Published by Oxford University Press in association with The London School of Hygiene and Tropical Medicine *Health Policy and Planning* 2007;**22**:274–276

doi:10.1093/heapol/czm019

10 best resources for . . . health research capacity strengthening

Yvo Nuyens

Accepted 16 April 2007

Health research capacity strengthening (RCS) is widely recognized as a major unmet need, particularly in low- and middle-income countries (Lansang and Dennis 2006). It has been high on both national and international agendas for the past 20 years, as evidenced by a steady stream of peer-reviewed and grey literature, training tools, programmes, grants, workshops, task forces and conferences. Defined as '. . . the ongoing process of empowering individuals, institutions, organizations and nations to define and prioritize problems systematically, to develop and scientifically evaluate appropriate solutions, and share and apply the knowledge generated' (Lansang and Dennis 2004), RCS encompasses a broad and complex spectrum of activities, including training programmes, tools and grants. In addition, anyone embarking on an RCS programme needs to address broader issues of which and whose capacities to strengthen, to do what, in which context and with which purpose. Resources for RCS therefore include:

- analytical documents, reviewing issues such as scope, dimensions and target groups in RCS (what has to be done?);
- tools, training materials and guidelines for the development of specific skills in the research process (how can it be done?);
- references to RCS programmes and grants (who is doing it?).

Keeping in mind that 'much of what has been written on capacity development strategies is in the grey literature of papers prepared for international development agencies' (Horton *et al*. 2003), this review selects 10 of the most useful and easily available resources for RCS.

Analytical documents

Lansang and Dennis, in '**Building capacity in health research in the developing world**', review the positive features and weaknesses of various approaches to capacity-building, emphasizing that complementary approaches to human resource development work best in the context of a long-term systems perspective. These approaches include training of individual researchers, learning by doing, partnerships between developed and developing countries, and centres of excellence at national and international levels. As a key element of capacity strengthening, countries also have to address issues related to the enabling environment, in particular leadership, career structure, critical mass, infrastructure, information access, and interfaces between research producers and users. The authors argue that the success of efforts to build capacity in developing countries will ultimately depend on political will and credibility, adequate financing and a responsive capacity-building plan that is based on a thorough situational analysis of the resources needed for health research and the inequities and gaps in health care.

Confronted with a situation of fragmentation, overlapping, incompleteness, selectivity and gaps in research capacity strengthening, a recent publication from the Global Forum for Health Research, '**No development without research: a challenge for capacity strengthening**', sets out to identify key issues, problems and challenges in RCS and to bring these pieces together into a conceptual framework. The framework is constructed in three steps, starting with the classical distinction between the individual level (training), institutional level (development and strengthening of institutions) and macro or system level (enabling environment). As a second step, the macro level is conceived in terms of the national health research system, with its major functions as an organizing framework. The document reviews the capacities and skills required to support the functions of governance, financing, creating resources, and producing and using research. Thirdly, the function of producing and using research leads to the notion of the research process as an organizing framework. This framework views research as an iterative process, starting with managing the research agenda and ending with utilizing evidence in decision-making in policy and practice and feeding the outcomes back to the agenda. For each phase, capacity strengthening needs are reviewed and examples given of strategies to address them.

Although capacity development is high on national and international development agendas, and considerable amounts of money are being spent in its name, little has been written on how research capacity development efforts can be evaluated. '**Evaluating capacity development**', by Horton *et al*., is a first step towards filling that void. On the basis of evaluation studies in six low- and middle-income countries, the authors address two fundamental issues: why managers should be concerned with organizational capacity development and why they should evaluate capacity development efforts. The document discusses

University of Leuven, Leuven, Belgium. E-mail: yvo.nuyens@free.fr

the 'how' of capacity development, including ways to negotiate sound partnerships, outlines approaches and methods for evaluating organizational capacity development, and discusses how to utilize evaluation to advance capacity development and performance in an organization. Each chapter begins with an abstract, includes 'take-home messages' and gives a guide to further reading, features that increase the practical value and usefulness of the document.

Tools

In line with the above analytical frameworks, the tools described below support capacity strengthening in a broad range of health research-related activities, from priority setting and protocol development, to use of research results and impact assessment.

