The Global Health Research Agenda:
A Case Study Approach

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TABLE OF CONTENTS

The Global Health Research Agenda

This paper presents the results of a collaborative study conducted by researchers at the New York University Robert F. Wagner School of Public Service (NYU) and the Council on Health Research for Development (COHRED). The study builds upon the work of previous studies[1] with the following aims: 1) to identify key factors influencing health research agendas in Cuba, Cameroon, The Gambia, Lao PDR, Nicaragua, and Philippines, and 2) to elicit recommendations from key stakeholders that will lead to a more equitable balance between the health research needs of these low-middle income countries (LMICs) and the allocation of health research funding by domestic and international agencies.

Background

Approximately 90 percent of the global disease burden exists in developing countries.[2] From a global standpoint, it is apparent that priority action is needed to combat the health status and economic inequities faced by individuals and their families in these countries.[3] Research is a mechanism that can contribute to health improvement, the implementation of health systems change and interventions to improve the overall health of these vulnerable populations. One of the critical roles of health research is to ensure that measures proposed to help break the vicious cycle of ill health and poverty are based, as far as possible, on evidence, so that the resources available to finance them are used in the most efficient and effective way possible.[4] A way to effectively utilize resources is through prioritizing health research. Since the funding available for health research is low in comparison to its very high potential benefits, it is essential that it is based on a rational priority-setting process.[5] However, priority-setting at a global level rarely addresses the regional and local health inequities and health research knowledge gaps that exist in low-middle-income countries,[6] usually as a result of donor resource allocation and bureaucratic agendas.

The 10-90 Gap

Scarce funding for health research is a problem that affects many countries. The problem is particularly acute for LMICs. They suffer from the double constraints of limited financial resources to fund necessary research themselves, and the low priority given to their national health problems by the global research community. These constraints have contributed to the global disparity between disease burden and research funding termed the '10-90 gap'- drawing attention to the fact that of the US$ 73 billion invested annually in global health research by the public and private sectors, less than 10% is devoted to research into the global disease burden measured in Disability-Adjusted Life years (DALYs).[7] The Commission on Health Research (The Commission) first drew attention to the 10/90 gap in 1990 and subsequently issued a

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[1] Council on Health Research for Development (COHRED). Priority setting for health research: lessons from developing countries. Health Policy and Planning; 15 (2): 130-136. 2000.;
Kennedy, et. al. The research conducted by low-income countries fails to address the majority of their disease burden. Council on Health Research for Development.
[2] The 10/90 Report on Health Research 2003-2004.
[3] Ibid.
[4] Ibid.
[5] Ibid.
[6] Pang, T. et al. *From Bangkok to Mexico: towards a framework for turning knowledge into action to improve health systems.* Bulletin of the World Health Organization: 82(10). October 2004.
[7] Ibid.

recommendation that all countries spend at least 2% of health budgets on health research and institute a policy of undertaking essential national health research priority setting.

In 1993, the Commission established COHRED to monitor progress and to promote financial and technical support for research on health problems of developing countries[8] by advocating for the establishment of Essential National Health Research (ENHR) strategies. ENHR is a five-step priority-setting approach to health research funding allocation. Building on the recommendations made by the Commission on Health Research, the Ad Hoc Committee on Health Research was formed. The Global Forum for Health Research (The Forum) was founded in 1998 to work towards correcting the 10/90 gap through collaboration with the key decision-makers from governments, research institutions, universities, multi- and bi-lateral agencies, private foundations, private-sector companies, NGOs, and the media. In 2000 the Bangkok Action Plan, which included recommendations for correcting the 10/90 gap, was developed as a result of the first International Conference on Health Research for Development.[9] To close the 10/90 gap, it is, therefore, essential that these researchers, as well as policy-makers, and international research commissioning agencies prioritize health research to addresses national research needs. There is great potential in researchers from developing countries, who comprise 27% of total researchers world wide.[10]

Previous studies and rationale for our study
A number of publications, websites, and international conferences have addressed the topic of health research priority setting, many of these emerging as a result of the 2000 International Conference on Health Research for Development in Bangkok. These studies have taken a variety of approaches to address the capabilities and constraints faced by developing countries in conducting research and applying the results to minimize health inequalities. Some focused specifically on processes and methods for setting research priorities[11], while others addressed the research outputs of a country versus its burden of disease.[12] Another study focused on documentary analysis and key informant interviews, which highlighted the growing importance of "research-informed policy making" in light of global pressure for accountability and greater understanding of policy-making mechanisms.[13]

The broad argument behind the 10/90 gap is that globally not enough research is done on the health problems of developing countries. In the case of this study, key factors and cross-cutting issues that surround health research at the local level will be examined in the following six developing countries: Cameroon, Cuba, the Gambia, Lao PDR, Nicaragua, and the Philippines. To make the most of opportunities for health research priority setting, it is also important to understand stakeholders' perceptions of the key factors influencing health research agenda setting, and any priority setting strategies they have to offer, which can help to improve their overall health research environments. Among those studies that have examined the issues surrounding health research priority setting in developing countries, we are unaware of any to

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[8] Kennedy, et al. *A Review of Methods to Estimate Country Level Spending on Health Research.* Research Policy and Cooperation. WHO. Geneva, November 2003.
[9] The 10/90 Report on Health Research 2003-2004.
[10] Paris: Institute of Statistics, UNESCO; 2004.
[11] Council on Health Research for Development (COHRED). Priority setting for health research: lessons from developing countries. Health Policy and Planning; 15 (2): 130-136. 2000.
[12] Kennedy, et. al. The research conducted by low-income countries fails to address the majority of their disease burden. Council on Health Research for Development.
[13] Lavis, J.N., et al. *Use of research to inform policy making.* The Lancet; 364: 1615-1621. October 2004.

date which examine stakeholders' opinions, ideas, perceptions, and unique professional knowledge across more than one LMIC. We used a qualitative study design to explore key informants' in-depth accounts of their perceptions of the overall health research environment, their interactions with various actors involved in the health research sectors, key factors influencing health research agenda setting, and recommendations that might help to improve health research priority setting processes in LMICs. This study also responds to the recent call by the Global Forum for Health Research for further research to address the social determinants of health, including health and economic inequalities.[14]

Methods
Data were collected through a combination of quantitative and qualitative methods over the course of seven months, by reviewing current research publications and disease burden data for each country and conducting semi-structured interviews with key stakeholders to provide further explanation of the quantitative picture and to highlight areas requiring further study. Countries were identified purposively by COHRED to give a breadth of health research systems infrastructure and dependence on foreign funders.

Quantitative Methods
Bibliometric analyses were conducted to provide context for the current research situation for each of the six countries. This analysis used a method developed by COHRED[15] for comparing the disease burden to research outputs in each respective country. In this study disease burden was measured in terms of DALYs. This measure combines the effects of health problems on morbidity and mortality, and incorporates population values for these effects.[16] Disease burden data are published on an annual basis by WHO for 14 mortality sub-regions and are disaggregated using the Global Burden of Disease (GBD) health condition classification. This taxonomy is based on the tenth revision of WHO's International Statistical Classification of Diseases and Related Health Problems (ICD-10).[17] DALYs were estimated from WHO regional data based on the country's population.

With regards to research outputs, 'health research' publications were defined as those listed by one of the three ISI bibliographic databases (Science Citation Index, Social Science Citation Index and Arts and Humanities Citation Index) and the NLM PubMed bibliographic database. The advantage of the ISI databases is that the addresses of all the authors contributing to a publication are indexed, not just that of the first author. Papers published as part of international collaborative research efforts can therefore be classified according to institutional affiliations of all contributing authors. However, a drawback of these databases is that the subject matter of the articles is not classified. Instead, the ISI databases classify indexed journals by their major topics. This method of classification is problematic for multidisciplinary journals, and is a particular problem for health research with its high rates of multi-disciplinary papers.[18]

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[14] Global Forum for Health Research, internet document:
http://www.globalforumhealth.org/filesupld/Scope31Jan.pdf
[15] Kennedy, A. *Methodological Annex.* COHRED Internal Publication.
[16] World Bank. *World Development Report 1993: Investing in health.* New York: Oxford University Press; 1993.
[17] Mathers CD, Bernard C, Moesgaard Iburg K, Inoue M, Ma Fat D, Shibuya K et al. Global burden of disease in 2002: data sources, methods and results. GPE Discussion Paper No. 54. Geneva: WHO; 2003.
[18] Kennedy, A. *Methodological Annex.* COHRED Internal Publication.

PubMed was selected over Medline because although both databases have the same journal coverage, PubMed has greater article coverage for a number of basic science journals (which are only selectively indexed by Medline). Publications were restricted to journal articles and reviews for the years 1999-2003, other forms of publication such as editorials or meeting abstracts were excluded from the analysis.[19]

Following the methodology previously developed by COHRED[20], the US National Library of Medicine (NLM) PubMed database was used actively to match global burden of disease terms with MeSH terms to identify research publications for the 40 selected health conditions (Appendix X), which account for approximately 80% of the disease burden in these countries. The PubMed database, unlike ISI, only provides the institutional affiliation of the first author. However, it does use the NLM's MeSH controlled vocabulary indexing language to identify and classify the subject matter of each listed publication. Search strategies were therefore developed to match the 40 burden of disease conditions with Major MeSH terms assigned by PubMed (those describing the main focus of the article). The majority of the disease burden conditions matched specific MeSH terms.

Subjects and setting

The sample was composed of 44 key stakeholders from the following types of institutions: Ministries of Health, researchers and research funders at the national level and organizations funding research at the international level. We consider these institutions to be important global 'partners' that have the potential to make an impact on reducing the 10/90 gap. Sampling was purposeful, in that COHRED selected interviewees that were potentially relevant to the study question. The interview protocol included an introductory email from COHRED (Appendix X), followed by an email from NYU researchers (Appendix X). Once a response was received by the potential interviewee, a time was arranged for the interview. NYU researchers were sensitive to the time zones of case study countries to accommodate the interviewees' schedules.

Interviews

We created two semi structured interview guides and piloted them at the Global Forum 8 conference in Mexico City on 7 interviewees. The interview schedules were then reviewed and updated to elicit more specified responses to our questions. Two surveys were developed. One was designed to elicit the perspectives of in-country stakeholders, and focused on influences on national priority-setting frameworks. The other survey was designed for international research commissioning agencies. The aim of the interviews was to determine what key factors influence health research agenda setting as well as priority setting strategy recommendations to improve the current health research environment in each case study country. Interview themes and questions were determined in consultation with COHRED and were based on previous work done by COHRED and the Global Forum for Health Research, as well as a resource-flow study by Alano and Almario[21]. Topics for in-country stakeholders included the existence of a formal national health research plan, funding activities, relative influences of various actors (Ministry of Health, Donors, etc.), research collaboration, information dissemination, and health research capacity. Topics addressed in interviews with international research

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[19] Ibid.

[20] Kennedy, A. *Methodological Annex.* COHRED Internal Publication.

[21] Alano B, Almario E. Tracking country resource flows for health research and development. 2000. Centre for economic policy research, Manila.

commissioning agencies and foundations included thoughts on funding countries' research priorities and needs, their relative influence, overall funding process, and recommendations for mechanisms that would facilitate funding of priority setting. The semi-structured interview design allowed for discussion of some peripheral issues as they were raised by respondents. Interviews were conducted by two NYU graduate student researchers.

Prior to the interview, each respondent was notified that all responses within the interview will be kept strictly confidential, and that they would have an opportunity to confirm the content of the interview transcript before it was included within the analysis. Interviews lasted 45-60 minutes were conducted in person or by telephone. Three respondents also chose to fill out the interview transcript via email. Notes taken by both NYU researchers during the interview were subsequently compared for accuracy and then compiled into one transcript. After the close of the interview, a snowball technique was used to identify further respondents, by asking interviewees for any possible contacts that may be able to provide information on this subject matter. If any corrections or additions to the transcripts were received from the respondents, these changes were added in before final analysis.

Analysis

Both authors were involved in the initial interview transcript coding using 34 codes. Analysis progressed through stages of data reduction, data display, and drawing conclusions.[22] Continuing discussions between the two authors, rereading of interviews, and construction of data matrices for each interview contributed to the development of the results presented in this report. Since our goal was to generate the perceptions of the stakeholders mentioned rather than generalisability in a statistical sense, findings are not presented numerically.

Limitations and Constraints

Our research was limited by certain factors. These factors included the time constraints posed by having only two part-time researchers and one part-time research assistant and the difficulty posed by not being 'on the ground' in the countries of interest. Additionally, the identification of donors active in these particular six countries was challenging. Regarding the respondent sample, we did not choose it in a fully systematic way and were faced with a lack of response from some particular countries and sectors. We could address these limitations by increasing our respondent sample size, including national research outputs such as grey literature, and through triangulation such as stakeholder focus groups.

Results

The following are the overall results from a bibliometric analysis of research outputs and 23 semi-structured interviews conducted with key stakeholders from all six countries of interest. Country-specific data are not included here, but are reported in the Appendix (pp. x-z) as separate case studies.

Description of sample/response rate

The total sample consisted of researchers, decision-makers, multilateral and bilateral agencies, NGOs, national and international research funders, and foundations. The overall response rate for our study was 52%. Of the 44 stakeholders to whom we sent requests for interviews, we

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[22] Miles MB, Huberman AM. *Qualitative data analysis: a sourcebook of new methods.* Beverly Hills, CA: Sage , 1984.

interviewed 23, 5 respondents declined, and we did not receive a response from 17. Four stakeholders agreed to an interview, but were unavailable on the day of the scheduled interview and unable to reschedule for a future date. Table 1 demonstrates the overall response rate according to the respondent's organizational perspective. Country-specific response rate tables are included in the case-study section of the appendix. Note that the totals provided in this overall response rate table do not correspond exactly to country-specific response rates as some international research commissioning agencies provided responses relevant to more than one country.

TABLE 1: Overall Interviewee Response Rate

Stakeholder	Contacted	Declined	No Response	Interviewed	Response rate
International Research Commissioning Agencies & Foundations	9	0	3	6	67%
Multilateral/bilateral	10	1	6	6	60%
National decision-makers	6	1	2	3	50%
National NGO	4	0	1	2	50%
Researcher	15	3	5	6	40%
TOTAL	44	5	17	23	52%*

*average total response rate percentage

Quantitative Results

Figure 1 presents, as an example, the results of the bibliometric analysis for the Philippines. The pink line represents the number of publications that would be expected if publications were distributed equitably based solely on level of disease burden. Conditions above this line could be considered as over-represented; those below line as under-represented. The graph indicates that no single condition dominates research production in the Philippines and that there is no correspondence between disease burden and research output. For a number of conditions with high disease burden, such as ischemic heart disease (IHD), road traffic injuries, chronic obstructive pulmonary disorder (COPD), perinatal conditions, unipolar depressive disorder, and cerebrovascular disease, there are no or very few publications.

Figure 1: Philippines bibliometric analysis

Correspondance between research output and disease burden for 40 selected health conditions: Phillipines
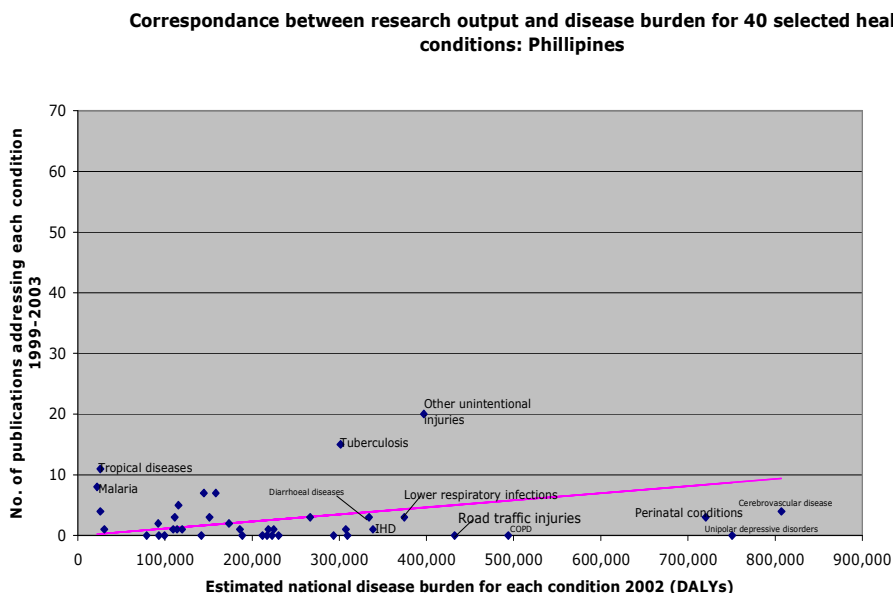
A comparative view of the bibliometric analyses conducted for all six countries is shown in Figure 2. The graph represents the proportion of all 'international' research publications for each country that focus on the 40 major disease burden contributors. Any publications that addressed more than one of these 40 conditions were considered only once, according to the primary focus of the particular study. The purpose of this bibliometric analysis was to find the proportion of total research output from studies conducted in each country that focuses on one or more of the major health problems affecting these six LMIC. Through this analysis, we were also able to examine the number of research outputs in each country that were conducted in collaboration with high-income countries. In Cameroon, for example, 78% of all studies were conducted in collaboration with Northern institutions.

Figure 2:
Health condition-specific research publications as a percentage of total research output
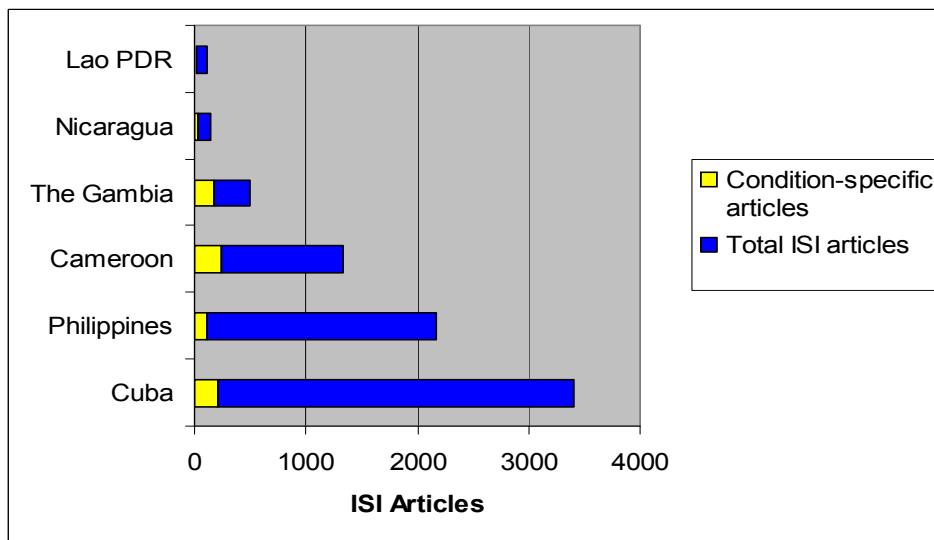
Qualitative Results

In the following sections we present key factors influencing national health research agenda setting, as stated by national, bi-lateral and multi-lateral respondents; next are responses from international research commissioning agencies. Then, each group respectively suggests key strategies for health research priority setting. We have grouped the respondents so that only those who directly fund research or fund organizations that directly fund research are included in the int'l agency sections. Multilateral and bilateral agencies that do not directly commission research are included with national stakeholders. Our final sections present cross-cutting issues and a discussion of the authors' recommendations.

Key Factors Influencing Health Research Agenda Setting- National, Multilateral, and Bilateral stakeholders

In all six countries studied, respondents said that the Ministry/Department of Health (MOH/DOH) was responsible for commissioning and at times conducting most of the applied, epidemiologic, operational, systems, and social research that was conducted. Respondents highlighted the chronically insufficient financing of ministries of health, despite the ministries' pivotal and often multifaceted role as a commissioner, consumer, and implementer of health systems research. Outside of those from the Philippines, no respondents listed health systems research as a current national health research priority, and instead expressed frustration with researchers and international funders that consider health research an 'ugly duck', 'not sexy', and 'not even research.'

Even in countries where national health research priorities have been formally outlined, respondents pointed to the lack of funding and mechanisms for inter- and intra-national collaboration based on those priorities. National stakeholders pointed to conferences and workshops as the most cost-effective and beneficial way of sharing information among their regional, national, and international peers and policymakers.

In countries such as the Philippines and Cameroon, respondents highlighted the role of local-level health centers as the main points of entry for internationally-funded health research and interventions. In addition, a national stakeholder in Cameroon also mentioned that three Ministries are primarily involved in health research activities: Ministry of Public Health, Ministry of Animal Husbandry and Fisheries, and Ministry of Scientific Research. He emphasized that these ministries are not aware of the research projects occurring in other ministries, and this can account for the lack of national health research priorities

None of the national stakeholders we spoke with were aware that any kind of health research capacity assessment had been conducted at their organization. Nevertheless, interviewees from several multilateral organizations mentioned efforts to move small fractions of resources from biomedical into systems research, in order to "know how to better deliver what works based on evidence to the people."

Key Factors Influencing Research Agenda Setting-International Research Commissioning Agencies

International agency respondents that we spoke with considered public/private partnership opportunities to be scarce in the countries we studied. Database limitations and a lack of attention to project evaluation make it difficult for agencies to track precisely what amount of the funding is spent on health research, or what the health research outcomes and impacts are at a regional/local level.

Responses from international agency stakeholders reflected little or no account of local health research priorities within their research commissioning processes. Some respondents reported, and appeared frustrated by the fact, that their organization chooses health research projects based on the organizations historical presence in specific regions. These organizations rarely fund unsolicited projects and are very conscious of what other donors are funding.

Also, projects may be prioritized by funding agencies according to where they believe they have a comparative advantage, whether in health research financing or access to high-level stakeholders.

Key factors influencing health research agenda setting - Contrast

Key factors: National, multilateral, bilateral agencies

Insufficient financing of ministries of health
Priority not placed on health systems research
Few opportunities for local, national, or int'l collaboration with other researchers
Online databases such as SHARED and PCHRD
Donors should increase investment in local-level health research infrastructure.
Devolution of health research decision-making to local levels
Researchers have limited capacity

Key factors: International research commissioning agencies

In country data were 'weak' and 'untrustworthy'
Level of health research decision-making (local v. national)

Priority-setting Strategy Recommendations – National, Multilateral, Bilateral stakeholders

Stakeholders recommended a number of specific actions for the continued correction of the 10/90 gap in their own countries, including the creation of better incentive structures to link researchers and decision makers. Stakeholders stated that improving the communication between researchers and decision makers to further align biomedical and health systems research would improve the utilization of existing knowledge on effective interventions.

