arrangements that build institutions in the 'south' for a long time;

Research Capacity Strengthening at national research system level: Even if there are 'good researchers in good institutions', research output and policy-relevance will be sub-optimal or even become non-existent if there is not a conducive research environments, communication facilities (IT, library access, internet bandwidth, etc), career structures, demand

for research by policy makers and communities, regular and (non-competitive) research financing, and more. All of these function at the 'research system' level, and are often address haphazardly, if at all. We have little understanding of 'national health research systems', have some theoretical models, but few 'best practices' to intervene in key areas;

Political and Economic level: finally, the wider environment in which research is done, the social and political environment, is critical. Unfortunately, because of the close link with macro-politics, such political and economic levels tend to be neglected by 'research' institutions, (because it is not 'research') aid agencies and research sponsors alike. International migration is perhaps one topic where there is international collaboration on Research Capacity Strengthening at this level.

NATIONAL HEALTH RESEARCH SYSTEMS

A further challenge is the operationalisation of 'National Health Research Systems', as the common route for sustainability and country ownership of priorities, research management and solutions. There is still little, if any, experience with systematic definition of components of the National Health Research Systems, with assessments, with targeted improvements, with finding those key points where minimal investments have maximal outputs, and so further. In short, we really lack much insight into operationalising health research systems, and our lack of understanding and action perpetuates the haphazard approach, the vertical programming, and lack of consideration of health research as a national tool towards development – not just a tool to generate products and technologies.

Examples of 'research system issues' include:

- private universities and research institutions taking over from public sector: is this good (it keeps researchers in the country) or bad (it causes an 'internal brain drain' towards funded – commercial research);
- 'diplomatic passports' for scientists in Africa are being spoken about, to increase communication ability between scientists in Africa;
- 'South-South partnerships' are increasing: how can this be made to work for health research?

- 'flooding the market' with research graduates in Kazakhstan – in the hope that they will develop the field;
- Need for political leadership: for example, the "Lagos Plan of Action 1980" is surprisingly similar to the call for science by the African Union in 2007, but nothing happened;
- Transformation of African institutions to align better with current development needs; it happened in agriculture – why not in health?
- Changing 'age-based' to 'merit-based' career advancement in many institutions in developing countries – a tough but crucial transformation needed to making health research flourish;
- AfriHealth – a study of all schools of public health in Africa shows a divorce of public health research from tertiary public health education – even in countries where both the Schools and the research are excellent; to ensure future generations of researchers, we have to find ways to have (externally funded) health research tied much closer to (internally funded) tertiary education.

Another important aspect of the debate is 'donor alignment and harmonization' in line with the Paris Declaration on Aid Effectiveness of 2005. While this declaration was not meant primarily to deal with research, it is equally valid in this field. Sida/SAREC produced a study for Tanzania, which showed that there were over 71 different research contracts with the Ministry of Health by 71 different countries and large research conducting / sponsoring organisations in 2005. Last year, the director of the International Diarrheal Diseases Research Institute in Bangladesh (also a beneficiary from Swiss aid) stated that at any one time, the Research Institute has 132 research contracts with organisations conducting and sponsoring research with or through the institute.

It requires little imagination to understand what can happen in terms of national research and research system capacity building if the donors would agree on aligning with health research priorities of the country concerned – or – if such were not available – to fund and support the process by which the country could set such priorities. In addition, if 71 different research funders or sponsors or conductors would pool

at least the overhead costs of their projects on an ongoing basis, this may well create the pool for a substantial support of a key national resource: national health research.

Lastly, there is almost no assessment of research capacity needs in countries. There are almost no data. A little is beginning to come in terms of capacity for health systems research; KFPE outlines some aspects of networking, partnerships, and local ownership but stops short of outright capacity assessments and evaluation criteria; and, outside the Science, Technology and Innovation domain or the agricultural domains (if this is to be considered separately) there are no data, no studies, no models to work with. There is an urgent need to 'research research'!

CONCLUSIONS AND RECOMMENDATIONS

It is easiest to start by recommending the collection of more data on research capacity and research systems. However, there are other, good examples already underway which may lead to models for the future. For example, the Wellcome Trust, renowned for its funding of the best scientist on a competitive basis, has designed its new 'international programme' in ways that can help strengthen (already good performing) institutions, and is setting up a more systematic way of institutional capacity building; DFID (the UK's development agency) has not only decided to fund increasingly in the Science, Technology and Innovation environment, but also to fund 'capacity development in policy advocacy' with a special focus on the 'non-governmental sector' (i.e. a key 'research system issue' approach); WHO/TDR has had an intensive external evaluation, as a result of which it has listed as its first objective 'country empowerment'; COHRED, organised

a Human Resources for Health Research conference in June 2006 with six other partners, including the IDRC that funded this meeting, to help draw attention to this field, and now, is collaborating in a partnership with International Diarrheal Diseases Research Institute (as lead institution), the London School of Hygiene and Tropical Medicine, and the Makerere Faculty of Medicine on a 'best practices in research contracting' template that strengthens the 'negotiating hand' of developing countries and their research institutions to obtain better deals in technology transfer, sharing intellectual property rights, and ensuring capacity building at all levels of the system, not just for the narrow goals of the research project.

Above all, Human Resources for Health Research (HRHR) needs to be mainstreamed in wider HRH initiatives. Health research needs to be redefined as 'research for health' and engage in efforts towards Science, Technology and Innovation. This process will not only increase the resources made available, it will also make sure that HRHR becomes more firmly driven by the 'South' and able to fight for its rightful corner in the wider arena of the human resources for health debate.

* CAREL IJSSELMUIDEN is a public health physician and epidemiologist who worked in rural, urban and academic public health in South Africa until he accepted his current position as Director of the Council on Health Research for Development (COHRED) in 2004. Contact: www.cohred.org, Carel@cohred.org

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