'**Health research for policy, action and practice. Resource modules**' is the result of a Collaborative Training Programme (CTP) involving four international organizations (Alliance for Health Policy and Systems Research, Council on Health Research for Development, Global Forum for Health Research and the INCLEN Trust), which share the objective of enhancing capacity in health research. The partner organizations identified a series of previously neglected issues for which training and institutional development could increase the impact of research on policy, programmes and practice. Two modules have particular relevance for research capacity strengthening. 'Setting priorities for health research' presents a practical process for priority-setting, includes a critical analysis of major approaches in priority-setting over the past decade, and summarizes lessons learned. The final module, 'Promoting the use of knowledge in policy and practice', discusses how knowledge is communicated, explores competencies in advocacy, describes features of knowledge networks and reviews electronic tools for managing knowledge. The modules are divided into units, each of which includes a topic note, an annotated recommended reading list and a set of tools and resources, including websites and extracts from manuals.

'**Designing and conducting health system research projects**' is a thorough revision of Volume 2 of the Health Systems Research Training Series, which was published by the International Development Research Centre (IDRC) and the World Health Organization (WHO) in 1991. The original publication was reprinted several times under the same name and translated into at least six different languages. Constructed as a course for a full-time workshop lasting 2 weeks, the revised materials are divided into two volumes. Volume 1, 'Proposal development and fieldwork', contains 20 modules, which lead the course participants through all the steps in developing a research protocol (from selection of the research problem up to the utilization of results), and guide them through the fieldwork and preliminary data analysis. Volume 2, 'Data analysis and report writing', consists of 13 modules, covering such issues as description of variables, measurement of association, significance tests and report writing. Each module contains instructions for group work and there are also guidelines for the planning and management of HSR workshops and the supervision of fieldwork. The authors emphasize that the modules can be used in a flexible way, depending on the educational level and research experience of the course participants.

The Global Development Network (GDNet) is a network of research and policy institutes, with offices in India and Cairo, which focuses on generating, sharing and applying research for development in developing and transition countries. As one of its core activities in building research capacity, GDNet (http://www.gdnet.org) provides online tools and services to support researchers in their work and to disseminate their research. These services include toolkits, which provide advice compiled from a range of sources, from best practice literature to interviews with experienced individuals. One example is **Disseminating research online**, which provides broad tips and practical suggestions for communicating academic research using the Internet. The toolkit does not cover every aspect of research dissemination, but focuses on best practices from the information and commercial world in disseminating research through the Web. **Proposal writing and fundraising** is another relevant toolkit for capacity strengthening of researchers. It provides a checklist of issues to consider when writing a research proposal, including budgeting, and includes a guide to donors and hints on networking with funders, as well as some institutional insights.

More online toolkits related to the different phases in the research process are available from the Research and Policy in Development (RAPID) Programme of the (British) Overseas Development Institute. RAPID develops and distributes tools, resources and training support to improve the use of research and evidence in development policy and practice. Of the four handbooks produced so far, in printed form and online, two have direct relevance for research capacity strengthening. The **Policy Impact Online Toolkit** represents work-in-progress on tools for policy impact, specifically geared towards the needs of researchers. Within an overarching framework of context (policy), evidence (research) and links (interface), the tools are grouped under the headings of Research Tools (e.g. focus group discussion), Context Assessment Tools (e.g. stakeholder analysis), Communication Tools (e.g. the marketing mix) and Policy Influencing Tools (e.g. policy papers). The **Successful Communication Online Toolkit** aims to help researchers and practitioners to communicate evidence better within the international development field. It presents 23 tools, divided into the following categories: planning (e.g. social network analysis), packaging (e.g. visioning scenarios), targeting (e.g. building a community of practice) and monitoring tools (e.g. outcome mapping).

In view of the increasing concern about communication, dissemination and utilization of research, the UK Department for International Development (DFID) published recently '**Communication of research: guidance notes for research programme consortia**'. The Notes provide an overview of the essential elements of a research communication strategy and direct researchers to tools, worksheets and websites that will help them through each of the stages of design and implementation. The Notes are divided into three main sections. Section 1 provides DFID's 'Ten Principles' for communicating research, which will help 'in creating the enabling environment potential users need to convert research knowledge into action'.

Section 2 provides a checklist of questions, links to more detailed information and suggested activities, based on the 'Ten Principles' and designed as a guide through the different stages of a communication planning process. Section 3 provides some practical examples of how research projects have addressed some of the questions in section 2. The document also has a list of resource material, including further reading on communication, guidelines and toolkits, and relevant websites.