Improved knowledge management: Several national respondents called for further action by the DOH/MOH to commission research that is better linked to national priorities. Of all six countries, stakeholders in four mentioned having access to some form of integrated system of online health research dissemination. For example, the Philippines contain well-developed information networks and portals to regional and national databases. They expressed hope that improving electronic information technologies and online research databases will lead to more shared learning and results-based policy making at the national level. This sentiment was echoed in a 2004 report issued by ten recipients of the Rockefeller-WHO sponsored International Health Research Awards, which stated that "websites, conferences, and mass media have proven to be particularly powerful instruments [for dissemination]."

The use of sandwich PhD training programs by one bilateral agency is meant to ensure that the students undertake priority research toward completion of their thesis in their home country after completing their first year of graduate studies at an institution in the donor country.

Priority-setting Strategy Recommendations – International Research Commissioning Agencies

One criterion for choosing projects mentioned by two funding agencies was the ability to make gains toward achieving the Millennium Development Goals (MDGs). According to the Rockefeller Foundation, "this umbrella approach has influenced many of the bilateral donors."[23] Slowly but surely, multilateral stakeholders are promoting more health systems research, including areas such as human resource capacity, as an integral component to the achievement of MDGs in LMIC. One stakeholder mentioned that will be a topic for discussion on the upcoming World Health Assembly agenda. International agency respondents pointed out that the need for countries to allocate more in-country resources to the development of national health research agendas.

Priority-setting Strategy Recommendations – Contrast

Strategy recommendations: National, multilateral, bilateral agencies

Linking researchers & decision makers
Aligning biomedical health research and health systems research
Sandwich PhD training programs
Further development of online databases
Conferences and workshops as the most cost-effective and beneficial way of sharing information among regional, national, and international peers and policymakers

Strategy recommendations: International research commissioning agencies

Align health research projects with MDGs
Need easier access to key decision-makers
Support public-private partnerships

Crosscutting and other issues

Cross cutting issues that emerged from these 23 stakeholder interviews were ideas on developing online databases, funding more individual researcher capacity building, linking researchers and decision-makers, and more funding for collaborative opportunities among researchers regionally and globally.

Discussion

Above all else, the factor most often mentioned as influential for priority setting was the existence of some type of online research portal or data base. These included the SHARED and PCHRD data bases in the Philippines and the INFOMED and Virtual Health Library in Cuba. Increasing exposure to the "volumes of unpublished studies" that are carried out by national researchers through these online resources was also a frequently recommended strategy for health research priority setting. A recent report by Lavis et al. stated that, "unlike clinicians, health ministers can turn to very few systematic reviews of the reports most relevant to them (i.e., health systems research) and they cannot rely on advice about how to critically assess the applicability of reviews."[24] Historically, international funding agencies have focused on health research questions. Further study is needed to fully understand the potential

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[23] Whyte, Amy. *Landscape Analysis of Donor Trends in International Development.* Human and Institutional Capacity Building: A Rockefeller Foundation Series. Issue 2, 2004.

[24] Lavis, J.N., et al. Use of research to inform policy making. The Lancet; 364: 1615-1621. October 2004.

of such databases for increasing and improving awareness and utilization of regional health priorities among national decision-makers.

Funders we spoke with more often described their resource allocation for capacity building as support of individual researchers in particular universities or institutions rather than as development of multi-stakeholder coordination and information sharing networks. In Cameroon, for example, research grants are arranged directly with the university researcher, without little to no intervention by the university as external funding coordinators. If this is to be the case, at least in the short run, we believe that it is essential that funders allocate more funds to build researcher capacity in the areas of grant-writing and peer-review. These two skills, mentioned by national researchers as obstacles to obtaining funding, stand out to as critical for LMIC researchers who seek to obtain research funds from international research commissioning agencies.

Respondents most often described decision-makers' implementation of research as a post facto process, rather than what recent International Health Research Awards report calls a "continuous cycle of research from shaping of questions through use of results in policy, programs, and practice—and generation of new questions." A report recently issued by the Rockefeller Foundation calls for more questions of national priority to be generated by the decision-makers, with researchers informing the study design. We anticipate the primary obstacles to 'institutionalizing' this proposed link between researchers and decision-makers to be: 1) the limited incentives in place to engage researchers and 2) the lack of decision-maker support for national researchers. Of the countries in our study which have recently created new health research departments or initiatives, such as the Health Sector Reform Agenda in the Philippines and the Ministry of Operational Research in Cameroon, only a respondent in Nicaragua mentioned a commission created to link researchers (UNAN) and decision-makers (Ministry of Health).

Further funding of conferences and workshops was recommended by nearly all stakeholders. Regional training networks, supported by a number of donors, which provide a "suite of support mechanisms to the professionals being trained" have also been documented as sustainable capacity-building approach. One such network, the Economy and Environment Program for Southeast Asia, operates in Lao PDR and is supported by over 10 bilateral, multilateral, foundation, and private-sector agencies. This network has been found in studies to be both effective and efficient at building research capacity.[25] We recommend further support of these capacity-building opportunities for researchers in LMIC.

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[25] Whyte, Amy. *Landscape Analysis of Donor Trends in International Development.* Human and Institutional Capacity Building: A Rockefeller Foundation Series. Issue 2, 2004.

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APPENDIX

1. Case study: Cameroon
2. Case study: Cuba
3. Case study: The Gambia
4. Case study: Lao PDR
5. Case study: Nicaragua
6. Case study: Philippines
7. List of 40 conditions
8. Interview guides: Country perspective, Funder perspective
9. Samples of correspondence

Please note: Given that certain funder respondents presented perspectives related to LMICs broadly, stakeholder responses may be repeated in more than one case study country.

APPENDIX 1

CASE STUDY: CAMEROON

National Context
The population of Cameroon is approximately 16 million. Life expectancy at birth is 47.2 for men and 49.0 for women in 2002. Total health expenditures in 2001 were 3.3% of GDP, or (Intl) $42. To better understand the health research environment in Cameroon, COHRED has funded three studies: *Situation Analysis of Health Research in Cameroon, Report on Priority Setting in Cameroon,* and *Tracking Resource Flows for Health Research and Development in Cameroon.*

The first study outlines health research constraints, priorities of health research, and funding of health research, much of which holds true today. According to this study, "it is estimated that Government invests only about 0.01 dollars per capita, less than 5% of the world's scientific work in health research in developing countries. Research in the country is supported mostly by bilateral and multilateral organizations."

After a Promotion and Advocacy workshop for ENHR held in Yaoundé in December 2000, a "Report on Priority Setting in Cameroon" was completed. This report's primary objective was to "identify Cameroon's specific health problems, and design and evaluate action program[s] for dealing with them." Results showed malaria as the number one disease priority, followed by intestinal worms, diarrhea, and HIV/AIDS. Following this phase of priority setting, the next stage "will combine the results of the study on research flows[26] in an effort to determine whether funding for health research is directed at priority research areas."

Findings from the resource flow study indicated that funds for health research and development come from two sources: the public sector and international donor agencies. The public sector utilized these funds in addition to the private sector (even though they did not contribute to research funds), while the international donor agencies provided funds but did not carry out health research activities, making research more donor-driven as opposed to priority-driven. In addition, the government has not allocated many funds to health research as well, due to scarce resources.[27]

Description of sample/response rate
Overall the response rate was approximately 86%. Of the seven stakeholders to whom we sent requests for interviews, we interviewed six, no respondents declined, and we did not receive a response from one. Table 2 demonstrates the response rate for Cameroon separated by the respondent's organizational perspective. A table for overall stakeholder response rate table is included on page 8 of this report. Note that the totals provided in this country-specific response rate table do not correspond exactly to the overall response rate totals, as some international research commissioning agencies provided responses relevant to more than one country. These respondents were counted in the overall response rate but not in country-specific rates.

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[26] Mbanga, George, et. al. Tracking Resource Flows for Health Research and Development (R&D) in Cameroon. University of Yaoundé.
[27] Ibid.

TABLE 2: Cameroon Interviewee response rate

|	Contacted	Declined	No Response	Interviewed	Response rate
Researcher	3		1	2	67%
National decision-makers	1			1	100%
Multilateral/bilateral	2			2	100%
International Research Funders & Foundations	1			1	100%
TOTAL	7	0	1	6	86%

Quantitative Results

The level of health-related research outputs for Cameroon is relatively low compared to other research. Publications devoted to major health problems make up only 22% of total health-related research outputs. Figure 3, below, are results of the bibliometric analysis (for details, see Methods, p. 5) for Cameroon. The pink line represents number of publications that would be expected if publications were distributed equitably based solely on level of disease burden. Conditions above this line could be considered as over-represented, below line are under-represented.

The graph here indicates that tropical diseases, HIV/AIDS, Malaria and maternal conditions, hypertensive heart disease and diabetes clearly dominate research production in Cameroon. Four conditions that were underrepresented among all research publications were: road traffic accidents, childhood conditions, perinatal conditions, lower respiratory infections. These conditions were in line with what stakeholders also reported, i.e., HIV/AIDS diarrhoeal diseases, and malaria. Epilepsy and genetically linked diseases such as sickle cell were mentioned by stakeholders but do not appear here on this graph. Nutritional disorders (Protein energy malnutrition) and cardiovascular disease (IHD) are represented amongst the 40 conditions, but do not have sufficient disease burden or research output to stand out.

FIGURE 3: Cameroon bibliometric analysis

Correspondance between research output and disease burden for 40 selected health conditions: Cameroon
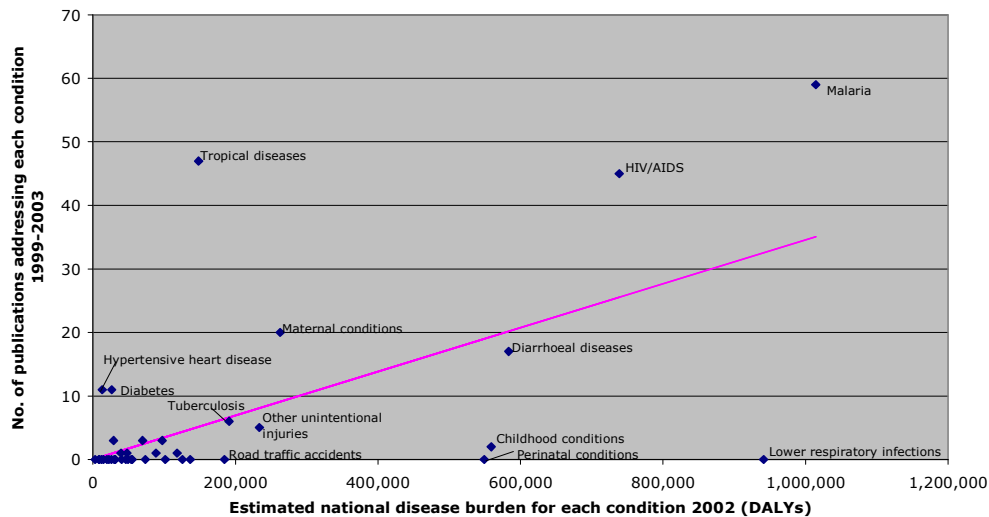
Qualitative Results

In the following sections we present key factors influencing national health research agenda setting, as stated by national, bi-lateral and multi-lateral respondents. Next, stakeholders suggest key strategies for health research priority setting. Our final sections present cross-cutting issues and a discussion of the authors' recommendations.

Key Factors Influencing Research Agenda Setting- National, Multilateral, and Bilateral stakeholders

There are a number of factors that, according to interview participants, contribute to the priority-setting process in Cameroon. While there has been a recent, previous study titled "Situation Analysis of Health Research in Cameroon," national respondents were not aware of it. One national stakeholder stated that there was 'no formal national research plan in Cameroon, although there exists a national health (policy) plan which at times calls for intervention of research expertise.' The respondent also mentioned that three Ministries are primarily involved in health research activities: Ministry of Public Health, Ministry of Animal Husbandry and Fisheries, and Ministry of Scientific Research. He emphasized that these ministries are not aware of the research projects occurring in other ministries, and this can account for the lack of national health research priorities. The respondent from the Ministry of Health was unaware of any strategic health research, but mentioned that priorities have been defined in a "Health [Sector] Strategy." The respondent also mentioned that priorities for individual [research] institutions are set internally, rather than in collaboration with other institutions. He stated that funders are always involved in "preparing, elaborating, and adopting strategic plans" at these institutions. Funders also decide on how the results of the project should be disseminated.

Interviewees from two multilateral/bilateral agencies stated that there is a national research plan, but it has not been formalized as recommended by COHRED. A respondent stated that Cameroon is disadvantaged much of the time when it comes to comparable research, with more emphasis placed on intervention activities. Overall, an interviewee also mentioned that Cameroon is weak on the research side in proportion to its capacity, which is usually a problem when trying to conduct research. A respondent from one multilateral agency stated that there were no major external funders supporting research. Instead, many of the funds come through a competitive process with a cadre of national scientists skilled in obtaining grant money. The respondent also stated, "not too many African countries get direct research funding- most who provide funds in developing countries are much more interested in interventions/trials that research."

It also seems that little to no account of local health research priorities are taken into consideration in international agency research commissioning processes. The two national researchers we interviewed stated that the government does not have enough money to fund research, which one respondent said "leaves the scientists at the mercy of external funding agents whose priorities determine the priority areas of the researchers." An interviewee also stated that funders did not take national health research priorities into account, and instead researchers must comply with funder policy. For example, the policy of one funder states that it will only give money to institutions that serve as fiscal agents to individual researchers, but then those institutions receive the benefits of the project. "At the end of any such research project, equipment etc acquired through the project reverts to the institution or ministry, etc."

Respondents also mentioned "warfare" between the Ministry of Health and researchers. Many times one group accuses the other of not utilizing their services. Oftentimes topics chosen by researchers are not in line with the priorities of the country, with results written in a complicated fashion, inaccessible to the public. The Ministry of Health feels threatened by the researchers' knowledge, and does not want them to "encroach" on MoH's powers. However, there has been some recent effort on MoH's behalf to collaborate with research institutions in Cameroon, the medical school in particular. Also, in instances where researchers are not confident in their grant writing abilities, they turn to research external scientists have commissioned, thereby responding to a donor need as opposed to the national need for where he/she believes research is necessary.

Key Factors Influencing Research Agenda Setting --International Research Commissioning Agencies
One international agency respondent mentioned that program areas depend on the funding streams they have. Also, international research grants are targeted towards countries with those who know their specific research capabilities, to help them build their national research capacity. The respondent stated, "not as a formulaic process, but in most of the places where we are working we ask scientists to come with proposals or we hold meetings with scientists where they talk to us about what they see as the priorities there." In addition, the interviewee mentioned that they have had a presence in Africa for many years, since region can oftentimes predetermine where research is conducted. He also stated, "Scientists there are very plugged in to the policymakers and those setting the research agendas."

This respondent felt that the influence their agency had on the research was positive. Although they may 'set the standard' for the type of research conducted, they 'push and pull' the way the agenda is set, giving authority to national stakeholders when needed and vice versa.

Key Factors Influencing Research Agenda Setting– Contrast

Key factors: National, multilateral, bilateral agencies

Priority setting studies not widely disseminated to national stakeholders
Internal research priority setting
Weak research environment in proportion to capacity
No major external funders supporting research
"Warfare" between MoH and researchers
Lack of researchers' grant writing skills

Key factors: International research commissioning agencies

Program areas depend on funding streams
Regional country presence has effect on research conducted

Priority-setting Strategy Recommendations – National, Multilateral, Bilateral stakeholders

Stakeholders recommended a number of specific actions for the continued correction of the 10/90 gap in their own countries. One respondent stated that Ministries involved in health research should come up with health research priorities. The government should provide substantial funding into basic research, attracting scientists who would otherwise be supported by external funders with different agendas, thereby facilitating the creation of better incentive structures to link researchers and policy makers. He also stated that one single Ministry coordinating health related research would be more efficient, thereby using limited funds efficiently, and avoiding the duplication of services among the various ministries.

One respondent stated that funders should have their priorities more aligned with those of the country's to provide effective interventions, through the use of evidence-based research. To facilitate information sharing amongst researchers and decision makers, two multi/bi-lateral agency respondents stated the importance of establishing a health database (SHARED), which is currently underway with the help of the current MoH minister. Most importantly, one also discussed the importance of collaboration between researchers, since many are working alone, especially identifying 'northern' partners to work with. This respondent also stated that private sector involvement in research is needed to secure more money.

Priority-setting Strategy Recommendations – International Research Commissioning Agencies

The one respondent representing international research commissioning agencies discussed the need for joint projects on capacity development for researchers. Their agency is "involved more at the research training level, hoping to foster 'sufficient critical mass' so that the scientific thought process will continue there." This will help the scientists establish their long term careers independently.

Priority-setting Strategy Recommendations – Contrast

Strategy Recommendations: National, multilateral, bilateral agencies

Priorities more aligned with those of the country's to provide effective interventions, through the use of evidence-based research
One single Ministry coordinating health related research would be more efficient
Establishing a health database (SHARED)
Collaboration among north and south researchers

Strategy Recommendations: International research commissioning agencies

Need for joint projects on capacity development

Crosscutting and other issues

One respondent mentioned the lack of systematic recording of grey literature sources and internal reports. In regards to donors, although they take part in priority-setting exercises, they use these opportunities to highlight the areas that are of interest to their own countries. As in all other countries studied, respondents in Cameroon called for strengthening ties between researchers and decision-makers. One respondent said that there is a "need to create policy makers and systems researchers who can take findings from basic research and apply them-individuals who are policy makers but are research literate."

Discussion

We are in agreement with stakeholders with regards to north-south collaboration as a means to identify partners to work with and to help with research publications. To alleviate the problem of grey literature, a recording process should be developed for better organization, making it easier to submit in international journals. This can be achieved through training programs and classes geared towards research information management and dissemination to broader community. There also needs to be improved communication between Ministry of Health and researchers. Grant writing classes would help researchers to articulately state their actual research needs rather than those of external funders, which will facilitate better communications with donors to express need of health research priorities.

References

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Sama, Martyn, et. al. Report on Priority Setting in Cameroon. IMPM- Yaoundé.

Sama, Martyn, et. al. Situation Analysis of Health Research in Cameroon.

APPENDIX 2

CASE STUDY: CUBA

National Context
The population of Cuba is approximately 11 million. Life expectancy at birth was 75 for men and 79.3 for women in 2002. Cuba spends 7.2% of GDP on health, or (Intl)$229 per capita. The majority of funding for health research in Cuba comes from the Cuban government. The Ministry of Public Health (MPH), the biomedical industry, and the Academy of Science are all prominent national stakeholders in Cuba. The private sector is a major funder of health research in Cuba. International stakeholders include the Canadian International Development Agency (CIDA), the Pan-American Health Organization (PAHO), UNICEF, the National Council of Research, Venezuela (CONICIT), the European Union, TDR, and the Health Research Systems Analysis (HRSA) department of the WHO.

Science and Technology Units and medical universities often are responsible for the design of research projects and report the results to the National Division of Science and Technology and the Ministry of Public Health (MPH). This work is then translated, through discussions with the MPH, into national health research priorities. National research is often indexed on the Virtual Library of Health, which was initiated by PAHO in Brazil. This online center for health sciences information consists of a library for each country in Latin America, and acts as a portal to all public health journals in Latin America from the past 5-10 years in Spanish and Portuguese. INFOMED, an online database, was created in Cuba and linked to the Virtual Library of Health as a portal to both national and international health and health research information.

National health research priorities in Cuba have been set for the past 10 years through a number of collaborative efforts. In a 1999 ENHR initiative sponsored by COHRED, a multi-level stakeholder decision-making process was used to determine the ten major health problems on which the national health research agenda would be based. In June, 2001, COHRED sponsored the "Workshop on National Essential Research in the Context of the National Health Research System." The workshop was organized by the National Science and Technology Division of the Ministry of Public Health Care. The workshop brought together 53 health research professionals, in four working groups, to address issues such as national health research capacity development, generation of knowledge, and financing. National stakeholders from national research institutes, medical colleges, and centers of biotechnology were present, along with community researchers, MPH decision-makers, and National Health Science and Technology Division officials. [28] Another recent study, building on previous work done by Alano and Almario[29], examined the flow of resources allocated for health research in Cuba as a means of having "more precise control [over] the use of funds for...scientific activity."[30]

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[28] *Final Report: Workshop on National Essential Research in the Context of the National Health Research System.* City of Havana, Cuba: June 26-28, 2001. Internal COHRED document.
[29] Alano, B.P. and E.S. Almario. *Tracking Country Resource Flows for Health Research and Development (R&D).* 2000.
[30] Valenti Pérez, C., et. al. *Tracking Resource Flows for Health Research and Development in Cuba, Years 2000-2001: Final Report.* May 2003. Internal COHRED document.

Results

The following are the results from a bibliometric analysis of research outputs and two semi-structured interviews conducted with key national stakeholders in Cuba. First, we present the bibliometric analysis. Then, qualitative results are presented: key factors influencing national health research agendas, as stated by national, bi-lateral and multi-lateral respondents.

Description of sample/response rate

The response rate for Cuba was approximately 22%. Of the 9 stakeholders to whom we sent requests for interviews, we interviewed 2, 2 respondents declined, and we did not receive a response from 5. Table 3 (below) demonstrates the response rate for Cuba separated by the respondent's organizational perspective. A table for overall stakeholder response rate table is included on page 8 of this report. Note that the totals provided in this country-specific response rate table do not correspond exactly to the overall response rate totals, as some international research commissioning agencies provided responses relevant to more than one country. These respondents were counted in the overall response rate but not in country-specific rates.

TABLE 3: Cuba Interviewee responses

|	Contacted	Declined	No Response	Interviewed	Response rate
National decision-makers	2	0	1	1	50%
Multilateral/bilateral	2	0	1	1	50%
Researcher	4	2	2	0	0%
National NGOs	1	0	1	0	0%
TOTAL	9	2	5	2	22%

There are very few international research commissioning agencies providing funding for health research in Cuba. As we did not interview a stakeholder from this type of organization, the sections below present results gathered only from national stakeholder responses.

The level of health-related research outputs for Cuba is relatively low compared to other research. Publications devoted to major health problems make up 6% of total health-related research outputs. Figure 4, below, presents results of the bibliometric analysis (for details, see Methods, p. 5) for Cuba. The pink line represents number of publications that would be expected if publications were distributed equitably based solely on level of disease burden. Conditions above this line could be considered as over-represented; those below line are under-represented

The graph indicates that in Cuba there is little correspondence between disease burden and research output. For a number of conditions with high disease burden, such as such as unipolar depressive disorders, ischemic heart disease (IHD), alcohol use disorders, and chronic obstructive pulmonary disorder (COPD), there are no or very few publications.

Figure 4: Cuba bibliometric analysis

Correspondance between research output and disease burden for 40 selected health conditions: Cuba
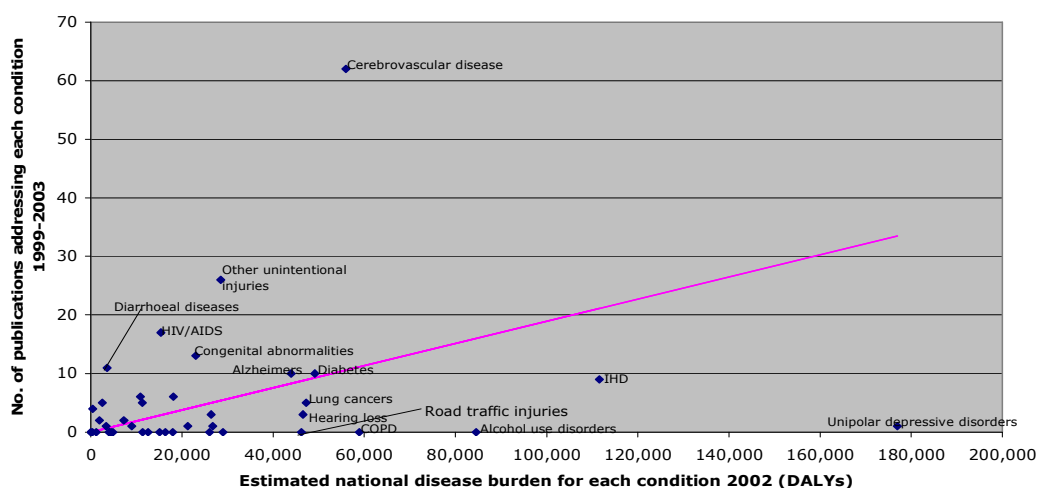
Qualitative Results
In the following sections we present key factors influencing national health research agenda setting, as stated by national, bi-lateral and multi-lateral respondents. Next, stakeholders suggest key strategies for health research priority setting. Our final sections present cross-cutting issues and a discussion of the authors' recommendations.

Key Factors Influencing Health Research Agenda Setting- National, Multilateral, and Bilateral stakeholders
There are a number of factors that, according to the respondents we interviewed, influence the research agenda-setting process in Cuba. Both respondents stated that priority-setting for and commitment to health research in Cuba occurs at the highest levels of government. Because the research is primarily state-funded, national scientists and the MPH have relatively more control over the direction that research takes. However, according to one respondent, tensions often arise between the scientific organizations and the MPH. The scientific committee is more closely aligned with the State Council, the 'ultimate' decision-making council of Cuba than the MPH. Many health personnel participate in health research at one point or another because medical research is a part of physician training in Cuba, and physicians must continue conducting research throughout their career.

The independent nature of biomedical funding and agenda-setting is heightened by this sector's outside link to pharmaceutical exports to other LMICs. One respondent pointed to the interests of individual researchers and national strategic needs (e.g. development of drugs that cannot be purchased affordably, or at all, on the international market), as determined by the State Council, are key factors currently driving the biomedical research agenda in Cuba. The MOH directs most health systems research, an area that has only recently gained some ground because,

27

according to one respondent, it is considered 'ugly duck', 'not sexy', and 'not even research' by researchers in Cuba and worldwide.

In recent years, the MPH has worked with a number of national institutions to conduct health research capacity assessments, including the Cuban National Institute of Health. Additionally at a biannual event called Science & Technology in Health, stakeholders gather to discuss what has been done in the area of health research in Cuba and how to address the existing gaps. This meeting is also an attempt to link the work of local health districts according to what their needs are, and to identify the overall problems that should be addressed in the national health plan. One stakeholder we interviewed stated that this effort to build the agenda "from the bottom up", while laudable, is an idea that exists more on paper than in practice.

Priority-setting strategy recommendations—National and multilateral stakeholders

Respondents recommended a number of health research priority-setting strategies. One multilateral agency stakeholder suggested in particular that more health systems research should be initiated where it relates to the MDGs. This respondent also recommended that health systems research be translated into national-level priorities, citing global research questions about human resources for health as an example. Authors Valentini Pérez et al. reinforce this point in their recent resource-flow report, stating that "investigations in the field of the social sciences [have not yet] reached...the force that [biomedical research has]."

The multilateral agency respondent stated that decision-makers should be more involved in defining basic [public health] questions, according to this respondent, in conjunction with the community, civil society organizations, and interest groups. Once these research questions are defined, the decision-makers would work with the researcher(s) to translate the basic questions into research questions. This sentiment is echoed in the final report generated from the June 2001 ENHR workshop held in Havana. This document stated that "the development of an efficient relationship among government, decision-makers, academicians, researchers, and the community is essential to adequately identify health problems nationwide...by means of contributing feasible and measurable solutions." Finally, the multilateral agency respondent called for more consideration of the diversity and specific needs of each country in funder agenda setting processes.

Crosscutting and other issues
Stakeholders call for decision-makers to form the basic health questions and then work with researchers to translate them into research questions.

Discussion

The misalignment of MPH's role commissioning health systems research and researchers' opinions of it as 'not sexy' and the 'ugly duck' is troublesome. Further incentives needed to coordinate these two groups. Further incentives ARE needed to coordinate these two groups" and then add "and courage more collaboration.

References

Final Report: Workshop on National Essential Research in the Context of the National Health Research System. City of Havana, Cuba: June 26-28, 2001. Internal COHRED document.

Valenti Pérez, C., et. al. *Tracking Resource Flows for Health Research and Development in Cuba, Years 2000-2001: Final Report.* May 2003. Internal COHRED document.

Alano, B.P. and E.S. Almario. Tracking Country Resource Flows for Health Research and Development (R&D). 2000.

APPENDIX 3

CASE STUDY: THE GAMBIA

National Context
The population of Gambia is approximately 1.4 million. Life expectancy at birth is 55.4 for men and 58.9 for women in 2002. Total health expenditures in 2001 were 6.4% of GDP, or (Intl) $78. Multilateral and bilateral research commissioning agencies include, but are not limited to the Medical Research Council, World Bank, and UN agencies. The Medical Research Council (MRC) in particular has a significant role in the Gambia. They serve as the primary medical research arm in the country. "The MRC Laboratories in The Gambia [represent] the UK's most important public investment in medical research in developing countries. The Laboratories [continue] to develop a relationship of partnership with the Government of The Gambia. The overall goal of the Unit [is] to improve global health through high quality clinical and public health research and the Laboratories [are] a key element of MRC's strategy in global health in partnership with DfID."[31]

Results
The following are the overall results from a bibliometric analysis of research outputs and four semi-structured interviews conducted with key stakeholders in the Gambia.

Quantitative Results
The level of health-related research outputs for Gambia is relatively even compared to other research. Publications devoted to major health problems make up 53% of total health-related research outputs. Figure 6 below, are results of the bibliometric analysis (for details, see Methods, p. 5) for the Gambia. The pink line represents number of publications that would be expected if publications were distributed equitably based solely on level of disease burden. Conditions above this line could be considered as over-represented, below line are under-represented.

The graph here indicates that malaria, tuberculosis, tropical diseases, and maternal conditions clearly dominate research production in Gambia. Four conditions that were underrepresented among all research publications were: road traffic accidents, childhood conditions, perinatal conditions, lower respiratory infections. These conditions were in line with what stakeholders also reported, i.e., malaria, HIV/AIDS, and tuberculosis.   Pneumonia, diabetes, and asthma were mentioned by stakeholders but do not appear here on this graph. Hypertension, liver cancer and asthma are represented amongst the 40 conditions, but do not have sufficient disease burden or research output to stand out.

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[31] http://www.mrc.ac.uk/prn/index/public-interest/public-council_meetings/public-council_meetings_2003-04/public-council_meeting_12_may04/public-council_meeting_12_may04_note.htm

FIGURE 6: The Gambia bibliometric analysis

Correspondance between research output and disease burden for 40 selected health conditions: Gambia
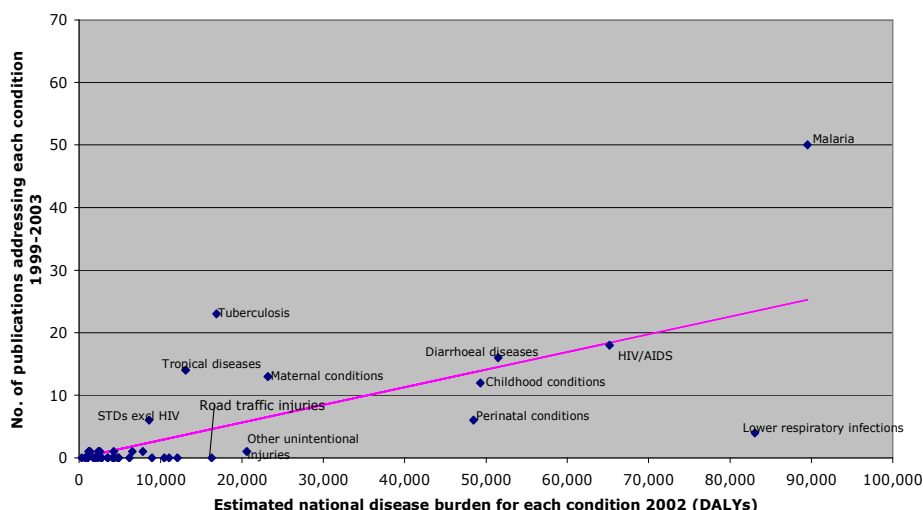
Description of sample/response rate

Overall the response rate was approximately 80%. Of the 5 stakeholders to whom we sent requests for interviews, we interviewed 4, no respondents declined, and we did not receive a response from 1. Table 4 demonstrates the response rate for Gambia separated by the respondent's organizational perspective. A table for overall stakeholder response rate table is included on page 8 of this report. Note that the totals provided in this country-specific response rate table do not correspond exactly to the overall response rate totals, as some international research commissioning agencies provided responses relevant to more than one country. These respondents were counted in the overall response rate but not in country-specific rates.

TABLE 4: Gambia Interviewee response rate

	Contacted	Declined	No Response	Interviewed	Response rate
Researcher	2			2	100%
Multilateral/bilateral	1		1	0	0%
International Research Funders & Foundations	2		0	2	100%
TOTAL	5	0	1	4	80%

31

Key Factors Influencing Research Agenda Setting- National, Multilateral, and Bilateral stakeholders

There are a number of factors that, according to interview participants, influence the health research agenda in the Gambia. Priority-setting in the Gambia typically falls in the hands of the Medical Research Council (MRC) or the Ministry of Health. One national stakeholder stated that the Ministry of Health is the main driver for health systems research, while the Medical Research Council (MRC) conducts biomedical research. One stakeholder mentioned that priority setting is based on common problems perceived locally, i.e. malaria, AIDS, pneumonia, TB, etc. He deemed the priorities as "fairly self-evident." Although hypertension, diabetes, asthma are problems that have been stated by more that one respondent, one national stakeholder found that it was challenging to convince the board of his agency in conducting non-communicable disease research. One national respondent believes that the MoH serves as a "gatekeeper," if it seems profitable, the MOH agrees and then submitted through the review process. A respondent also mentioned that since the Gambia is a very small country, people were usually referred to the MRC, since it is the primary research arm of Gambia. He stated, "if one approached the government, they were referred to the MRC."

One respondent stated that "the influence on the direction of research is often determined locally and if the funder is interested it happens, if not it does not. At times, funders will approach the MoH or MRC for a particular project they are interested in, and if the institutions agree, it can be done. However, there is enormous pressure placed on agencies from donors. A national respondent discussed the large amount of time that was devoted to meet the needs of donors and how they act as though they should be their primary and only focus.
In regards to health research capacity, no formal assessment has been conducted, but with the MRC the capacity seems to be there. However, respondents still pointed to a great deal of reliance on international researchers in the Gambia.

Key Factors Influencing Research Agenda Setting --International Research Commissioning Agencies

One international agency respondent mentioned that their agency primarily funds TB vaccine trials and trachoma in the Gambia. Their choice of research program areas depend on the funding streams they have. Similar to Cameroon, these international research grants are targeted towards countries with specific research capabilities, to help them build their national research capacity. The respondent stated, "not as a formulaic process, but in most of the places where we are working we ask scientists to come with proposals or we hold meetings with scientists where they talk to us about what they see as the priorities there." In addition, the interviewee mentioned that they have had a presence in Africa for many years, since region can oftentimes predetermine where research is conducted. He also stated, "Scientists there are very plugged in to the policymakers and those setting the research agendas." This respondent felt that the influence their agency had on the research was positive. Although they may 'set the standard' for the type of research conducted, they 'push and pull' the way the agenda is set.

A respondent from a multilateral research commissioning agency supports the translation of research results into policy in the Gambia. This respondent considers LMIC health research priorities by engaging primary national stakeholders in discussion to come to agreement on where resources should be allocated. Once the country targeted for resource allocation is selected, the agency investigates the country's priorities and brings together the ministries of all sectors to find out the agency's competitive advantage. The agency then agrees to devote a

certain amount of funding, for everything from health research salaries to infrastructure, from the agency's overall country program budget. This strategy of identifying priorities and allocating resources is coordinated with other research institutions such as TDR, Pasteur Institute, and the MRC. The stakeholder described the process of convincing the government to engage with NGOs and universities to conduct agency-funded research, as a more challenging process.

Key Factors Influencing Research Agenda Setting– Contrast

Key Factors: National, multilateral, bilateral agencies

MoH drives health systems research
MRC is biomedical research, with MoH as a gatekeeper
Funder requests to conduct research are channeled through MRC and MOH
Structured health research environment

Key Factors: International research commissioning agencies

Program choice depends on funding streams
Funder priority-setting not 'formulaic
Long-standing relationships with local decision-makers

Priority-setting Strategy Recommendations – National, Multilateral, Bilateral stakeholders
Both stakeholders recommended the development of training programs to increase in-country health research capacity. One interviewee emphasized the importance of getting research into policy and practice, but finds it very challenging. The other respondent also mentioned that MoH and MRC websites are not as accessible, although international conferences have proved helpful in sharing results with large sponsors abroad.

Priority-setting Strategy Recommendations – International Research Commissioning Agencies
The one respondent representing international research commissioning agencies discussed the need for joint projects on capacity development for researchers. Their agency is "involved more at the research training level, hoping to foster 'sufficient critical mass' so that the scientific thought process will continue there." This will help the scientists establish their long term careers independently. In addition, the respondent recommended the need to link researchers with policymakers.

The respondent from the multilateral agency advises that more countries should develop their own health research goals and priorities to help facilitate his agency's funding processes. In his opinion, "epidemiologic research to determine health problems is very uneven; data are weak, and government data are untrustworthy." This interviewee recommends that governments collaborate more with NGOs and universities to do research projects.

Priority-setting Strategy Recommendations – Contrast

Strategy Recommendations: National, multilateral, bilateral agencies

Development of training programs to increase in-country health research capacity
Getting research into policy and practice
International conferences have proved helpful in sharing results with large sponsors abroad

Strategy Recommendations: International research commissioning agencies

Joint projects on capacity development for researchers
To link researchers with policymakers
Countries should develop their own health research goals and priorities to help facilitate funding processes
Governments collaborate more with NGOs and universities to do research projects

Crosscutting and other issues

Funders choosing programs because of historical presence and longstanding relationships with decision-makers in the country, can lead to duplication of efforts and redundancy.

Discussion

In response to funders' historical presence in a region, perhaps they can use collaborative methods to get new ideas, and seek out different regions/themes for research instead of relying on what is familiar and historical. Using innovative methods can help identify new research and solutions. Implementation of training programs would definitely help increase the 'critical mass' of national researchers, and collaboration with the government and NGOs would help the health research capacity of the Gambia. In addition, more conferences amongst various stakeholders and databases with research articles would help to facilitate the process of information sharing and dissemination.

References

http://www.mrc.ac.uk/prn/index/public-interest/public-council_meetings/public-council_meetings_2003-04/public-council_meeting_12_may04/public-council_meeting_12_may04_note.htm

APPENDIX 4

CASE STUDY: LAO PEOPLE'S DEMOCRATIC REPUBLIC (PDR)

National Context

The population of Lao PDR is approximately 5.5 million. Life expectancy at birth is 54.1 for men and 56.2 for women in 2002. Total health expenditures were 3.1% of GDP, or (Intl) $51. Some recent efforts regarding health research priority setting have proved successful in Laos, and serve as important models in the country. In December 2002, Health Ministers from Cambodia, Laos, and Vietnam gathered to "sign a Declaration to pursue regional coordination on the health issues."[32] This effort came about after the European Commission's programme on malaria control, which was a five year project to "assist the national health organizations in their efforts to decrease malaria morbidity and mortality rates by providing financial, technical and communications support for operational activities, which involved identifying research priorities."[33] This new collaboration among the three health ministers was a result of this program, and had a conference to control malaria and also concentrate on other issues of health research.

The International Development Research Centre in Canada, an international research funder, has also made great strides towards improving the health research environment in Laos. According to a 2003 study titled Health Priorities and Policies (Laos), [the agency supported workshops on basic research methods for health personnel in Lao PDR; small grants and field supervision for those with feasible proposals arising from the workshops; and training in data analysis and report writing. This grant supported "train-the-trainers" exercise, trainers including previous workshop participants and the increasing number of new Master of Public Health (MPH) graduates returning to Laos. A research project management workshop was planned for the first year, as well as a workshop on participatory research methods. There was also some support for a small number of projects arising from these workshops. The project was administered by the Council of Medical Sciences of the Ministry of Health.][34]

Quantitative Results

The level of health-related research outputs for Lao PDR is relatively low compared to other research. Publications devoted to major health problems make up 25% of total health-related research outputs. Figure 7, below, are results of the bibliometric analysis (for details, see Methods, p. 5) for Lao PDR. The pink line represents number of publications that would be expected if publications were distributed equitably based solely on level of disease burden. Conditions above this line could be considered as over-represented, below line are under-represented.

The graph here indicates that malaria and tropical diseases clearly dominate research production in Laos. Four conditions that were underrepresented among all research

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[32] http://www.deltha.cec.eu.int/en/news_2002/Ccam_health_con_en.htm
[33] Ibid.
[34] http://www.idrc.ca/en/ev-67541-201_040144-1-IDRC_ADM_INFO.html

publications were: road traffic injuries, chronic obstructive pulmonary disease, perinatal conditions, depressive disorders and cerebrovascular disease.

FIGURE 7: Lao PDR bibliometric analysis

Correspondance between research output and disease burden for 40 selected health conditions: Laos
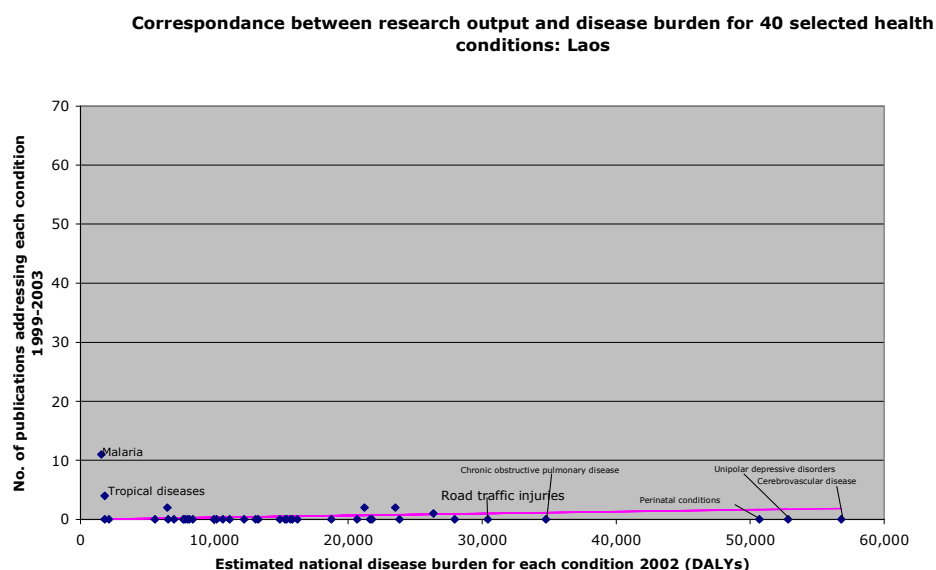
Description of sample/response rate

Overall the response rate was approximately 42%. Of the 12 stakeholders to whom we sent requests for interviews, we interviewed 5, 3 respondents declined, and we did not receive responses from 6. Table 5 demonstrates the response rate for Lao PDR separated by the respondent's organizational perspective. A table for overall stakeholder response rate table is included on page 8 of this report. Note that the totals provided in this country-specific response rate table do not correspond exactly to the overall response rate totals, as some international research commissioning agencies provided responses relevant to more than one country. These respondents were counted in the overall response rate but not in country-specific rates.

TABLE 5: Lao PDR Interviewee response rate

	Contacted	Declined	No Response	Interviewed	Response rate
Researcher	3	1	2	0	0%
National decision-makers	2	1	1	0	0%
Multilateral/bilateral	1	1	2	1	100%
International Research Funders & Foundations	6		1	4	67%
TOTAL	12	3	6	5	42%

Key Factors Influencing Research Agenda Setting- National, Multilateral, and Bilateral stakeholders

The following describes priority-setting factors as stated by one multilateral respondent representing Lao PDR. The respondent discussed the overall weakness of the health research environment in Lao PDR. Working in conjunction with the Swiss National Research Foundation, the respondent discussed how Lao PDR developed projects along lines of a "partnership approach," linking them with researchers in Switzerland. The respondent felt that this mechanism proved successful, saying the quality and level of health personnel is very low. There is not much health research capacity, as medical and nurse training is low, and that their overall system is "so slow, takes a year just to get it going- leaves little time to do the actual research."