Researchers are increasingly required to describe the impact of their work, for example in grant proposals, project reports, press releases and research assessment exercises. A **Research Impact Framework** has recently been proposed by Kuruvilla *et al*., based on identification of potential areas of health research impact and various established research assessment criteria. The Framework provides prompts and descriptive categories that can help researchers to identify systematically a range of specific and verifiable impacts in four broad areas: research, policy, service delivery and the wider society. In this way it can potentially support researchers in presenting systematically the value of the work they have done as well as the work they plan to conduct. This is important because the better researchers are able to explain to a range of audiences what they do and why, the more impact their work will have.

RCS programmes and grants

Finally, the WHO, through its programmes at headquarters and in the regional offices, and particularly its special programmes on tropical disease research and human reproduction research, is an important resource for research capacity strengthening. The **Special Programme for Research and Training in Tropical Diseases** runs numerous capacity strengthening programmes and has various innovative grant schemes, including research training grants, re-entry grants, small grants (with WHO Regional Offices) and malaria capacity-building grants. It has also developed a variety of training materials, toolkits and guidelines, for instance in the areas of ethics of biomedical research, good laboratory practice, project planning and evaluation. The **Special Programme of Research, Development and Research Training in Human Reproduction (HRP)** has an extensive grant system in support of research capacity strengthening, which includes long-term institutional grants, competitive intraregional research grants, research training grants and re-entry grants. Communication/writing workshops, covering scientific writing, communication skills and information management, are also part of HRP's research capacity strengthening.

Resources

1. Lansang M, Dennis R. 2004. Building capacity in health research in the developing world. *Bulletin of the World Health Organization* **82**: 764–9. Online at: http://www.who.int/bulletin.
2. Nuyens Y. 2005. *No development without research: a challenge for capacity strengthening*. Geneva: Global Forum for Health Research. Online at: http://www.globalforumhealth.org.
3. Horton D, Alexaki A, Bennett-Lartey S *et al*. 2003. *Evaluating capacity development: experiences from research and development organizations around the world*. The Hague: International Service for National Agricultural Research (ISNAR), International Development Research Centre (IDRC) and ACP-EU Technical Centre for Agricultural and Rural Cooperation (CTA). Online at the IDRC website: http://www.idrc.ca.
4. The Collaborative Training Programme. 2004. *Health research for policy, action and practice. Resource modules*. Version 2. Geneva: Collaborative Training Programme. Online at: http://www.alliance-hpsr.org/jahia/Jahia/pid/38.
5. Varkevisser C, Pathmanathan I, Brownlee A. 2003. *Designing and conducting health system research projects (Volumes 1 & 2)*. Ottawa: International Development Research Centre. Online at the IDRC website: http://www.idrc.ca.
6. Global Development Network Toolkits: *Disseminating research* online at http://www.gdnet.org/middle.php?oid=373; *Proposal writing and fundraising*, online at http://www.gdnet.org/middle.php?oid=363.
7. Research and Policy in Development (RAPID). *Tools for policy impact: a handbook for researchers*, online at: http://www.odi.org.uk/rapid/Tools/Toolkits/Policy_Impact; and *Successful communication: a toolkit for researchers and civil society organisations*, online at: http://www.odi.org.uk/rapid/Tools/Toolkits/Communication.
8. Department for International Development (DFID). 2005. *Communication of research: guidance notes for research programme consortia*. Online at: http://www.dfid.gov.uk/research/guidance.asp.
9. Kuruvilla S, Mays N, Pleasant A, Walt G. 2006. Describing the impact of health research: a Research Impact Framework. *BMC Health Services Research* **6**: 134. Online at: http://www.biomedcentral.com/1472-6963/6/134.
10. UNICEF/UNDP/World Bank/WHO Special Programme for Research & Training in Tropical Diseases (TDR), online at: http://www.who.int/tdr/publications; UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction (HRP), online at: http://www.who/reproductive-health/hrp/index.htm.

References

Horton D, Alexaki A, Bennett-Lartey S *et al*. 2003. *Evaluating capacity development: experiences from research and development organizations around the world*. The Hague: International Service for National Agricultural Research (ISNAR, International Development Research Centre (IDRC) and ACP-EU Technical Centre for Agricultural and Rural Cooperation (CTA).

Lansang M, Dennis R. 2004. Building capacity in health research in the developing world. *Bulletin of the World Health Organization* **82**: 764–9.

Lansang M, Dennis R. 2006. The need to develop research capacity. Working document for *The 10/90 Report on Health Research 2006*, Geneva: Global Forum for Health Research.