Key Factors Influencing Research Agenda Setting --International Research Commissioning Agencies

One international agency respondent mentioned that their choice of research program areas depends on the funding streams they have. Also, international research grants are targeted towards countries with specific research areas, to help them build their national research capacity. The respondent stated, "not as a formulaic process, but in most of the places where we are working we ask scientists to come with proposals or we hold meetings with scientists where they talk to us about what they see as the priorities there." This respondent felt that the influence their agency had on the research was positive and stated that although they may 'set the standard' for the type of research conducted, they 'push and pull' the way the agenda is set.

One respondent from an international funder emphasized the weak infrastructure of Laos, and how it faces great challenges. It is supported more on a global level "through the Global Forum and the use of subcontractors." when compared with other LMICs. This (international funder) respondent spoke in broad terms about the key factors influencing the funder's approach to agenda-setting processes in LMICs, including Laos. As stated in the Cameroon and Gambia case studies, this respondent considers LMIC health research priorities by engaging primary national stakeholders in discussion to come to agreement on where resources should be allocated. Once the country targeted for resource allocation is selected, the agency investigates the country's priorities and brings together the ministries of all sectors to find out the agency's competitive advantage. The agency then agrees to devote a certain amount of funding, for everything from health research salaries to infrastructure, from the agency's overall country program budget. This strategy of identifying priorities and allocating resources is coordinated with other research institutions such as TDR, Pasteur Institute, and the MRC. The stakeholder described the process of convincing the government to engage with NGOs and universities to conduct agency-funded research, as more challenging process.

Key Factors Influencing Research Agenda Setting– Contrast

Key Factors: National, multilateral, bilateral agencies

Weakness of health research environment
Partnership approach is favored by respondent(s)

Key Factors: International research commissioning agencies

Choice of research program areas depends on the funding streams
Funder as 'standard setter' for type of research conducted
Funder 'push' and 'pull' of health research agenda
Weak health research infrastructure
Priorities coordinated among multiple agencies

Priority-setting Strategy Recommendations – National, Multilateral, Bilateral stakeholders

The multilateral stakeholder recommended the development of training programs to increase in-country health research capacity. He also stated the importance of conferences and international publications as means to improve the research environment.

Priority-setting Strategy Recommendations – International Research Commissioning Agencies

The one respondent representing international research commissioning agencies discussed the need for joint projects on capacity development for researchers. Their agency is "involved more at the research training level, hoping to foster 'sufficient critical mass' so that the scientific thought process will continue there." This will help the scientists establish their long term careers independently. In addition, the respondent recommended the need to link researchers with policymakers.

The respondent from the multilateral agency advises that more countries should develop their own health research goals and priorities to help facilitate his agency's funding processes. In his opinion, "epidemiologic research to determine health problems is very uneven; data are weak, and government data are untrustworthy." This interviewee recommends that governments collaborate more with NGOs and universities to do research projects.

Priority-setting Strategy Recommendations – Contrast

Strategy Recommendations: National, multilateral, bilateral agencies

Training programs to increase in-country health research capacity
Conferences and international publications

Strategy Recommendations: International research commissioning agencies

Joint projects on capacity development for researchers
The need to link researchers with policymakers
Countries develop own health research goals and priorities to help facilitate funding processes
Government collaborate more with NGOs and universities to do research projects

Crosscutting and other issues

Although Lao PDR has a weak health research infrastructure, a lot of collaborative 'partnership' work is being done.

Discussion

Since the health research environment is very weak in Lao PDR, continued efforts to build capacity are necessary. Lao PDR should continue these collaborative efforts, and use them as opportunities to increase funding and allow more people's involvement in health research.

References

http://www.deltha.cec.eu.int/en/news_2002/Ccam_health_con_en.htm

http://www.idrc.ca/en/ev-67541-201_040144-1-IDRC_ADM_INFO.html

APPENDIX 5

CASE STUDY: NICARAGUA

National Context
The population in Nicaragua is barely over 5 million. Life expectancy at birth is 67.9 for men and 72.4 for women in 2002. Total health expenditures in 2001 were 7.8% of GDP, or (Intl) $158. A 10-year National Health Plan was approved by the national government of Nicaragua in 1994. The national health plan outlined maternal mortality, infant mortality, population growth, chronic malnutrition, high prevalence of acute respiratory and intestinal diseases, endemic diseases, labor accidents, mental health problems, violence, chronic diseases, and cancer as national priorities.

According to one national stakeholder, research was not included as part of the National Health Plan of 1994. However, in 2004 a health research priority setting process was initiated by a major state university and COHRED with funds from COHRED and the Brazilian Ministry of Health. This process has involved the Nicaraguan Ministry of Health (MOH), major universities, and community-based organizations. While the National Policy on Science and Technology was created by presidential decree in 1995 and was the subject of discussions between government representatives, private sector stakeholders and universities, it currently has no operational budget.[35]

The national health research priorities, as described by one major university stakeholder, are infectious diseases (especially infant diarrhea), labor medicine, and epidemiology. PAHO/WHO and SAREC/SIDA are the primary commissioners of health research in Nicaragua. Other key stakeholders include Save the Children, OXFAM, and more recently the International Foundation for Science, CDC and a number of pharmaceutical companies. There are currently over 150 formal partnerships that have been formed between research commissioning agencies in Europe, the United States and South American and the National Autonomous University of León (UNAN).

The majority of health research conducted in Nicaragua takes place at public universities and, according to national stakeholders we interviewed, pertains to communicable diseases; primarily the identification of microorganisms that cause diarrhea in children. The Center for Epidemiological and Demographic Studies was recently created at UNAN, the focuses of which are health surveillance systems and epidemiological studies. The Center is currently conducting one study on occupational health problems related to pesticides and another on traditional medicines. According to a study conducted by SAREC, there has been a dramatic increase in Nicaragua's health research capacity over the past 15 years.

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[35] Medina, Ernesto and Edumndo Torres. *Doing Research in Nicaragua.* Submitted for publication in the International Foundation for Science annual report.

Quantitative Results

The level of total research outputs for Nicaragua is extremely low, and publications related to major health problems (e.g. diarrhea, tuberculosis, perinatal conditions, and lower respiratory conditions) make up 20% of this total. Due to this limited number of publications, we have not included a bibliometric graph.

FIGURE 8: Nicaragua bibliometric analysis

Correspondance between research output and disease burden for 40 selected health conditions: Nicaragua
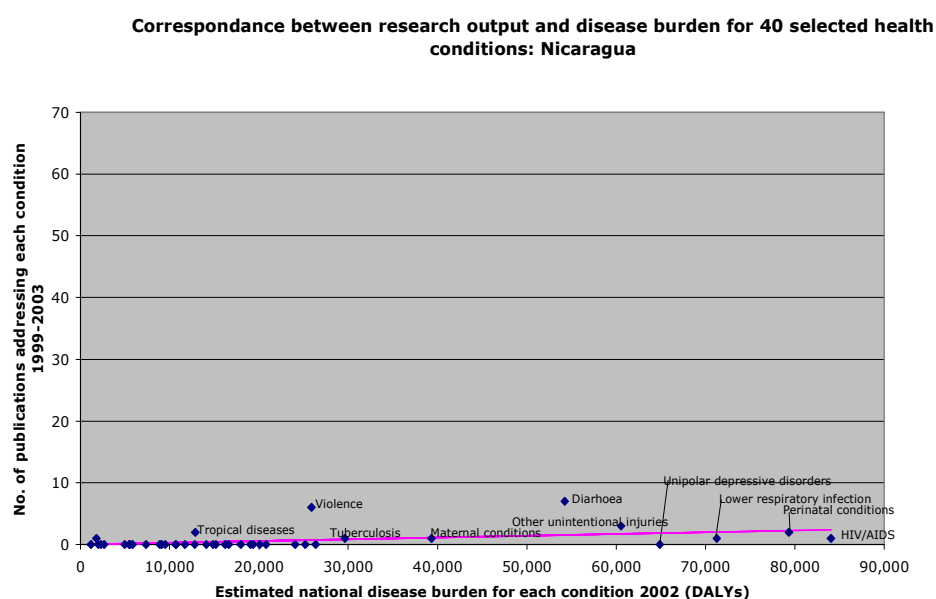
Description of sample/response rate

Overall the response rate for respondents for Nicaragua was 80%. Of the 5 stakeholders to whom we sent requests for interviews, we interviewed 4, no respondents declined. One stakeholder agreed to an interview, but was unavailable on the day of the scheduled interview and unable to reschedule for a future date. Table 6 (below) demonstrates the response rate for Nicaragua separated by the respondent's organizational perspective. A table for overall stakeholder response rate table is included on page 8 of this report. Note that the totals provided in this country-specific response rate table do not correspond exactly to the overall response rate totals, as some international research commissioning agencies provided responses relevant to more than one country. These respondents were counted in the overall response rate but not in country-specific rates.

TABLE 6: Nicaragua interviewee response rate

	Contacted	Declined	No Response	Interviewed	Response rate
Multilateral/bilateral	2	0	0	2	100%
International Research Funders & Foundations	1	0	0	1	100%
Researcher	2	0	0	1	50%
TOTAL	5	0	0	4	80%

Qualitative Results
In the following sections we present key factors influencing national health research agenda setting, as stated by national, bi-lateral and multi-lateral respondents; next are responses from international research commissioning agencies. Next, each group respectively suggests key strategies for health research priority setting. Our final sections present cross-cutting issues and a discussion of the authors' recommendations.

Key Factors Influencing Health Research Agenda Setting- National, Multilateral, and Bilateral stakeholders
There are a number of factors that, according to the national stakeholders we interviewed, contribute to the priority-setting process in Nicaragua. One multilateral agency respondent said that health research priorities are required to be coherent with national health priorities as defined in the National Health Plan 2004-2015. However, unlike the situation in Cuba, national stakeholders receive almost no health research funding from the State. Thus, all respondents stated that external funding still drives the research agenda significantly. A multilateral agency respondent said that despite the strong presence of civil society and NGOs, high priority is still placed on biomedical research.

Respondents differed in their views of the MOH's role in health research agenda setting. With the 2004 implementation of a Sector-Wide Approach (SWAP)[36], the multilateral agency respondent felt that research was increasingly driven by the priorities defined by the MOH. However, another respondent described the MOH as having "practically no influence at all in the definition and support of research activities" and the National Research Council as "weak" with "no budget." Yet another respondent called the current health research environment fragmented and unisectoral, where the MOH replicates the agendas of donor organizations.

A respondent also mentioned that a permanent commission was recently formed to discuss all matters related to both the National Autonomous University of León (the University) and the

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[36] A SWAp implies that all significant funding for the sector supports a single sector policy and expenditure programme, under government leadership, adopting common approaches across the sector, and progressing towards relying on government procedures and systems to disburse and account for all funds." Cassels (1997) From Swiss Tropical Institute website

MOH. Most of these matters relate to problems with training health professionals and the coordination of activities in state hospitals, which also function as university hospitals. Another respondent stated that the MOH has also cooperated on previous health research initiatives with the local government, community-based organizations, and the University.

Several respondents pointed to national researchers' limited success at being published in international journals. One multilateral agency respondent pointed out that researchers in Nicaragua who focus on local priorities usually receive little exposure in international publications. As a result, they will focus on studies that they are certain will be published by these journals. The respondent suggested that this creates the capacity to distort health research priorities at the national level. Priority local research is often disseminated only by the local press and at local scientific events.

Since the national health movement of the late 80s lost momentum, very few resources have been devoted to priority health research in Nicaragua. One stakeholder from a major university stated that "external cooperation is vital for the development of research capacity." Public universities are funded through the national budget and do not receive specific funds designated for health research. Nor has any health research capacity assessment at local or national levels, according to national respondents. National scientists are apt to follow a commonly heard mantra in these LMICs saying, as one respondent said "I received this money for this study; I'll do this research no matter what."

Only one stakeholder expressed a willingness on the part of these agencies to respond to the demands of Nicaraguan institutions that focus on national health research priorities. Negotiations between the heads of these institutions and this international agency establish the general framework for the research that will be conducted. Then research experts are consulted to prepare the research protocols and budgets. Periodic evaluations are conducted by staff at both the university and the agencies. One respondent from a bilateral agency said that the agency's capacity-building role for LMIC research councils, universities, and research institutions and research program areas is based on guidelines set by the agency's own national research council.

One researcher cited a particular university's increased coordination with international agencies as a way to "attract resources and expertise not available in Nicaragua." All agreements between the university and international research commissioning agencies are negotiated based on "common and reciprocal interests" and the university "guarantees the transparent and efficient use of the received funds." This particular university has committed to research and community involvement as key components of its current curriculum. According to a stakeholder from a major university in Nicaragua, the university does not explicitly set health research priorities. University researchers are supported based on projects chosen according to their own personal interests.

One stakeholder mentioned a network of national researchers has also been formed to address infectious diseases in Central America. These researchers conduct joint research projects and organize a biennial conference to share the results. There is also a regional network the focus of which is to facilitate the exchange of results related to labor medicine [occupational health].

Key factors influencing priority setting – International Research Commissioning Agencies
The respondent from international agencies mentioned fewer key factors influencing health research in Nicaragua. The interviewee noted that the grants given by that agency are often very large and the projects may involve many partners, including the MOH, NGOs, and national science academies. This respondent described the agency's influence as "having implications in these countries."

Key factors influencing health research agenda setting - Contrast

Key factors: National, multilateral, bilateral agencies

National researchers receive little interest from international publications
National researchers will do research they are certain will be published by journals
National Health Plan 2004-2015 defines national health priorities
MOH has little influence in definition/support of research activities
State does not have budget for health research
External funders are vital for development of research capacity
Sector-Wide Approach (SWAP)
Priority placed on biomedical research
Research dissemination mechanisms are weak
Organizations currently share information via conferences, web pages, seminars, and workshops

Key factors: International research commissioning agencies

Grants given are large
Agency's influence "has implications"
Grant projects involve many major stakeholders

Priority-setting strategy recommendations—National, multilateral, and bilateral respondents
While national stakeholders listed many key factors influencing health research, they were less forthcoming with priority-setting strategy recommendations. National, multilateral, and bilateral respondents recommended a number of priority-setting strategies to increase resource allocation to priority health research areas. One bilateral agency respondent recommended building researchers' negotiation skills.

Priority-setting strategy recommendations--International research commissioning agencies
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The research commissioning respondent was also not very forthcoming with strategy recommendations. The multilateral agency respondent recommended that the MOH and UNAN undertake a formal national health research capacity assessment.

Priority-setting Strategy Recommendations – Contrast

Strategy recommendations: National, multilateral, bilateral agencies

Researchers need to have better negotiation capacity

Strategy recommendations: International research commissioning agencies

MOH and UNAN should undertake a formal national health research capacity assessment

Crosscutting and other issues

MOH's evolving role with regards to new Nat'l Health Plan and SWAP.[37] Stakeholders hold different views with regards to how the MoH will incorporate other actors into these new efforts.

Discussion

Both national researcher and multilateral agency respondent stated the lack of a coordinated research dissemination mechanism. Currently, the only method of raising awareness of national researchers' non-published work is through local scientific events and the local press.

We found national and multilateral respondents in Nicaragua to have differing views of the health research environment. With the National Health Plan still in nascent stages of development and implementation, and the large grants that are awarded by funding agencies, there are still heavy incentives for researchers to "follow the funding". This creates a huge potential for the distortion of health research priorities at the national level.

We recommend that further funding be directed to improving dissemination of results through online databases and regional conferences.

References

Medina, Ernesto and Edmundo Torres. *Doing Research in Nicaragua.* Submitted for publication in the International Foundation for Science annual report.

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[37] Ibid.

APPENDIX 6

CASE STUDY: PHILIPPINES

National context
The population of the Philippines is currently 78.5 million. Life expectancy at birth was 65.1 for men and 71.7 for women in 2002. Total health expenditures in 2001 were 3.3% of GDP, or (Intl) $169. National health research priorities in the Philippines are set through both top-down and bottom-up collaborative and participatory processes.[38] The Department of Health (DOH), the Department of Science and Technology (DOST), the Philippine Council for Health Research and Development (PCHRD)--an agency within the DOST--and the Department of Education are the primary practitioners and consumers of health research. Other key stakeholders include the Commission of Higher Education, university researchers, professional societies, and local government units. Multilateral and bilateral research commissioning agencies include, but are not limited to the World Bank, JSPS, JICA, GTZ, USAID, AUSAID, and the Fogarty Institute. Finally, organizations from the private sector, including pharmaceutical companies, foundations, and non-governmental organizations (NGOs) contribute their own funds.

The first set of national health research priorities were developed in 1991 through consultations with the Philippines ENHR office. Working primarily with the DOH, and with technical assistance from COHRED and the International Development Research Center (IDRC), the ENHR office focused its work on how to improve the service and delivery of the DOH.[39] Building on the National Health Science & Technology Priorities 1999-2004, the National Health Science & Technology Priorities 2005-2010 (currently in the planning stages) will serve as the national health and health research agenda for the Philippines. The DOH has increasingly taken responsibility for health systems research as part of the recently introduced Health Sector Reform Agenda, and health research decision-making was recently devolved to local levels. Future research carried out by the PCHRD and the DOH will seek to align biomedical priorities with those outlined in this Agenda.

Quantitative Results
The level of health-related research outputs for the Philippines is relatively low compared to other research. Publications devoted to major health problems make up 5% of total health-related research outputs. Figure 8, below, are results of the bibliometric analysis (for details, see Methods, p. 5) for the Philippines. The pink line represents the number of publications that would be expected if publications were distributed equitably based solely on level of disease burden. Conditions above this line could be considered as over-represented; those below line as under-represented.

The graph indicates that no single condition dominates research production in the Philippines and that there is no correspondence between disease burden and research output. For a number of conditions with high disease burden, such as ischemic heart disease (IHD), road traffic injuries, chronic obstructive pulmonary disorder (COPD), perinatal conditions, unipolar depressive disorder, and cerebrovascular disease, there are no or very few publications.

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[38] *National Health S&T Priorities (Draft): 1999-2004.* Philippine Council for Health Research and Development.
[39] From transcript of interview with national researcher.

FIGURE 8: Philippines bibliometric analysis

Correspondance between research output and disease burden for 40 selected health conditions: Phillipines
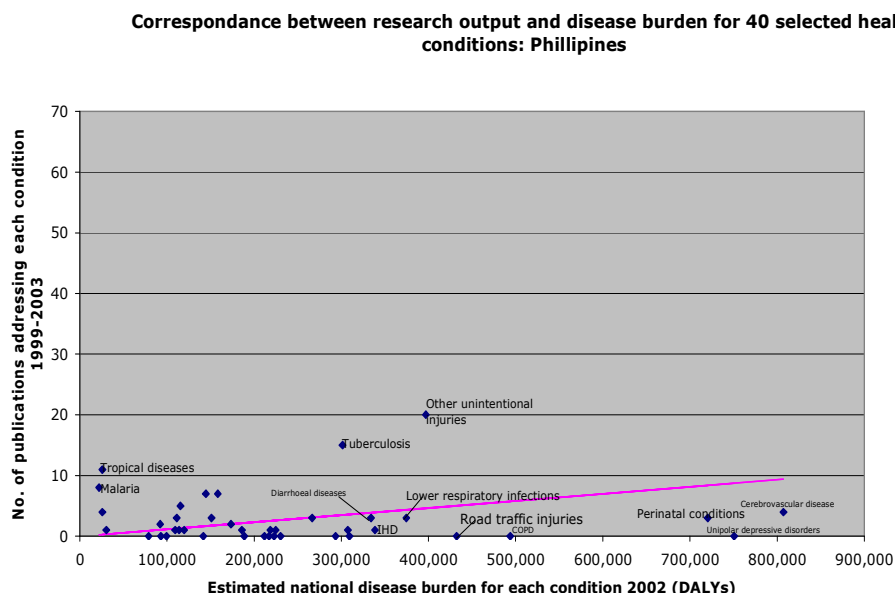
Description of sample/response rate

The response rate for stakeholders in the Philippines was 71%. Of the 7 stakeholders to whom we sent requests for interviews, we interviewed 5; no respondents declined; and, we did not receive a response from one. One stakeholder agreed to an interview, but was unavailable on the day of the scheduled interview and unable to reschedule for a future date. Table 7 demonstrates the response rate for the Philippines, separated by the respondent's organizational perspective. A table for overall stakeholder response rate table is included on page 8 of this report.   Note that the totals provided in this country-specific response rate table do not correspond exactly to the overall response rate totals, as some international research commissioning agencies provided responses relevant to more than one country.

TABLE 7: Philippines interviewee response rate

	Contacted	**Declined**	**No Response**	**Interviewed**	**Response rate**
Researcher	2	0	0	1	100%
Decision-makers	1	0	0	1	100%
International Research Commissioning Agencies & Foundations	1	0	0	1	100%
National NGO	3	0	0	2	67%
TOTAL	7	0	0	5	71%

Qualitative Results

In the following sections we present key factors influencing national health research agenda setting, as stated by national, bi-lateral and multi-lateral respondents; next are responses from international research commissioning agencies. Then, each group respectively suggests key strategies for health research priority setting. Our final sections present cross-cutting issues and a discussion of the authors' recommendations.

Key Factors Influencing Health Research Agenda Setting- National, Multilateral, and Bilateral stakeholders

There are a number of factors that, according to interview participants, influence the health research agenda in the Philippines. The first factor is international research commissioning agency (international funder) influence. While overall national stakeholders described the current health research system environment as positive, one stated that international funders had 'too much influence sometimes'. These funders' requests for research proposals (RFPs) are usually focused on very specific research and it is often only by chance that an agency's mandate falls in line with local or national priorities.

Another factor is the Department of Health (DOH), especially its current administration and budget. One multilateral agency respondent considered the current Secretary of Health a primary factor influencing health research agenda setting, describing him as "champion in terms of health research, especially in terms of health *systems* research [versus basic research]". However, another respondent explained that the DOH's capacity for funding priority research remains limited, as the majority of the budget is allocated for staff salaries.

Most stakeholders mentioned the availability of two online databases as another key factor influencing health research agenda setting. The SHARED and PCHRD databases currently serve as primary portals for linking researchers in the Philippines to national and international health research resources, some of which is has not been published in international journals. The PCHRD bibliographic database currently indexes over 40,000 national health- and medical-related publications and project documents. It also interfaces with the Health Research and Development Information Network (HERDIN) Database and other specialty databases, and links to a select number of foreign and local journal publishers.

One respondent pointed out that university faculty are highly regarded, consulted as experts, and commissioned by the DOH to conduct priority research. University researchers we interviewed described volumes of national health research of which, falling short of international standards, an estimated 80% are not published in international journals. Local research is often made available to the public, but is not peer reviewed, so quality is inconsistent.

The decision-maker we interviewed stated that the recent devolution of more health research decision-making authority from the DOH to the local level has increased opportunities for direct interface between international agencies and local government. A university researcher agreed, stated that increased local level decision making allowed international funders and NGOs to work directly with researchers and make decisions regarding family planning that "are sensitive and not as easy for [national] public sector decision-makers."[40]

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[40] SB Ozvaris et al. *The Role and Influence of Stakeholders and Donors in Reproductive Health Services in Turkey: A Critical Review.* Reproductive Health Matters. 2004: 12(24): 116-127.

Key Factors Influencing Research Agenda Setting—International Research Commissioning Agencies (International Funders)

The international funder respondent we interviewed described the Philippines as having a "reasonable amount of internal funding, better infrastructure, higher health expenditures per capita, and more institutional capacity" when compared with other LMICs. This respondent spoke in broad terms about the key factors influencing the agency's health research agenda in LMICs, including the Philippines. One factor the respondent described was the agency's "indirect," but "considerable" influence on the health research agenda setting process. The respondent stated that because many LMICs have limited health research budgets, the funders are more likely to influence "whether or not research even happens in the first place." Another way in which this "indirect" influence manifests itself is through the agency's ability to bring major national stakeholders "to the table at once", a result of their access to all departments and ministers (of health, finance, agriculture, etc.). The respondent described the current Secretary of Health as being much more aware, and supportive, of the need for further utilization of health research in policy making.

This particular funder considers the LMICs' current debt burden, current/potential economic growth, current budget status, and cost-sharing of health research activities among all relevant ministries are key factors considered by at least one major funding agency during the resource allocation process "at the table" with the Department of Health (DOH). The agency chooses projects according to where it is seen to have a comparative advantage, especially in health economics and financing (often measured by the level of access to the Ministry of Finance), and the gains that can be made toward achieving the Millennium Development Goals (MDGs). The agency has recently assisted the Philippines in a process of aligning national priorities with MDGs. However this respondent said the bar was set very high in relation to MDG goals for many LMICs and when these goals seem set so high as to be unattainable, it can be frustrating for funders.

The respondent stated that priority setting and resource allocation is coordinated with other international research commissioning and multilateral agencies. However, the respondent described national epidemiologic data, even in light of the SHARED and PCHRD databases, stakeholder as "weak" and "uneven."

Key factors influencing health research agenda setting: Contrast

Key factors: National, multilateral, bilateral agencies

International funders do have influence
Funder RFPs are focused on specific research topics
DOH budget for health research is limited
DOH current administration is supportive of health [systems, especially] research
SHARED and PCHRD databases online

Key factors: International research commissioning agencies

Philippines considered to have reasonable health research infrastructure
LMICs limited health research budgets
Current debt burden
Current DOH administration aware and supportive of health research

Economic growth potential
Follow funding through NHA block allocations
Chooses projects according to where agency has comparative advantage
National data are considered "uneven" and "weak"

Priority setting strategy recommendations—National, Multilateral, and Bilateral stakeholders

National stakeholders recommended a number of health research priority-setting strategies. One respondent recommended convincing donors to increase investment in priority social science research in addition to biomedical research. All national stakeholders recommended further development of regional databases such as SHARED and that of the PCHRD. Finally, respondents suggested further allocation of resources to support community-based projects focused on the development of local-level health research infrastructure, human resources, and overall research 'culture'.

Priority setting strategy recommendations—International research commissioning agencies

The respondent suggested that LMICs further align their own "realistic" goals and priorities with those of the MDGs, but acknowledged that this is a difficult process which most LMICs have not experienced much success.

Priority-setting Strategy Recommendations – Contrast

Strategy recommendations: National, multilateral, bilateral agencies
Donors should increase investment in priority social science research in addition to biomedical research
Ministry should further development online databases such as SHARED and PCHRD
Donors should increase investment in local-level health research infrastructure

Strategy recommendations: International research commissioning agencies
LMICs should align goals and priorities with the MDGs

Crosscutting and other issues

LMICs that have set realistic goals and aligned national priorities with the MDGs may be able to channel more agency resources to the desired areas of research.

Discussion

A local health research advisory board comprised of one health research director from each of the 16 regions could serve as "an excellent mechanism to motivate all sectors to initiate new approaches [to priority setting]."[41] Facilitating inter-sector collaboration and cooperation will help to form better health research priorities. In addition, monitoring and following up on the implementation of policies and programs will help with defining priorities. We also

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[41] SB Ozvaris et al. *The Role and Influence of Stakeholders and Donors in Reproductive Health Services in Turkey: A Critical Review.* Reproductive Health Matters. 2004: 12(24): 116-127.

recommend further strengthening of university-int'l agency coordination mechanisms, such as the example university in our study.

National researchers expressed their ongoing search for opportunities to share their work, including publication. Capacity building in the areas of grant writing and peer review would definitely benefit national researchers. In this case, if universities served as external funding coordinators, it would make it easier on the researchers.

When agencies sidestep the national DOH in order to fund local-level priorities, it may results in "inefficient procedures to get the project effectively implemented instead of taking the time to build administrative capacities to improve the situation." [42] As regional health centers acquire more capacity it is crucial that the priorities are not set and projects are not funded in a vacuum. The issues pertaining to these 16 areas must be integrated meaningfully into a national health research plan, lest the international agencies "undermine the very capacities they are supposed to be building."[43] How much has devolution contributed to the fragmentation of the national health research priority-setting process?

The DOH should serve as receptor of research for policy making. In order to do so, the researcher-DOH interface must be improved through open dialogue and effective communication. Local research indexed in online databases should be further utilized by the DOH for these purposes as well.

Useful online resources:

Department of Health
http://www.doh.gov.ph/index.htm

Department of Science & Technology, PCHRD database
http://www.pchrd.dost.gov.ph/library/

References

SB Ozvaris et al. *The Role and Influence of Stakeholders and Donors in Reproductive Health Services in Turkey: A Critical Review.* Reproductive Health Matters. 2004: 12(24): 116-127.

National Health S&T Priorities (Draft): 1999-2004. Philippine Council for Health Research and Development.

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[42] Whyte, Amy. Landscape Analysis of Donor Trends in International Development. Human and Institutional Capacity Building: A Rockefeller Foundation Series. Issue 2, 2004.
[43] Ibid.

APPENDIX 7

Top 40 conditions comprising 80% of LMIC DALYS

Alcohol use disorders
Alzheimer and other dementias
Asthma
Bipolar affective disorder
Cataracts
Cerebrovascular disease
Childhood diseases
Chronic obstructive pulmonary disease
Cirrhosis of the liver
Congenital abnormalities
Diarrhoeal diseases
Diabetes mellitus
Drowning
Falls
Fires
Hearing loss, adult onset
HIV/AIDS
Hypertensive heart disease
Iron-deficiency anaemia
Ischaemic heart disease
Liver cancer
Lower respiratory infections
Malaria
Maternal conditions
Nephritis/nephrosis
Osteoarthritis
Perinatal conditions
Other unintentional injuries
Poisoning
Protein-energy malnutrition
Road traffic accidents
Schizophrenia
Self-inflicted
STDs excluding HIV
Stomach cancer
Trachea/bronchus/lung cancers
Tropical diseases
Tuberculosis
Unipolar depressive disorders
Violence

APPENDIX 8

Participant responses will not be attributable and transcripts will be made available for review by respondent before inclusion in the final report.

"NYU/COHRED Health Research Priorities in Developing Countries Project"
Interview guide – country perspective

Interviewee:
Country:
Organization:
Title:
Date:
Time:
Interviewer:
Note taker:

1. Please tell us about your role at _____ organization.

2. Is there a formal national health research plan in (country)?
   - If yes, what are the health research priorities?
   - If no, what should the national priorities be?

3. Which internal and external organizations help fund current health research activities in (country)/ (your institution?)?

4. Now we would like to find out more about the relative influence of each stakeholder (e.g. foreign funders, national funders-where they exist, ministries of health, other ministries, researchers-medical school and university, health care providers, community) involved on the health research conducted. (note also if specific stakeholders have *no* influence)
   - How much interaction do you have with the health ministry or other institutions (collaborations)? What level of input does the Ministry of Health have in the research process?

5. Can you describe what kind of health research is conducted, i.e. basic research, communicable, non-communicable, health systems? What is mostly done?

6. To what extent do funders get involved in the procedures or practices for setting health research priorities and securing funds? Please tell us more about this.

7. Who are the stakeholders involved at each stage of the research process?

8. What assessment has been done on your health research capacity? We would like to hear about research priority setting at your institution and overall.

9. What is the role of your organization in coordinating external funding?

10. How are the results of research projects disseminated?

    - Where are the results reported (is access to publications limited to donors or the MOH, or are publications more accessible than this)?
    - How do others (e.g. researchers, organizations) get access to the reports if they want them?

11. What coordination or mechanism to exchange information regarding health research has taken place?

12. Additional Comments

"NYU/COHRED Health Research Priorities in Developing Countries Project"
Interview guide – funder perspective

Interviewee:
Organization:
Date:
Time:
Interviewers: Nadia Ali, Cayce Hill

1. How does (organization) support health research in the following countries?

- the Gambia
- Cameroon
- the Philippines
- Laos
- Cuba
- Nicaragua

2. What influences your choice of research program areas?

3. What efforts have you made to address countries' priorities and needs? Taking into account country priorities, how do you decide what to fund?

4. When you fund research projects, what exactly are you funding? i.e. employee's salaries, project expenses, other?

5. What level of influence do you feel you have on the health research conducted? If so, how?

6. Describe the process of funding a research project.

   - Once you decide to make the grant, do you help tailor projects according to the funding sources you have, or fully accept an agency's grant proposal as is?

   - If their proposal seems unreasonable, do you help them set realistic goals?

7. Approximately what percentage of your organizational budget is dedicated to the following areas of health research:

- development
- health
- research
        - developed countries
        - developing countries

8. What would facilitate your funding processes? What would help you to be more effective as a donor at the country-level?

9. Additional comments:

APPENDIX 9

SAMPLES OF CORRESPONDENCE

Sample of Introductory Email from COHRED: COHRED project on national health research agendas

Dear _____,

The Council on Health Research for Development (COHRED) is conducting a project jointly with New York University's Wagner Graduate School of Public Service as part of a planned programme of research aimed at improving the evidence base surrounding what factors affect the national health research agendas of low and middle income countries.

The Gambia has been selected as one of our case-study countries and you were identified by Prof Carel IJsselmuiden as a key stakeholder within your country's health research system. We would be extremely grateful if you could spare some time to share your thoughts on the national and international influences on domestic research activities in the country.

If you could find time to share your thoughts the NYU researchers will contact you to arrange a short telephone interview. If you would rather not take part in the interview, please let me know and I will have your details removed from our sampling frame.

Many thanks in advance, regards
Andrew

_____
Dr Andrew Kennedy
Scientific Officer
COHRED
Council on Health Research for Development
Rue de Cornavin, 11
Geneva 1201
Switzerland

Sample of Introductory Email from NYU: NYU-COHRED Project: The Global Health Research Agenda

Dear _____,

In a joint venture between the Council for Health Research and Development (COHRED) and New York University's Wagner Graduate School of Public Service, we are conducting a project assessing influences on the health research agendas of selected case-study countries located in Africa, Latin America, and Southeast Asia. We are completing this study as part of the New York University Capstone Program, a year-long consulting and research project and the culmination of our Masters in Public Administration degree. You should already have received an introductory message from Andrew Kennedy of COHRED.

This project will examine the impact of different actors, including researchers, policy-makers and research funders (national and international) on the extent to which domestic research activities target local needs. We would like to interview key informants, such as you, who can contribute their knowledge to this important subject matter.

Please advise if you would be available for a phone interview during any of the day/times listed below, or if there is a day or time that would work better for you. We have attached a copy of the interview guide we will use to conduct the interview, so that you may review it in advance.

Tuesday, April 5, 1:00/2:00/4:00 p.m. (Gambia time)
Thursday, April 7, 1:00/2:00/3:00/4:00 p.m. (Gambia time)
Friday, April 8, 1:00/2:00/3:00/4:00 p.m. (Gambia time)
Monday, April 12, 1:00/2:00/3:00/4:00 p.m. (Gambia time)
Thursday, April 14, 1:00/2:00/3:00/4:00 p.m. (Gambia time)
Friday, April 15, 1:00/2:00/3:00/4:00 p.m. (Gambia time)

All information will be kept confidential and we will verify our interview transcripts with you before inclusion in our analyses. At the end of April of this year we will present our findings in a detailed written report, a copy of which can be sent to you if you should wish. Should you have any questions regarding this project, please do not hesitate to contact Andrew Kennedy, of COHRED at Kennedy@cohred.ch or +41 22 591 8903; or Professor Jo Ivey Boufford, of NYU, at jo.boufford@wagner.nyu.edu or + 1 212 998 7410.

Sincerely,

Nadia Ali
Cayce Hill

Sample of follow up Email to Interviewee from NYU: COHRED/NYU Telephone Interview

Dear _____,

On behalf of Cayce Hill and myself, I would like to take this opportunity to extend our thanks for taking time out of your busy schedule to speak with us. We greatly appreciate your enthusiasm regarding the project, and your expert advice will be very helpful as we complete our joint project with COHRED.

As a reminder, our project focuses on the internal and external influences on the national health research priority setting processes in Cameroon, Cuba, the Gambia, Laos, Nicaragua, and the Philippines.

Attached please find a copy of the interview transcript. If you could please take a moment to revise and/or expand on your answers, that would be great. Also, please revise any possible errors. Your input is very valuable to us. You also mentioned a contact in Laos, _____. If you could provide us with an email address, that would be very helpful.

Again, thank you for your time and interest in our project. We will certainly contact you when we have completed the initial draft of our report, and look forward to receiving your comments and suggestions.

Sincerely,
Nadia Ali
Cayce Hill

APPENDIX 10 – Raw transcript of interviews

"NYU/COHRED Health Research Priorities in Developing Countries Project"

Interview guide – funder perspective

Interviewer: Cayce Hill
Note taker: Nadia Ali

10. What influences your choice of research program areas?

Pragmatism - are funds available?

11. What efforts have you made to address countries' priorities and needs? Taking into account country priorities, how do you decide what to fund?

Identified priority areas, i.e. in Latin America- Guatemala and Bolivia, because of their

low health indicators. The agency has contacts with government and take into account if there

are enough funding opportunities there.

Donors also look at other factors, which do not help organizations- this policy decision does not help to assist poor countries. For example, some donors will not fund Guatemala, or Haiti due to the country's corruption, inefficiency, and difficulty to follow-up.

Some big donors that allow a stable presence are: USAID, DIFID, EU (not an impt role yet)

Overall they do not have an established source of indicators, use country strategy to see if they want to invest sources.
*   *i.e. development indicators- usually common health indicators- morbidity, mortality, schooling, % of girls married, age, fertility rate, macro indicators- GDP/per capita*

12. When you fund research projects, what exactly are you funding? i.e. employee's salaries, project expenses?

Depends on nature of project, will fund fieldwork for few or many people, salaries,

administrative costs, overhead, dissemination of information.

Fund travel to give local researchers opportunity to interact with other researchers on a more global level. Organize meetings and invite researchers from different countries- local researchers really value the importance of exposing themselves and their work, gives them confidence in presenting and sharing results.

13. What level of influence do you feel you have on the health research conducted? If so, how?

The agency works with different organizations on various projects. Usually try to involve government at some level whether it be either service delivery or decision making to foster implementation of findings.

They work with NGOs that is more stable but they have less power with policies, and work with local universities, research centers.

14. Describe the process of funding a research project.

They start from scratch with a local partner and develop ideas and protocol with them. Try to do everything with a local partner. It is our job to get funds for a topic. Feels that funds with just a geographic focus or flexible grants let them make their own decisions and empowers these community-based orgs. We always work with a local organization in a country.

- **Once you make the decision to fund a research project in a developing country, do you fully accept their research proposals or help them tailor their projects according to the funding sources you have?**

Some countries have more power than others in regards to influence. In general, countries are disempowered in donor settings. There are not many formal channels to donors. Donors make their own decisions using secondary data and little or no consultation with country agency.

Gave example: Involving the local authorities, we started a large project 2 years ago on maternal syphilis in Bolivia- they knew prevalence was higher, and the project raised visibility of the problem.

- **If their proposal seems unreasonable, do you help them set realistic goals?**

15. Approximately what percentage of your organizational budget is dedicated to the following areas of health research:
- **development**
- **health**
- **research**
             - developed countries
             - developing countries

 8. What information or mechanisms from countries would facilitate your funding processes? What would help you to be more effective as a donor at country-level?

 9. Additional comments:

Agency has 3 divisions:

   i. International program division: All programs have to do with health research or social determinants of health
   ii. Policy research in demographics or sociology research
   iii. Center for biomedical research: basic lab research, development of microbicides

Respondent suggested we adopt our definition of health for the purposes of this project. Believes in local empowerment and giving organization's independence. Says to train and offer opportunities to people to feel better prepared to interact with donors (language barrier, culture differences). Says it helps when donor is decentralized and present at country level.

"NYU/COHRED Health Research Priorities in Developing Countries Project"
Interview guide – funder perspective

Interviewers: Nadia Ali, Cayce Hill

1. How does (organization) support health research in the following countries?
Rarely support research directly. Fund other organizations. Especially more biomedical.
Perhaps pub/private partnerships that work in our countries of interest? Not aware of them
working there, though. Clinical trials to test new products, manufacturing drugs.

2. **What influences your choice of research program areas?**
Largely historical reasons – Office in Nairobi (driven by food security reasons, funds non-
health activities (office used to be called agricultural sciences – trying to develop new
seeds/crops/etc.), Bangkok office. Took small office in Bangkok and expanded Nairobi and
gave regional offices more autonomy, closed office in Mexico/Zimbabwe and consolidated
and strengthened remaining two. Directive – everything they do needs to be to improve
conditions for poorest of poor in East Africa and SE Asia. Challenge for foundation,
because need to work with subsistence farmers means working with them where they are,
or working elsewhere to develop seeds/drugs/vaccines. Not working in ground for health,
but labs in north or India/Brazil where there's infrastructure for R&D. Why is what they're
doing have anything to do with lives of poor in SE Asia, East Africa.

3. **What efforts have you made to address these countries' priorities and needs?**
    Taking into account country priorities, how do you decide what to fund?

Difficult time now – new president – frustrating that they may not get green light to fund.
Strategy going forward would focus on private/public partnerships, funding at low levels,
working with other donors to get them into the field. These are no-brainers and are easy to
measure. Where they have consultants is (similar to JLI process Jo Boufford is involved with)
working on health innovation systems in developing countries. Goal is products for the poor,
doing it in whatever way you can. Maturation of public/private partnerships, establishment of
huge procurement funds like GAVI/GLOBAL FUND/PEPFAR/international finance facility
for immunization (UK global TB facility). Rise of innovation and capacity in countries,
increased south-south based networking among most advanced developing countries. Look at
implications of this 67% of India's drug exports go to other countries – number is higher by
volume. Off patent generics. Source of low cost health products is this – south south
relationships. Some developing countries can support their own R&D. Links – where are
leverage points for national policies to influence systems. Health innovation systems – how do
they link to health systems. Global Forum shows dev. countries spend lots more $$ on health
research (2B a year), not including China, than we realize. India's priorities are set, but their
dept of biotechnology SCie & Bio Research institute, center for cellular and molecular biology
– what are they doing? Becomes very complicated. Where are they spending the money?
Perhaps because it's funded publicly it is aligned with public goals. Nascent biotech industry,
pharma industry, capabilities for local priv/pub partnerships are very low – need to be
developed. Fuel in tank but gears not engaged with out negotiation and facilities capabilities,
ethnical stewardship of technology (owned by govt) can be used to increase access. Idea that
Oxford (MIHR) is trying to promote. last year gave $$ to Global Fund to work with

COHRED to get better grip on financial flows for Brazil, SA, India. Encouraged in most recent report to develop pie charts. Total civilian R&D spending that goes to health research? Curious thing is that even the countries themselves don't know what they're spending money on.

India is spending more on space research than health research. Big problem is the age-old debate in community – do we spend on existing technologies & access to what we have or on developing new tools to provide easier access.

Wealth with well being vs. health with well being (must bring in regulatory system + other components and their relationship to each other). Countries have innovation (industrial) policies – India just announced biotechnology policies. What they say vs. what policies they implement. How do you align innovation with national health priorities?

4. **When you fund research organizations, do you track what are you funding? i.e. employee's salaries, project expenses, other?**

Mechanisms for tracking funding. Countries met (including Cuba as observer) – MOH and reps of state run orgs starting the meeting to align industrial policies with health priority (as a reaction to TRIPS). Here's the tech support we can offer, here's what we need. South-south tech transfer in man. of ARVs, male/female condoms, research on microbicides. Innovation system components – here is network focused on one disease with all pieces coming together. Website may not be up yet.

Difficult for us to track flow of funding for health research – COHRED was just in Brazil to work with gov't to get numbers.

5. **What level of influence do you feel you have on the health research conducted? If so, how?**

6. **Describe the process of funding a research project.**

Works closely with grantee/contractor throughout period. With grant, sit back and proposals come to them. They decide what to fund or not fund. Rarely fund anything unsolicited. Develop strategy that accounts for landscape, changes, what other donors are doing. Turn down more than they fund; grants are usually those that officers have identified potential grantee/discussed for years or months before they feel comfortable that they send in proposal. May go back and forth a few times.

  a. Once you decide to make the grant, do you help tailor projects according to the funding sources you have, or fully accept an agency's grant proposal as is?

  b. If their proposal seems unreasonable, do you help them set realistic goals?

7. **Approximately what percentage of your organizational budget is dedicated to the following areas of health research:**

- development
- health
- research
    - developed countries
    - developing countries

8. **What would facilitate your funding processes? What would help you to be more effective as a donor at the country-level?**

Millenium Science Initiative – meant to try and do the following?
Ugandan capacity building to do peer review, etc. Donors go thinking of technical training, equipment, etc. These people may end up going to UK or equipment breaks/collects dust. What is needed & more sustainable is management capacity building. Technical agencies in developing countries need mgmt capacity building on peer review side – ethical Project/data/ethical review/clinical trial board management. Donors have never provided this, which is stupid. No model for doing this, so financial management – who will do that? We have even talked about building up capacity of managers – assumption/hope that building up cadre that understand process they will feed into decisions of country. Need to develop science policy capacity.   Don't even know how much they are spending, so how can they ask where it is going (national priorities, etc/) NSF funds indicators – provides datasets. Session on financial flows – why can't India come up with numbers? Need standardizeable methodology to look at trends.

"NYU/COHRED Health Research Priorities in Developing Countries Project"
Interview guide – country perspective

Interviewer: Cayce & Nadia

2. Is there a formal national health research plan in (country)?

Cuba: The scientific, biomedical industry is also a powerful stakeholder and is more independent than the MOH

3. Which internal and external organizations help fund current health research activities in the six countries of interest?

Cuba: At the bi-annual event, Science & Technology in Health, stakeholders look at what has been done in research and how to plug the gaps. Here there is an attempt to link the work of local health districts according to what their demands are, and to find the overall problems in order to develop a national health research agenda. In these meetings, there is an attempt to build the agenda from the bottom up. His impression is that it exists more on paper than in reality, and is highly driven by the work of PAHO Cuba. Cuba is the only country in which PAHO office employees are primarily from the MOH. Therefore, the work of PAHO is very linked to MOH.). Still, Cuba is a better example of national priority setting than other countries in the sense that at least they are trying to do this (for past 10 years, anyway). The primary difference in Cuba is that all funding is public. Some money that comes from int'l orgs, EU (for health research), but the bulk is from the State. This means that scientists and the MOH can have more control over health research. The funding and agenda for the biomedical industry is separate, and in 'hard currency' because they export drugs/vaccines/etc. to other developing countries. This gives them more autonomy in funding and directs their agenda. Therefore health research in Cuba is more directed to a public health strategy. Especially 5-6 years ago, the MOH focused a lot on what the health research system and capacity was. The National Institute of Health does similar work in this area.

Nicaragua: Almost the opposite situation from Cuba is true here; there is almost no money from the State. Most of the research is done through NGOs or national foundations, Nordic corporation, etc. This external funder involvement drives the research agenda very much.

His specific experience with Brazil, a middle income country: Brazil built a clear national research agenda which came from the MOH. The MOH currently contributes about $25M a year for health research, in addition to the money already spent through National Research Council (CNDQ).   This is the first time the MOH has done this. Research councils at the state level FADEFT? invests almost as much money in health research as the national level council. In Brazil they have constructed the research agenda from the top down and bottom up. At the municipal level, there are Health Councils that are elected, as well as at the state and federal levels. Brazil's MOH used this structure to really look into what the demands for health research and gaps were, by bringing scientists and decision-makers together at each level. All information about this is on the Web.

Interviewee described Secretary Dayrit as a "champion in terms of health research, especially in terms of health systems research". He does more work on research on health systems and policy than basic research. Even before him, the Philippines did a lot of research on its capacity and resources. Secretary Dayrit was also integral to the discussions in Mexico. If Secretary Dayrit is not able to participate in an interview, he could probably direct us to other key informants.

4. Now we would like to find out more about the relative influence of each stakeholder (e.g. foreign funders, national funders-where they exist, ministries of health, other ministries, researchers-medical school and university, health care providers, community) involved on the health research conducted. (note also if specific stakeholders have *no* influence)

- How much interaction do you have with the health ministry or other institutions (collaborations)? What level of input does the Ministry of Health have in the research process?

Cuba: There is a rivalry, a big separation between scientific organizations and the MOH. Scientists are more directly linked to the State Council where Fidel and other Ministers sit (the 'ultimate council'). Until about 5 years ago Fidel would often make decisions personally – regarding what research was important, etc. Augustin Lage is very prominent scientist and a member of central committee. This scientific committee is very independent and has even more resources than MOH. The MOH is more restricted to some clinical research and public health research. Because researchers are so linked organically to MOH they aren't always able to direct the research according to their own questions. If they know someone who they can convince someone to fund the research they want to do, that may happen. In other cases, with the biomedical industry, research is based on combinations of scientists' interests and the strategic needs of Cuba. For example, they need to produce some drugs that they can't buy on the international market or need to buy at a premium. This is a factor that drives the research agenda.

5. Can you describe what kind of health research is conducted, i.e. basic research, communicable, non-communicable, health systems? What is mostly done?

In most countries, less effort is put forth for systems research.

Cuba: Research very divided between what should be health systems research and what should be biomedical. In the MOH, a little biomedical research is done, esp. in terms of communicable diseases, cardiology, other directed areas. The MOH is beginning to do more on health systems research – this is a trend in all the countries he has worked in. HSR is the 'ugly duck', not 'sexy' it's 'not even research' to some researchers.

Nicaragua: No clear definition of health research from the MOH; The University of Nicaragua does some health research, primarily with external funds.

Philippines: A lot of health systems research, which will probably increase under the current Health Secretary.

6. To what extent do funders get involved in the procedures or practices for setting health research priorities and securing funds? Please tell us more about this.

Cuba: It is true that if a foundation came to Cuba with $10M and wanted to research something, Cuba would probably accept. But this doesn't happen too much there.

Nicaragua: The environment is very chaotic. During the huge health movement of the revolution, the MOH tried to do more participatory/needs focused research. The momentum came from the people in power at the time, and local "Health agents." In 1987 respondent participated in meetings where health agents from small towns would come and say what the priority research areas were for their region. In this time, Nicaragua gained a lot of support from other countries (Brazil, for one) who were sympathetic to the social movement, and this support added up. There was a lot of capacity building with resources from the Nordic corporation (Sweden, Norway) put lots of resources including health research. This movement fizzled out, and now there is very little being done. Some scientists do what they can with few resources in priority areas. But overall Nicaragua lost a lot of momentum. El Salvador, Panama, and Costa Rica all have a long tradition in health research. Although Nicaragua was on a path to change, it fell back. There is currently no major structure in place to define a health research agenda; primarily this is a cost factor. Scientists say, "I received this money for this study, I'll do this research no matter what."

7. Who are the stakeholders involved at each stage of the research process?

Cuba: Medical research is part of physician training, and physicians must keep doing research as part of their career. Therefore, most health personnel are stakeholders, because at some point in their life they did participate in health research. Cuba doesn't count on funders as strong stakeholders as do other countries. There is a high level decision-making commitment to health research. There is the Academy of Science, overseeing major strategies, the specific directorate of the Ministry of Health, and biomedical industry on the other side.

Nicaragua:
About 10 years ago, respondent looked into patterns of (e.g. Panama) WB and IADB loans from for health. One loan would be give approximately 10-15 times what some countries are spending on health research. This definitely sets up an agenda and unsettles any previously-agreed to national agendas

Philippines: USAID money for health research here unsettles the agenda as well (i.e reproductive health, etc.). USAID office may be larger than Ministry of Health office in some countries – this is clear indication of importance to the local population.

10. How are the results of research projects disseminated?

- Where are the results reported (is access to publications limited to donors or the MOH, or are publications more accessible than this)?

HINARI: Has an agreement with publishers to offer very low online subscription with online journals. There are some restrictions, but very successful
Many think there should be more dissemination to the general public – to get public's support (when scientists are not perceived well/trusted by public) – including for funding. The scientists say 'we are accountable for the money, spending for research that comes at the cost of other goods to society.' He sees this as a very self serving view of the situation. It is important, but there is another side to look at: the right for people to know, to use knowledge. Dissemination to the general public of scientific knowledge.

The Virtual Library of Health is also very interesting. It was organized by EREINE (part of WHO and PAHO, based in Brazil – center for health sciences information). There is a virtual library for each country and one is specifically science & technology. One feature "scielo", indexes all public health journals in Latin America from the past 5-10 years. And other journals; Spanish and Portuguese. Wonderful resource. Well evaluated by BMJ (check articles)

- How do others (e.g. researchers, organizations) get access to the reports if they want them?

11. What coordination or mechanism to exchange information regarding health research has taken place?

Researchers in Nicaragua with a local issue to research, receive no interest from international publications. So researchers will do research that they are certain will be published by journals. With this going on, the capacity to distort health research priorities at national level is huge.

For example, in Peru looming cholera on local levels were not supported by any research at all – has 1,000 other examples like this.

It is fundamental that there are ways of channeling knowledge that is in country to global attention. With electronic publishing this will advance, initiatives like SHARED – this is one side of the equation (from countries to global scene). The other side is channeling global resources to examine problems in the countries where the resources are needed. The 10/90 gap is true; and there are few resources for doing this.

"NYU/COHRED Health Research Priorities in Developing Countries Project"
Interview guide – funder perspective

Interviewer: Cayce Hill
Note taker: Nadia Ali

1. How does (organization) support health research in the following countries?
We do not have particular focus countries. We try to assess the program's potential and relevance model.

- **the Gambia**

- **Senegal:** *fund small NGO called Tostan, worked in rural areas, village, teach literacy through human-rights model, use health topics also- is an unusual project for them to fund something community-based, since they primarily fund large projects.*
- **the Philippines**

- **Laos:** *has friend from Laos that does statistical analysis for GAVI, which interfaces with country*

- **Kazakhstan**

- **Ukraine**

- **Cuba** *No funding relationship yet; growing biotech sector and medical training for docs from other countries are of interest.*

- **Nicaragua** *considering a proposal from NicaSalud to expand network of clinics.*

- **Cameroon**
Fund projects that may have research sites in countries so it is hard to say where a project might be operating. Global health programs as a whole may have implications in these countries. Tend to focus more on Africa and Southeast Asia..

9. **What influences your choice of research program areas?**

Is it the right project, scope of work with the right organization, will have grantee

organization partner with other orgs when appropriate. Do not use Request for Proposals

(RFPs) to a large extent, most projects are funded by an initial letter of inquiry or discussion.

We really value innovation as a major factor and do not want to do what has already been

done.

10. What efforts have you made to address countries' priorities and needs? Taking into account country priorities, how do you decide what to fund?

11. When you fund research projects, what exactly are you funding? i.e. employee's salaries, project expenses?

Travel, personnel, supplies, contracted services, and consultants.

12. What level of influence do you feel you have on the health research conducted? If so, how?

We have various levels of evaluation on how they monitor the grantees' progress. They

must submit annual reports and all grantees have $ allocated to evaluate their project. If

grantee is deviating from the initial proposed project, they have to justify it, but we do want

them to take risks and be opportunistic.

13. Describe the process of funding a research project.

Grants tend to be large and have lots of partners- i.e. Ministries of Health in India NGOs.

> *National Academies of Science - Africa academies. Then the organization or group of orgs develops a proposal and there is an intensive vetting process, lots of back and forth Q&A. We place trust in organizations - she provides a global view rather than decision making criteria.*
> *For Global Health, we cover all developing countries, with around $600 million in this program area. However, have database limitations to track what exactly $ is spent on.*

> a. Once you make the decision to fund a research project in a developing country, do you fully accept their research proposals or help them tailor their projects according to the funding sources you have?
> b. If their proposal seems unreasonable, do you help them set realistic goals?

14. Approximately what percentage of your organizational budget is dedicated to the following areas of health research:
- development
- health
- research
  - developed countries
  - developing countries

Our database limitations make it very difficult to know what percentages of our budget are dedicated to those categories.

15. What information or mechanisms from countries would facilitate your funding processes? What would help you to be more effective as a donor at country-level?

To be more effective as a donor, with global effect is their goal- have to know whether program succeeded and how that impacts other things, and conduct portfolio evaluations.

9. Additional comments:

Looks at process by which countries look at their health research priorities.
As program officer- managers a portfolio of grants.
   Main focus areas: information & evidence for decision making, leadership,
   Other groups: HIV/Infectious diseases/reproductive health, Infectious Diseases,
   Global Health Technologies.

Has a public health background, and has done research on socio-economic inequities in Central America.

We have an office in India - $200 million project on AIDS but that is the only country focused program to date.

"NYU/COHRED Health Research Priorities in Developing Countries Project"
Interview guide – funder perspective

Interviewer: Cayce & Nadia
Note taker: Cayce & Nadia

1. How does your organization support health research in the following countries?

In last few years, focusing on Africa. Between 1999-2004 funded direct to Africa around 86 million dollars. Total to overseas (locations fieldwork in African countries, 125 million dollars (1999-2004).

300 grants to projects involving African institutions; most commonly cited subject areas tropical medicine, population, malaria, epidemiology, and immunology.

- *the Gambia – TB vaccine trials, trachoma,*
Over the last 8 years, have funded 11 different projects. We have one that is ongoing at the moment. Advanced training fellowship –hepatitis B. Awarded in 2003, for 3 years.

- *Cameroon – malaria*

- *Senegal – 4 projects, one that is on-going. The three that are completed were funding for symposia. The other is a program grant – animal health; diagnosis epidemiology and control of African swine fever virus.*

- *the Philippines*

Two training fellowships – one in 2000, one in 2001. Both are completed; having to do with population studies.

- *Lao PDR – A program looking into malaria, typhoid, septicaemias and beri-beri.*

Recently set up reasonably small project work in Laos. Working out of Thailand, going into Laos. 3 projects have been funded in Laos and are ongoing now. Exploratory studies looking at thiamin deficiency. Supplements to SE Asia budget. In Betian (sp?)Ventiane (capital city)

- *Kazakhstan – collaborative research grant with U. of Liverpool. Looking at the dynamics of plague in its host reservoir, awarded in 2001 and still going on.*
- *Ukraine – funded 33 different projects in the last 8 years. Nine of those are still going on. Most are collaborative research grants. Most are basic science; neuroscience & biochemistry.*

2. What influences your choice of research program areas?

Subject area really depends on funding streams – There are five activities based around scientific areas:

o   *Immunology and Infectious Disease*
o   *Populations and Public Health*
o   *Neuroscience and Mental Health*
o   *Physiological Sciences*
o   *Molecules, Genes and Cells*

Whole series of different mechanisms to cover most eventualities that we see as necessary.

Int'l research grants – targeted to countries with specific research areas: India, South Africa, Eastern European countries – restructuring after Soviet era, before entry into European Union. . Supporting post-apartheid by bringing in indigenous scientists. Difficulty of middle-level scientists to develop

Third area:
Eastern Europe (former Soviet Republics, new countries to the European community that used to be supported by Soviet Union, and there has been a gap between the interim period before g

3. What efforts have you made to address countries' priorities and needs? Taking into account country priorities, how do you decide what to fund?

Not as a formulaic process, but in most of the places where we are working we ask scientists to come to them with proposals or we hold meetings in the countries with scientists where they talk to us about what they see as the priorities there.

In SE Asia and Africa we have teams who've been working there for many years. Scientists there are very plugged in to the policy makers and those setting the research agendas. In order to set research agendas.

Recent Symposia:
meeting of MRC in the Gambia (reflection)
money for Global Forum on bioethics of research (practitioners and policymakers)
10 researchers to attend conference in Morocco
conference on Africa population
conference on malaria – setting agenda regarding malaria research
first national Ukrainian conference on bioethics.
smooth muscle physiology and bioethics in Ukraine

4. **When you fund research projects, what exactly are you funding? i.e. employee's salaries, project expenses, other?**

Grants can be for equipment, programs, or projects in basic or clinical sciences.

Largest awards are to major overseas programs, SE asia, S. Africa, Malawi, Kenya. Program grants of 5 years, project grants of 3 years, fellowships (clinical or non-clinical). UK or developing-country based. Also symposia and networks. People who have had int'l research fellowships can come back and ask for equipment grants after the fellowship.

5. **What level of influence do you feel you have on the health research conducted? If so, how?**

May set the standard for the type of research that others want to do. Balance between leading the field and following – pull and push the way the agenda is set.

6. **Describe the process of funding a research project.**

Like to have a bit of a discussion with the grantees first, then independent referees (large panel of experts in the particular areas that they have built up over the years. We look in the database to see who has reviewed projects in that area before), independent scientists panel (on website – matter of public record, and tend to be international. Tend to mostly be active researchers in academic institutions) who recommend that it be funded (if so, how much) or not, and whether they want to take out portions of the work. Once that is agreed, we issue a letter for the funding. Sometimes it is recommended that there should be yearly milestones. In other cases they just ask for a final report

For the tropical work, the scientists' panel will definitely be international. Since Tropical Medicine is a small field, there is a strong possibility of a conflict of interest (their institution may be collaborators, or they are collaborating with people who are putting in grants) try to get panel members from different countries.

      a. Once you decide to make the grant, do you help tailor projects according to the funding sources you have, or fully accept an agency's grant proposal as is?

      b. If their proposal seems unreasonable, do you help them set realistic goals?

7. **Approximately what percentage of your organizational budget is dedicated to the following areas of health research:**
- development

Come as collateral benefits of the research that is done. No specific budget earmarked for these (development and health) areas. The $$ really goes into research – the symposia are peripheral, but are still symposia for researchers. Close to 100%.

- health

- research
  - developed countries

Difficult to measure – what do you actually count. You can do neuroscience research in the Ukraine; it's not tropical medicine or malaria in the UK which is tropical medicine. 10-15% of budget spent on tropical medicine.

  - developing countries

8. **What would facilitate your funding processes? What would help you to be more effective as a donor at the country-level?**

Starting to look more at translational impact of research on health – knowledge produced. Asking applicants to indicate how research might actually be used. Ask panels to look at how findings may be relevant to improving health, and ask researchers to produce final reports. And specifically ask about policy changes that have come about, and changes in practice.

9. **Additional comments:**

Most of the research is going on in long-term programs. Continues to run. Otherwise, are funding developing country scientists working there in the country.

Trying to track whether developing country scientists – or fund UK scientists AT developing country locations.

Discussions with DFID and IDRC about joint project specifically about capacity development; We are involved more at the research training level, hoping to foster "sufficient critical mass" that the scientific thought process will continue there. Also, that there are long term careers for scientists to follow so that they don't have to rely on us from the "cradle to the grave." Need to create policy makers and systems researchers who can take the findings from basic research and apply them – individuals who are policy makers but are research literate.

"NYU/COHRED Health Research Priorities in Developing Countries Project"
Interview guide – funder perspective

Interviewer: Cayce Hill
Note taker: Nadia Ali

1. How does (organization) support health research in the following countries?

- **the Gambia**
- **Senegal**
- **the Phillipines**

    Laos: *research cooperation with University*
- **Kazakhstan**
- **Ukraine**
- **Cuba**
- **Nicaragua**
- **Cameroon**

We support post-graduate education
Supports capacity-building
            -research/research activity
            -structures- ICT
            -library
            -small faculty, funds
Believes to have important mechanisms in place on a faculty level to implement good research systems.
Have a small grant scheme program.

3 different components:
    -sandwich models- research co-op- do coursework, part of project at University
    -structure- libraries, ICT, faculty funds?
    -support reform work at university level: have strategy for research issues, financing on a country level, harmonization between donors with thinking not just $??

As a donor can respond to promotion schemes, improving libraries and facilities to create a nice environment for researchers thereby inculcating research culture, employee morale, and worker productivity.

10. What influences your choice of research program areas?

We have moved away from supporting small projects to broad programs that look at

priorities. They would not support projects with a narrow scope.

11. What efforts have you made to address countries' priorities and needs? Taking into account country priorities, how do you decide what to fund?

SIDA uses MDGs- country's perceptions of their problems.

The research supported is very linked to the country's local problems. We shape priorities according to country plans and their analysis. The Minister of Foreign Affairs has an influence.

Some countries they are currently working on: Rwanda, Tanzania, Uganda, Mozambique (vet science, HIV/AIDS, reproductive health), and Ethiopia (reproductive health, TB)

12. When you fund research projects, what exactly are you funding? i.e. employee's salaries, project expenses?

We do not support salaries or infrastructure, i.e. buildings, but supports lab equipment,

actual project expenses (field allowances, books, equipment, laptop).

13. What level of influence do you feel you have on the health research conducted? If so, how?

We encourage programs to disseminate their information, i.e. through workshops, both

locally and nationally. It is part of the grant proposal to do so.

14. Describe the process of funding a research project.

When doing research co-op with Universities, they look at their strategic plan where

they describe their priorities. Most of the actual project is done in researcher's home country-

way of reducing "brain drain" in home country. Almost all of the research is conducted in

developing country, with 1/3on of our institutions.

*Initial process might identify: Logistical Framework Analysis (LFA) - involves many stakeholders, we primarily work with Universities

There is coordination and collaboration between Ministries and Universities- i.e. Tanzania-health systems and children- strategic directions

      a. Once you make the decision to fund a research project in a developing country, do you fully accept their research proposals or help them tailor their projects according to the funding sources you have?

When a proposal is submitted, first draft is usually edited, and have discussions with how to

improve proposal, i.e. the outline. We provide contact with one of our national institutions.

> *Example: A delegation of people from Rwanda visited several of our institutions to see who they would like to collaborate with, wegave them the opportunity to make their own decisions.*

      b. If their proposal seems unreasonable, do you help them set realistic goals?

15. Approximately what percentage of your organizational budget is dedicated to the following areas of health research:
* development
* health
* research
        - developed countries
        - developing countries

 8. What information or mechanisms from countries would facilitate your funding processes? What would help you to be more effective as a donor at country-level?

 9. Additional comments:

1.   Tell us about your role at your organization.
We coordinate health research activities, define and set priorities in health domains, disseminate research results among different stakeholders within the country and over.

2.   Is there a formal national health research plan in (country)?
    •   If yes, what are the health research priorities?
    •   If no, what should be the national priorities be?

Actually, there is no specific Strategic Plan available but, priorities in this domain had been defined in the Health Sectoral Strategy. Meanwhile, a seminar dealing with these issues is planned in the surrounding months. But the national priorities in a subjective way should be on the communicable and non-communicable diseases, on the health system and on the traditional medicine.

3.   Which internal and external organizations help fund current health research activities in (country) your (institution)?

Internal organizations:
    •   MOPH (Ministry of Public Health)
    •   MOSRI (Ministry of Scientific Research and Innovation)
    •   MOHE (Ministry of Higher Education)
    •   IMPM

External Organizations:
    •   CPC
    •   IRD
    •   CDC
    •   ANRS
    •   OMS
    •   UE
    •   GTZ
    •   UNFPA

4.   How much interaction do you have with the health ministry or other institutions (collaborations)? What level of input does the ministry of Health in the research process?
The Ministry of Public Health interacts with others institutions by giving human, financial and material
supports. From now a precise numbers of the Institutions interacting with us is not yet known.

5. **Can you describe what kind of health research is conducted, i.e. basic research, communicable, non-communicable, health systems? What is mostly done?**

Basic research, communicable, non communicable, health systems and traditional medicine are the main domains where the research is conducted. But what is mostly done is the research on communicable and non communicable diseases.

6. **To what extend do funders get involved in the procedures or practices for setting health research priorities and security funds? Please tell us more about this.**

Since the priority setting in health domain is not yet done in our country although it is done internally in each Institution or Direction, Funders are always involved while preparing, elaborating and adopting strategic plans. Nothing still now had been done to secure funds. Each funders use their own strategies to secure their funds and decide on the way expected results should be disseminated.

7. **Who are the stakeholders involved at each stage of the research process?**

The main stakeholders involved in the research process are:
- Researchers
- Research Institutions
- Policy makers
- Funders

8. **What assessment has been done on your health research capacity? We would like to hear about research priority setting at your institutional and overall.**

An assessment conducted by HRSA (Health Research System Analysis) has been done in 2003 and no research priority setting in our institution had been done still now.

9. **What is the role of your Organization in coordinating external funding?**

By coordinating health research activities, the Division is also indirectly involved in coordinating internal even external funding. Thus, the role of the Division is to count the main Funders; recipients in order to be ensured that there is no squandering, misuse and even the disparity on the use of these funds and he has also the role to know exactly if these funds are used for purposes and objectives defined by the Minister of Public Health.

The results are reported through restitutions at the level of the Ministry of Public Health and through publications in other journals and periodical publications. A platform of collaboration had been set up by the Minister including researchers, research institutions, Funders to exchange information and to make results available for policy-makers for better decisions. A database is now available but not published. It will be on line in surrounding days.

"NYU/COHRED Health Research Priorities in Developing Countries Project"
Interview guide – country perspective

Interviewer: **Nadia**
Note taker: **Cayce**

1. What are the health research priorities in (country)?

Respondent mentions a national health development plan that sets out a health R&D agenda for 1998-2008. May we get a copy of that? Do you think it is still applicable? (why/why not?)

It is the official agenda? Health research in general, the national trend that affects guidance because there is no institutionalized help for funding research it does not exist. They do what the funding institutions want them to do

Funding to set priorities was given in 1992- Rockefeller Foundation, 2002.

Few initiatives in the area of stimulated? Research, some funds are allocated to that, but in general, the amount is very significant

His opinion- Operational research, things related to the summarization of research information and knowledge, and also impt to connect with researchers and with the policymakers.
   •   How do you believe that plan links (or could better link) to the health conditions?

2. Which internal and external organizations help fund current health research activities in (country)/ (your institution?)?

WHO, WHO TDR, WHO HRP

IRD, France
USAID
Islamic Development Bank- in Jeddah

3. How do funders or other entities influence the health research conducted? What level of interaction do you have with the health ministry or other institutions (collaborations)?

He also reported that 87% of total health R&D funds come from international agencies. Does that sound accurate? Yes, or could be more than that

Until recently it was erratic, but has been continuous and very productive, the personnel, legislators, and faculty of medicine, for major policy decisions. Great communication now in many years. People realized that should work in teams and collaborate to get job done, that the human resources are hear and called upon to inform decisions that are made.

* Seems accurate – could be more. Until recently, international agency R&D funds were erratic, but not they are more continuous and productive. Personnel are more involved in Ministry of Health programs. The Ministry of Health must be informed, and more and more resources are being called upon. Advisors are sought for major policy decisions. People in the field seem "out of touch", so the MOH has gotten more involved in publishing research.

4. Can you describe what kind of health research is conducted, i.e. basic research, communicable, non-communicable, health systems? What is mostly done?

Diabetes, hypertension, clinical research, community-based research, cover many areas of the clinical field, biomedical and social sciences.

The report on tracking resources for health R&D in (country) mentioned that "external aid is concentrated on primary health treatment, vaccinations, and other campaigns against diseases, family planning, etc. (UNDP, 1999) Is this still true?

Yes, but child mortality is still very high so immunization is very important.

Do any international agencies that you know of fund priority setting funding? If not, what efforts have been made to seek/coordinate this kind of funding?

Social science research was reported to make up only 2% of the health R&D expenditures in Cameroon during 1998/99. Is this figure still accurate? How can social science research be increased & improved?

5. Can you also describe the challenges you encounter when setting rules, procedures, and regulations?

Have structural problems, equipment is not enough to really do good training, and have a problem of personnel shortage.
Funding for research at the local level is non existent; not consistent.

6. **Who are the stakeholders involved at each stage of the research process, and what particular influence do they have on the health R&D processes?**

Community (those who pay taxes) to whom the researchers should be answerable, policymakers, social organizations and fed orgs, and policy makers in the municipal of health, and all depts. Involved w/ health in the govt.

These researchers are still under the "umbrella" of the institution, though. Their results are still accountable to the institution.

7. **What assessment has been done on your health research capacity? We would like to hear about research priority setting at your institution and overall.** Health research at national level, local institution is not looked at.

8. **What is the role of your organization in coordinating external funding?**

9. **How are donor reports regarding health research disseminated publicly?**

10. **What coordination or mechanism to exchange information regarding health research has taken place?**

No "proper" institutional link to speak of.

11. **Additional Comments:**

Grey literature sources and internal reports are not recorded systematically.

"NYU/COHRED Health Research Priorities in Developing Countries Project"
Interview guide – country perspective

Interviewer: **Cayce**
Note taker: **Nadia**

2. Is there a formal national health research plan in (country)?

ENHR health research priorities – derived from situational analysis of most prevalent diseases. Infectious, chronic, etc. Very important for them
   •   If yes, what are the health research priorities?

ENHR meeting-derived plan. Infectious diseases, adolescent health, malaria
   •   If no, what should the national priorities be?

Depends on funding – funders have their own priorities. Most of the time priorities remain the

3. Which internal and external organizations help fund current health research activities in (country)/ (your institution?)?

Collaborations, partnerships

NIH
Fogarty – training grants
WHO TDR is very important
Gates Foundation
Int'l Atomic Energy Agency
ISS
UNFP, UNICEF – adolescent health
Johns Hopkins University, CDC – HIV/AIDS & military
OSEAC for Central Africa (French org)
*Pasteur
ANRF
E.U.

4. **Now we would like to find out more about the relative influence of each stakeholder (e.g. foreign funders, national funders-where they exist, ministries of health, other ministries, researchers-medical school and university, health care providers, community) involved on the health research conducted. (note also if specific stakeholders have *no* influence)**

With NIH based in university and process is to go through national ethical committee. Process of getting community in place (villages); sensitizing committee, getting informed consent. Meeting with chiefs in community as well as individual informed consent.

If research will be carried out in health centers, Ministry must know. Dean of Faculty writes to MOH in charge of area of research to get permission to work in that community. Show letter of permission at health center.

Foreign funders? The hope is that they work with country researchers. But in Pasteur, other French, have research areas where they work. Usually these documents go through Ministry of Health for permission – to show administrative authorities.

Not many national funders – trying to get private sector interested in research. Football country – they would give money for football instead! Govt gives some money, but most dependent on foreign fund. Global Fund has made $$ avail for implementation of malaria, TB research.

- How much interaction do you have with the health ministry or other institutions (collaborations)? What level of input does the Ministry of Health have in the research process?

Especially now with division of Op'l Research – M of Higher education & MO Research working together. Op'l Research will coordinate this research – recently brought together people working in HIV/AIDS to talk about what's being done and how to coordinate the effort more. Plans to do this for each area of research.

5. Can you describe what kind of health research is conducted, i.e. basic research, communicable, non-communicable, health systems? What is mostly done?

Health systems – very little going on. After Mexico, want to see how to get more health systems research going on. To get research to improve systems. Believes that will be an important component of health research in the future.

6. To what extent do funders get involved in the procedures or practices for setting health research priorities and securing funds? Please tell us more about this.

Funders priorities are important – because researchers need the funding. They may go online and see that there is money out there. There are so many funders in the areas of infectious diseases & adolescent health that it is not such a problem.

7. Who are the stakeholders involved at each stage of the research process?

(see above)

8. What assessment has been done on your health research capacity? We would like to hear about research priority setting at your institution and overall.

Big Tulane grant for schistosomaisis, trained 12 phds. But these Phds now work outside the country for the most part. Was a big priority then, but not now.

9. What is the role of your organization in coordinating external funding?

Mainly individual researchers. One faculty member just met with funders in Seattle to set up collaboration. Areas where the university can find opportunities to link researchers & institutions together. A lot of effort going into this area. Believes things are getting better – someone else is coming from pharmaceutical center to see how they

10. How are the results of research projects disseminated?

Researchers are supposed to go back to the community and let them know the results are going. Doesn't happen as much as it is supposed to. "Not big on dissemination of results". More concerned with the idea of "publish or perish".

- Where are the results reported (is access to publications limited to donors or the MOH, or are publications more accessible than this)?

Local & national journals, conferences & seminars to talk about research results. A lot of research in the drawers not getting to public. Without collaboration, even south-south and multi-disciplinary team, (good data manager, statistician, etc.). If design is not made in a way that it can be easily analyzed. Int'l journals are very demanding of what is published. Less of a chance to get published if there is no northern contributing author.
Some of it doesn't even get to MOH – except when changing drug policy (showing resistance in one drug v. another) . Need to do more health systems research for it to be more applicable to MOH. Young resaearchers don't know how to write/make good designs.

- How do others (e.g. researchers, organizations) get access to the reports if they want them?

SHARED – in future.
To individual researchers.

Occasionally, Ministry of Higher Education & MOH get people to sit down and talk about what they're doing & want to do. (HIV/AIDS, MALARIA)

10. What coordination or mechanism to exchange information regarding health research has taken place?

Data manager has gone for training & has started getting work into SHARED database.

Ministry of Research – National Research Institute
MOH – is more coordinating body

11. Additional Comments:

Constraints (funding) – trying to identify northern partners to work with. Collaboration is essential.

Organizing research teams – because many researchers are working alone. At different institutes doing the same thing. Try at the biotech center to have monthly seminars, but in other places people work separately. Organizing one team to meet in the same area.

Collaboration between researchers and collaborators – Ministry of Research + MOH has not worked well. New division is the hope for the future that collaboration will improve. People in control of malaria research don't usually end up doing the implementation, for example.

Private sector involvement in research is needed – to get $$ from in country.

"NYU/COHRED Health Research Priorities in Developing Countries Project"
Interview guide – country perspective

Interviewer: **Nadia**
Note taker: **Cayce**

2. Is there a formal national health research plan in (country)?
Are the priorities stated in the ENHR still the same priorities in country?

- If yes, what are the health research priorities?

There is national research plan but this has probably not been drawn up in the formalized manner as recommended by COHRED. Malaria, for example, is a major problem in Cameroon and south of the Sahara – Senegal to Tanzania and down to around Zimbabwe in the South – not much in South Africa. Very serious problem probably more so than AIDS, another priority research problem; highest mortality is with children and pregnant women. What makes AIDS a much more serious problem is because it destroys that important workforce in the country in addition to attacking all age groups. HIV/AIDS is also a problem because there is still no permanent therapy nor is there a vaccine for its prevention. Other research problems include diarrhea diseases, nutritional disorders, CVD, and genetically linked diseases such as sickle cell disease. In (country) you don't find overt cases malnutrition, but doesn't mean nutritional problems don't exist – just aren't so bad. Linked to *gastroenteritis*/malaria and infectious diseases like measles. The preventative aspect of HIV/AIDS is very hard to administer. First got to our country in 1985/86, came from East Africa and moved West. Really took hold in 1990s, like malarial diseases. TB is not a problem like others, but in conjunction with HIV/AIDS is very serious and the DOTS treatment is not being followed rigorously.

- If no, what should the national priorities be?

3. Which internal and external organizations help fund current health research activities in (country)?

On the research side, (country) is a little disadvantaged – lots of intervention activities that are curative but no comparable activities on the research side. WHO is one of the greatest backers of HIV/AIDS program. Multilateral initiative for malaria in Africa (MIM) supports intervention activities in Malaria, but its funding on the research side is limited. On the whole, we are slightly weak on the research side in proportion to its capacity. Lots of good research going on malaria in the relevant departments of the Universities. No real strong external backers supporting research. Lots of funds come from competitive process – bidding for funds. You must have a cadre of scientists who gain that competence to get grants. Mali is very good at getting research grants. That group has developed the capacity to compete internationally. Not too many African countries get direct research funding – most who provide funds to developing countries are much more interested in interventions/trials than research. To better know what is the basis of the intervention (evidence-based); in the context of the overall aid programs. Big funders need to add this to their programs.

4. Now we would like to find out more about the relative influence of each stakeholder (e.g. foreign funders, national funders-where they exist, ministries of health, other ministries, researchers-medical school and university, health care providers, community) involved on the health research conducted. (Note also if specific stakeholders have *no* influence)

Traditionally, there is always "warfare" (probably best described as disaccord) between MOH (focus is on action) and researchers (more interested in researcher) in most developing countries and even some developed countries. Each accuses the other of not using the other. Topics researchers choose for their research may not be relevant to the country's priorities and the results of research may also be written in medical jargon with complicated table of results and no clear recommendations for action. MOH don't always respond to the needs of researchers nor will they commission research for generating evidence for action; some directors at MOH often jealously guard their positions/powers and not want researchers to "encroach" on their powers.

- **How much interaction do you have with the health ministry or other institutions (collaborations)? What level of input does the Ministry of Health have in the research process?**

On the whole the MOH has been striving in recent years to collaborate strongly with the research institutions in (country) particularly the medical school. For examples staff of the Medical School get appointed as experts to certain MOH technical committees – this is a possible incentive for researchers. They can also be appointed as Directors of relevant departments of the MOH. MOH may understand the importance of using evidence-based research, but actually putting this theory into practice is a different story without relevant experts to drive this. The present minister, for example, is a lawyer, but understands this and is keen on creating an electronic health database in his Ministry so as to know what researchers are doing in the country. He has pushed for the creation of a SHARED database that is currently in the implementation stage. This, he hopes, should facilitate intervention activities though relevant ready access to research findings. WHO has been at the forefront in pushing MOH and researchers in this direction? Tanzania created a health research forum in which the membership consisted of all the people, researchers, research institutions, MOH both for priority-setting, for the awards of research grants (all funds for research were in a common "pot" and disbursed from there) and for awards of grants and reviewing the results coming out of the research. In this way they are able to make sure relevant results pertaining to MOH policy priorities are appropriately implemented. Their Chief Medical Officer (equivalent to the US Surgeon General) is a member of this forum.

In situations where researchers are not confident about winning grants because of inadequate training, they take the "easy way out" and do research which external scientists have asked them to do – responding to a donor need/request rather than actually bringing up a national need for which he believes research is necessary. Without a critical mass of trained scientists to articulate the research that needs to be done, this (responding to external donor needs) becomes a current practice that is certainly not in the best interest of the country.

With university professors being appointed to responsible positions in MOH, they have the great capacity, for example, to push for changes in the health research agenda in some areas thus furthering consensus building between MOH and academics. In Tanzania, the forum is the most important way in which researchers and MOH get together on a research platform.

5. Can you describe what kind of health research is conducted, i.e. basic research, communicable, non-communicable, health systems? What is mostly done?

The research conducted is variable according to the competence of the staff. The current research undertaken is mainly in communicable diseases (malaria, the filariases – onchocerciasis and loa-loa- HIV/AIDS (mainly operational research); non-communicable diseases (hypertension, diabetes and endocrine disorders), cancer; nutritional disorders, etc

6. To what extent do funders get involved in the procedures or practices for setting health research priorities and securing funds? Please tell us more about this.

Although Donors tend to have their own agenda and areas of preferred funding (USAID, British DFID, GTZ etc) that they want to push in accordance to the policies of their respective governments, they are slowly, through the current int'l climate making their policies correspond and respond to the needs of the countries. They may subtly attempt to influence that the countries priorities become but this is increasingly becoming very subtle.

Donors take part in the priority-setting exercises in the countries in order to take note of areas of interest to the countries. They would also use such occasions to highlight the areas that are of interest to their governments.

7. Who are the stakeholders involved at each stage of the research process?

COHRED tried to push "bottom up" priority setting approach – as well as getting the more "enlightened" community leaders to take part in these national research priority-setting processes. Usually a national conference is called; people are invited from across disciplines to meet and draw up priorities. Sometimes, people are asked to name 7 priorities, and then looked for a consensus on certain problems. It was usually interesting to see what people express as "problems" but which may not necessarily be priorities in terms of research. By seeing what the concerns are, though, the research elite in the country can translate them into researchable topics. Some problems may already have evidence that only needs appropriate intervention but other areas may be ones where data for intervention may not be known and hence the need for research.

Priorities should definitely match up with the major disease burdens in the country. People at the "bottom" of the health ladder may not understand some of the health issues that warrant research. Hence there is always the need for a critical mass of researchers in a country to articulate this clearly.

8. What assessment has been done on your health research capacity? We would like to hear about research priority setting at your institution and overall.

Doesn't know of any – research capacity development has been one of Dr. Nchinda's areas of study/interest in more than two decades and he has been at the forefront for training most of the research leadership in tropical diseases research across much of tropical Africa. A Program called AfriHealth – has, over the last 2 years, been trying map the public health work force in Africa. Few of the countries he knows about have actually actually carried such a study. Hence there is an inability in Africa to know where appropriate health manpower is being deployed effectively. The first indications are that there is an insufficiency of this capacity. This is one of the reasons for the current USAID's Partnership Programme for public health training. This program aims to build up the training capacity for public health institutions in Africa.

9. What is the role of your organization in coordinating external funding?

Respondent cannot answer this question as it is not relevant to their role..

10. How are the results of research projects disseminated?

   - **Where are the results reported (is access to publications limited to donors or the MOH, or are publications more accessible than this)?**

At annual medical conferences – for past few years these conferences have been held in the nations capital bringing together stakeholders from all over country to present results of work. All doctors working in the field attend this three-day conference that includes responsible officials of the MOHs as well as researchers in the medical schools, research institutions and other bilateral agencies in the countries involved in research. These conferences are usually well attended with presentations and discussions of papers summarizing results different studies carried out. This is the major method of dissemination. The other method consists of directly discussing the results with the relevant responsible official in the MOH. The current move to establish a health database (SHARED) is important in this, as all health information would then be available on the database along with the names persons who did the studies and how they did it.

   - **How do others (e.g. researchers, organizations) get access to the reports if they want them?**

This is currently a major problem and is one of the strong reasons for setting up the SHARED project.

10. What coordination or mechanism to exchange information regarding health research has taken place?

Building up SHARED database – identifying countries, people, institutions where research is carried out. To get countries to put data that they collect on interventions into database so that others can know what is happening in the country. Follow-up workshop is planned to initiate getting country data into database. When Dr. Nchinda was promoting this, the MOH very quickly picked up the idea and are participating actively in its implementation.   Saw benefit in being able to call up results at a computer terminal in the MOH instead of having to go through the usual long channels of phoning up researchers. The director responsible for research in MOH is Co- Focal point with a senior lecturer in Medical School for SHARED in the country. The data in SHARED should include all studies (basic, intervention and operational research) on communicable and non-communicable diseases

11. Additional Comments:

Time:
Interviewer:
Note taker:

1. Please tell us about your role….
As a University lecturer my role is two fold, -teaching and evaluating the students taught, and ? carrying out research in my discipline of interest which for now is in the area of onchocerciasis (river blindness) and epilepsy, both of which are diseases of public health importance both here and elsewhere in the world where they occur.

2. Is there a formal national health research plan in (country)?
Personally I will say that there is no formal national research plan in (country), although there exists a national health (policy) plan which at times calls for intervention of research expertise. As far as research and particularly health related research is concerned, there are three major ministries involved ? Min of Public health, Min of Animal husbandry and fisheries, and Min of Scientific research. Each of these ministries coordinates research carried out at its own level, without necessarily being aware of what may be happening in the other ministries unless informed if need be. This lack of cohesion and the decentralized nature of research probably accounts for the lack of a formal national health research agenda. Because of this there are therefore no national health research priorities. This may also result from the fact that our government does not have enough money to fund research which therefore leaves the scientists at the mercy of the external funding agents whose priorities determine the priority areas of the researchers; thus abandoning the national health priorities in the hands of the policy makers and politicians and the health research priorities in the hands of the researchers and the funding agents.

· If yes, what are the health research priorities?

· If no, what should the national priorities be?

3. Which internal and external organizations help fund current health research activities in (country)/ (your institution?)?
As stated above, health research is funded to a great extent in our country by external agents, though with very little subventions from national institutions such as the Universities and the ministries, and may be to some extent the private sector (not sure!). The major external agents that fund health related research in this country are to the best of my knowledge:

WHO thru its special programme for research and training in Tropical diseases, IFS in Sweden, NIH through its diverse research programmes, European Union, Swedish agency for research cooperation SAREC, The EDNA McConnell Clark Foundation etc etc just to name a few.

4. Now we would like to find out more about the relative influence of each stakeholder (e.g. foreign funders, national funders-where they exist, ministries of health, other

ministries, researchers-medical school and university, health care providers, community) involved on the health research conducted. (note also if specific stakeholders have no influence)

· How much interaction do you have with the health ministry or other institutions (collaborations)? What level of input does the Ministry of Health have in the research process?

5. Can you describe what kind of health research is conducted, i.e. basic research, communicable, non-communicable, health systems? What is mostly done?
The major type of health research done here is at the basic level especially given the low levels of funding and the infrastructure available to carry out the research.

6. To what extent do funders get involved in the procedures or practices for setting health research priorities and securing funds? Please tell us more about this.
As far as I know, the funders of our research projects do not take into account our national health research priorities, probably because they do not exist as I earlier indicated. Non the less, in terms of research procedures the funders insist that the researchers must comply to the international norms; and it is the place of the institutions or ministries to confirm that the research facilities are in conformity with the said norms, before funding can be given. As far as securing research funds is concerned, the funders only disburse the said money to institutional accounts (not to individual accounts) from where they are now made available to the researcher for the research purposes. It is the said institution that preserves the financial records and presents the statements to the funding agent, upon signature by the scientist who in turn presents the scientific report. At the end of any such research project, all equipment etc acquired through the project revert to the institution or ministry etc.

7. Who are the stakeholders involved at each stage of the research process?
As far as each health research process is concerned, there are three major partners: - The government (i.e the institutions, ministries etc where the research will be carried) whose responsibility is to provide the needed infrastructural requirements and logistics etc, and to ensure full respect of the bioethical norms. The researchers whose rule is to carry out the research proper - The research participants from whom test samples and any necessary data are collected.

8. What assessment has been done on your health research capacity? We would like to hear about research priority setting at your institution and overall.

9. What is the role of your organization in coordinating external funding?

10. How are the results of research projects disseminated?

Seminars and conferences, scientific publications, internet discussion groups etc.

· Where are the results reported (is access to publications limited to donors or the MOH, or are publications more accessible than this)?

· How do others (e.g. researchers, organizations) get access to the reports if they want them?

10. What coordination or mechanism to exchange information regarding health research has taken place?

A number of scientific societies exist such as the Bioscience Society, the Society for Biochemistry and Molecular Biology, the Immunology Society etc. do exist all of which organize annual conferences for scientists in the different fields to exchange their research findings. Also, there exist at institutional levels, regular seminars during which scientists come together to refresh themselves on the latest findings and also to exchange their know how. Also, the defense of thesis are public thus allowing interested persons to have free access to the research findings. Also there exist scientific journal thus easing the possibility of publishing research findings; although delays in reviewing and shipment had often resulted in some of our research findings going out dated by the time they are published. Now there exist submission of manuscripts via internet and discussion groups on the internet to facilitate information exchange. Thus in conclusion there exist many avenues through which scientists can exchange their health research findings.

11. Additional Comments:
I will like to call on the government through its ministries involved in health research to come up with health research priorities aimed at addressing the health needs of our people. To address this validly, our government needs to put in substantial funding into basic research in line with the said priorities so as to attract the scientists who otherwise tend to be attracted by external funders who come with their own priorities that do not necessarily have to fall in line with government policy or priorities. Furthermore, the multiplicity of ministries involved in coordinating health related research such as those of Public Health, Fisheries and
Animal husbandry, Scientific research and Higher education, just to name a few, lead
to duplication of services with the end result being that no work finally gets to be done, as the service in one ministry thinks that it is the responsibility of the service in the other ministry who should do the job.

A single ministry coordinating health related research would be more efficient in effectively ensuring that the work is done, thus making proper use of the limited funds which we do not even have.

"NYU/COHRED Health Research Priorities in Developing Countries Project"
Interview guide – country perspective

Interviewer: Cayce
Note taker: Nadia

2. Is there a formal national health research plan in (country)?

Fairly self evident priorities – main problems in Africa seen as public health issues.

Schistosomiasis – stopped in favor of AIDS program in 1989 because seen as higher priority.
Pneumonia biggest cause of mortality in children – focus driven by need.
Non-communicable disease program was hardest to convince board of – hypertension, diabetes, asthma. Needed to be documented, but took persuasion. Did all prevalent studies, but can't persue them further without funding. Despite the

- If yes, what are the health research priorities?

By MRC, for MRC for government. Govt. approved it. Could have stopped it.

- If no, what should the national priorities be?

3. Which internal and external organizations help fund current health research activities in (country)/ (your institution?)?

Total population is 1.2 million – MRC has such long history – all other players work through MRC. Everyone referred to MRC. Monthly scientific review process, govt. refers orgs to scientific coordinating committee. Only approved programs were reviewed by ethics comm.. (Gambia gvt MRC committee). MRC budget was $10 pounds – only 5 million from funding agencies, collaborators, widely distributed (Gates, WHO, NIH).

Central coordinating mechanism. First gene bank set up. Because nego. between research org and government. This made research much easier. 2 formal

4. Now we would like to find out more about the relative influence of each stakeholder (e.g. foreign funders, national funders-where they exist, ministries of health, other ministries, researchers-medical school and university, health care providers, community) involved on the health research conducted. (note also if specific stakeholders have *no* influence)

Because it is such a small country- pop 1.2 million, people are always referred to MRC- and every month there was a scientific review process, and if one approached the govt, they were referred to the MRC

- How much interaction do you have with the health ministry or other institutions (collaborations)? What level of input does the Ministry of Health have in the research process?

5. Can you describe what kind of health research is conducted, i.e. basic research, communicable, non-communicable, health systems? What is mostly done?

6. To what extent do funders get involved in the procedures or practices for setting health research priorities and securing funds? Please tell us more about this.

7. Who are the stakeholders involved at each stage of the research process?

MRC and govt. presented priorities & there was sharing of priorities – in theory govt. could veto MRC areas of research or investment that was going to govt. capacity building. He refused to go unless there was significant training program – was a condition of his appointment. In Britain, science is funded from different pool than training – set up proactive training program in epi, stats, malaria control, TB control. Quite a big investment in training. Each research program was debated regarding how it would benefit the govt. afterwards, including amount of clinical care was huge benefit to govt.

8. What assessment has been done on your health research capacity? We would like to hear about research priority setting at your institution and overall.

Provided staffing for hospitals. PNeum vaccine trial (8 hours from coast) did lots of capacity building, imm in field. EPI program supported by. No medical school, so they are nationals trained overseas or brought in from Nigeria, Ghana, Egypt on aid programs from the countries. MRC staff of 800 included drivers to lab technicians from wide number of countries (about 13). Scientific staff was from all over, recruited in advert in int'l location (Lancet, Economist, etc.) and interviews held in London – no matter where they came from.

9. What is the role of your organization in coordinating external funding?

10. How are the results of research projects disseminated?

- Where are the results reported (is access to publications limited to donors or the MOH, or are publications more accessible than this)?

Within (country), inform MOH first – lead department that they were dealing with directly. Example – seminars, local dissemination workshops within region where research was being done. Huge push to make it known to local health authorities. In a way in which the results were understood locally. Most important – ballad singers – to talk about research to local communities. We are a heavy producer of peer review journal articles – main way of disseminating internationally. Goal – getting research into policy and practice. Very difficult – many outcomes became policy in country and practice around developing world: bednets, pneumocco, hep B, hemoph influenza vaccine. Major public health research implemented internationally.

- How do others (e.g. researchers, organizations) get access to the reports if they want them?

Ethics committee to get samples or data. Approved based on request being justifiable scientifically – approval within a month.

11. What coordination or mechanism to exchange information regarding health research has taken place?

Investment by govt. in research – used MRC as govt. arm. Very dependent on MRC, but do have policy unit on public health policy. Largely confine research to less technical issues, used MRC on committees to advise on management of many health problems. MRC represented in national health agenda at nearly every level. Not the same as own capacity within government.

Administrative structure changed after he left – 3 directors instead of 1. 1 overall Director (he supported this), scientific director (1.5 years to recruit) – difficult to get senior, credible scientific people to work in Africa – must be able to win credibility through molecular scientific review process , and administrative disease director.

12. Additional Comments:

Molecular science – related to setting up of DNA bank. Took an enormous amount of effort in Iceland, Greenland, Estonia – govt. really entered in and negotiated with pharma industry to sell genetic material. (country) debated with govt. and have published papers on genetic susceptibility to disease. Doesn't have much to do with managing sick people. Balance between public health (affordable) and blue skies, pathogenesis research is difficult to play, especially in resource-limited situation. Tension is to strike balance and persuade local authorities that long term interest to engage in such work. Usually North Amer. approach to ethics was inapp. and over the top, self-defensive (funding agencies, institutions). Didn't take account feelings of people being researched. Funding from US funding was different – research was high quality, so they forced local ethics standard.

Recent monograph – national council on bioethics. People from all over world on ethics of biomedical research. Contrasted that with procedures of US

Enormous pressure from donors, time spent justifying small gifts. Expect to force policy changes from people with little money. Effect on time people have to devote to work – every week different donor, pretending they are the most important thing in the world. Forces people to do nothing but serve the donors.

In Uganda, people give nationally to national budget to prevent weekly reporting to VIPS from outside. Basket of funding isn't supported by all countries. In Uganda, large portion of budget of country is supported by external. Not true in (country) – much more dependent on outside. MRC doesn't fund government, but does add capacity building.

In Uganda the human resources are much greater – lots of highly trained and motivated people who value education and university trained people. Not the case here.

Agenda of MRC was set by scientific staff (large staff – around 50), very public health oriented even if molecular scientists. Drove his priority setting. Although there were interesting things that needed investigation that weren't priority, but that was a minority. Reproductive health & noncommunicable disease programs not seen as "rocket science" had trouble getting funding.

External reviews
committee of people for prioritization with score from alpha to gamma. If it didn't achieve alpha, couldn't be done. Not all of it got funded even if it was alpha. Alpha-graded research was taken to other funders.

"NYU/COHRED Health Research Priorities in Developing Countries Project"
Interview guide – funder perspective

Interviewers: Nadia Ali, Cayce Hill

1. How does (organization) support health research in the following countries?

We increasingly emphasize interdisciplinary approaches and national and international partnerships. In addition, we continue to combine field, laboratory and clinical activities, thus making use of the long-standing ability to generate fruitful synergies in research, services and teaching.

Research activities involve close cooperation between people trained in many disciplines in natural sciences, medicine and social sciences, and between many institutions both in Switzerland and elsewhere.

Internally we have two research and training departments. The research activities are presented here by topic, since almost all projects include contributions from both research departments, and often from the service centres as well. This enables to the best possible use of all the experience and facilities available in the Institute.

Worked in Laos 5 years – set up small training school for medical doctors (tropical medicine). One of collaborating institutes that help set up center and helped with first training sessions. Schistomaisis – parasite control systems. Work in around 50 countries worldwide. Involved in malaria control – development of vaccines.

16. What influences your choice of research program areas?

Yes, from national Institute of Public Health. Set up with external support – with WHO support set up plan for 1995 – 2000 review date; also plan up to 2020. Not easy to get plan, but that would be the place to call.

17. What efforts have you made to address these countries' priorities and needs? Taking into account country priorities, how do you decide what to fund?

Integrated ITMed – regional institute for SE Asia but collaborates a lot. In same compound. Nat. Inst. of Public Health communicable diseases (malaria, infectious diseases, produce fever of unknown fever because makes prevention of AIDS difficult), maternal child health, diseases important in epi transmission. Operational research in connection with control of infectious diseases – how to implement malaria control activities.
Known what should be done but not how – needs more clarity about how the system should be set up so that interventions can be performed more effectively. HIV/AIDS also very important – at the moment the prevalence is low in Laos, but this may be a problem of bias studies. Others say that the studies are accurate so more focus should be placed on prevention. Dengue fever should be looked at more closely – will spread regionally in urban and also rural places. There are hypothesis as to why this spread is likely to happen, these hypotheses are being investigated. Shift from children to adults is new.

18. When you fund research projects, what exactly are you funding? i.e. employee's salaries, project expenses, other?

19. What level of influence do you feel you have on the health research conducted? If so, how?
Decision making process is not always clear – politics are involved. Institutions become somewhat accepted as giving inputs for certain ideas. Not sure how much influence they have. Certainly there is a positive impact.

20. Describe the process of funding a research project.
Don't have funds to distribute to Laos govt (health centers/etc.) They are looking for funding together. Partnership approach.

        a. Once you decide to make the grant, do you help tailor projects according to the funding sources you have, or fully accept an agency's grant proposal as is?

Promoted by (country) partnership for health research. National Research Foundation. Ask that they develop projects along lines of partnership approach. Start from beginning, edification of problem, include partners from beginning. Funding source that gives money for partnership

research. With others partnership approach is not so important. But he feels that to run an efficient program, partnership approach is essential. Has been done this way for about 20 years. Example of Tanzanians who have evolved to become equal partners – has become a standard for the partnership approach.

       b.   If their proposal seems unreasonable, do you help them set realistic goals?

21. Approximately what percentage of your organizational budget is dedicated to the following areas of health research:

        i.   development
- health
- research
- developed countries

22. What would facilitate your funding processes? What would help you to be more effective as a donor at the country-level?

Quality and level of health personnel is very low. Medical training, nurse training is very low. Need much more training to be able to do better research themselves without external support. 4 year program support should be minimum. System is so slow, takes a year just to get it going – leaves little time to do the actual research. Level of understanding is still quite low – need more time to absorb and develop ideas. Need to have strong commitment to training and to people so that they can pursue a career and give their capacities back to the countries.

Dissemination

Training for months at a time. If they wish, they can participate in the research activity and use the results toward their Masters degree. Directly introduce the results into training in the region. Try to publish in high ranking scientific journals; hard for growing in stitute in laos. First did poster presentations/oral presentations in regional conferences (Bangkok tropical medicine conference, SE Asia Tropical Medicine Journal Public Health, Int'l Journal of Clinical Nutrition in the works). Try to get as 'high' as possible.

23. Additional comments:

"NYU/COHRED Health Research Priorities in Developing Countries Project"
Interview guide – country perspective

1. **What are the health research priorities in (country)?**
Maternal and child health, malnutrition, endemic diseases (malaria, dengue and tuberculosis), HIV/AIDS, disability, mental health, violence, cervico uterine cancer, diabetes and hypertension.

• **How do you believe that plan links (or could better link) to the health conditions?**
Health research priorities must be coherent with national health priorities defined since May 2004 in the National Health Plan 2004-2015.

2. **Which internal and external organizations help fund current health research activities in (country)/ (your institution)?**
Different bilateral (USAID, ASDI, NORAD) and multilateral (IDB, WB) organizations are funding different health research activities as part of their current technical cooperation.

3. **How do funders or other entities influence the health research conducted? What level of interaction do you have with the health ministry or other institutions (collaborations)?**

In past years, there were independent agendas for health research. There was no coordination between agencies and the priorities of Ministry of Health. Since this year, with the beginning of the implementation of SWAP (sector wide approach) in health sector, the priorities are aligned, and new research activities will consider in first place, the priorities defined by the Ministry of Health.

4. **Can you describe what kind of health research is conducted, i.e. basic research, communicable, non-communicable, health systems? What is mostly done?**

Mostly applied research in areas of: health systems, communicable, non communicable, environmental health, workers health, indigenous people health.

5. **Can you also describe the challenges you encounter when setting rules, procedures, and regulations?**
In this year, the Ministry of Health elaborate a "Reglamento de Investigaciones" proposal which was widely consulted. It is expected to be approve next year. Its implementation and developing of specific norms will be a major challenge. The second challenge is to implement bio ethical committees for health research as establish in health law.

6. **Who are the stakeholders involved at each stage of the research process?**

- Ministry of Health: director of training and research and Bioethical Committee.
- Universities, one has a bioethical committee.
- Public Health Schools
- Other institutions of Health Sector, including technical schools.
- National University Council.

7. What assessment has been done on your health research capacity? We would like to hear about research priority setting at your institution and overall.

No assessment has been done. We are very interested in doing it. We have talk with Ministry of Health and one university about it.

8. What is the role of your organization in coordinating external funding?

In our regular budget we assign funds for research in different areas (according to national priorities). We also promote funding for specific research proposals and technical cooperation between countries. In emergency situations, we promote and sometimes coordinated specific research with support of different agencies of United Nations System and others.

There is a regional unit in PAHO, in Washington, devote to this area. There are some grants for health research, by regional concourse.

9. How are donor reports regarding health research disseminated publicly?

There are no specific reports.

10. What coordination or mechanism to exchange information regarding health research has taken place?

The coordination and specific mechanism are weak. Our organization share information trough direct dissemination to stakeholders and counterparts, web pages, participation on national and international events, promotion and support of congress, conferences, seminars, workshops, etc.

"NYU/COHRED Health Research Priorities in Developing Countries Project"
Interview guide – country perspective

2. Is there a formal national health research plan in (country)?

No

If no, what should the national priorities be?
In 1994 a 10 years National Health Plan was approved by the government and research was not included as part of the strategy. In this Plan the following priorities for the health sector during this 10 years period are defined: Maternal mortality, infant mortality, population growth, chronic malnutrition, high prevalence of acute respiratory and intestinal diseases, endemic diseases (Malaria, Dengue, Tuberculosis, HIV/AIDS), labor accidents, mental health problems, violence, chronic diseases and cancer.

Promoted by the University and COHRED in 2004 process of defining health research priorities was started with the participation of the Ministry of Health, universities and community organizations. At the National University the research priorities are: infectious diseases (infant diarrhea), labor medicine and epidemiology.

3. Which internal and external organizations help fund current health research activities in (country)/ (your institution?)?
PAHO/WHO have been funding health research in Nicaragua for more than 20 years. (agency) concentrates its support on the development of health research capacity at the state universities and is the main supporter of research at the National University. Some international NGO like Save the Children, OXFAM have supported health research but not in a systematic way. Recently, CDC-Atlanta, and other American institutions started establishing links of cooperation in health research with Nicaraguan Institutions. Some Pharmaceutical companies started a couple of years ago to make clinical trials of vaccines in collaboration with the National University.

4. Now we would like to find out more about the relative influence of each stakeholder (e.g. foreign funders, national funders-where they exist, ministries of health, other ministries, researchers-medical school and university, health care providers, community) involved on the health research conducted. (note also if specific stakeholders have *no* influence)

No doubt that the main stakeholders are the Public Universities and foreign donors, specially (agency) and PAHO/WHO. Public Universities are funded by the national budget but they do not receive specific funds for research. The Ministry of Health has so far no policy concerning health research and the National Research Council is still very weak and has no budget.

- How much interaction do you have with the health ministry or other institutions (collaborations)? What level of input does the Ministry of Health have in the research process?

The National University and the Ministry of Health have a permanent commission to discuss all issues concerning the relationship between the two institutions. Most of the work of this commission is related to problems with the training of health professionals and the coordination of activities in state hospitals that also function as university hospitals. In León there have been experiences of cooperation between the Ministry of Health, the local government, community organizations and the University in health related problems. At present, there are discussions going on to improve this kind of cooperation. So far, the Ministry of Health has practically no influence at all in the definition and support of research activities

5. Can you describe what kind of health research is conducted, i.e. basic research, communicable, non-communicable, health systems? What is mostly done?

Most of the health research conducted in (country) specially at the National University is related to the identification and characterization of microorganism related to communicable diseases. One of the main research programs is related to the identification of microorganisms that cause diarrhea in children: E. coli, rotavirus, parasites. Some work has been conducted on the situation of Chagas disease and Leishmaniasis in Nicaragua. A couple of years ago a Center for Epidemiological and demographic studies was created at the National University. This center has developed health surveillance system and works on epidemiological studies of different kind, most of them with the purpose of providing basic information on different health problems, including, domestic violence, HIH/AIDS, Chronic diseases. A group is conducting studies on occupational health problems, specially in relation to pesticides. There are also a couple of groups working on traditional medicine.

6. To what extent do funders get involved in the procedures or practices for setting health research priorities and securing funds? Please tell us more about this.

Most of the research currently being carried out in (country) is funded by external donors. In general, donors respond to demands presented by the Nicaraguan institutions. In the case of the two main donors there are some differences in approach. PAHO/WHO supports mainly research which is related to the programs they support in agreement with the Ministry of Health. Most of the research is carried out on a contractual base. (agency) support programs on a long term basis aiming to develop and strengthening research capacity. The programs they finance are the result of bilateral negotiations on the basis of proposal presented by the Nicaraguan institutions. The majority of other institutions supporting or conducting research in Nicaragua work on a project basis and once the project is finished there is no continuing cooperation. In these cases the topic of the project is brought by the foreign institution.

7. Who are the stakeholders involved at each stage of the research process?

In most cases there are first negotiations involving the head of institutions to discuss the general framework of the cooperation agreements. Then the specific projects are discussed by specialists that prepare the research protocols and budgets. In most cases there are periodic evaluations conducted by the office of the Vice Rector for Research and by the donor agencies.

8. What assessment has been done on your health research capacity? We would like to hear about research priority setting at your institution and overall.

No formal assessment on the health research capacity in (country) has been done. (agency) has done an external evaluation of the programs they finance and the general conclusion is that there has been a dramatic change during the past 15 years. Before that, research practically did not exist in (country).

For many years, the university did not make an explicit declaration of priorities. The decision was to support researchers based on their personal interest. Just last year, with support from COHRED and the Brazilian Ministry of Health a process of definition of priorities was started. The process is on the preliminary stages.

9. What is the role of your organization in coordinating external funding?
As mentioned before, external cooperation is vital for the development of research capacity. Now we have formal links of cooperation with more than 150 institutions in Europe, North- and South America. All agreements are negotiated on the basis of common and reciprocal interests. The university guarantees the transparent and efficient use of the received funds.

10. How are the results of research projects disseminated?
More and more we are having access to international journals but still the main way of disseminating results is the local press and local scientific events.

- Where are the results reported (is access to publications limited to donors or the MOH, or are publications more accessible than this)?

In general there are no limitations from the donors with the exception for research conducted by contract with pharmaceutical companies.

- How do others (e.g. researchers, organizations) get access to the reports if they want them?

11. What coordination or mechanism to exchange information regarding health research has taken place?

In the case of Infectious diseases a Network of researchers working in this field in Central America has been created. They conduct joint research projects and organize a biennial conference to share results. In labor medicine there is also a regional program that facilitates the exchange of results.

12. Additional Comments:

I would like to add a paper that was prepared a couple of days ago for the International Foundation for Science. They are going to publish it in their annual report. You can use it as background information.

"NYU/COHRED Health Research Priorities in Developing Countries Project"
Interview guide – funder perspective

Interviewers: Cayce & Nadia
1. How does (organization) support health research in the following countries?
- the Gambia
- Cameroon
- (country)
- Laos
- Nicaragua: *research cooperation with four universities; program objective is to increase access to healthcare; decentralization of Ministry of Health; healthcare reforms (what is connection of each to health research?) Bilateral research corporation aimed at specific countries; half of staff work on regional corporations in thematic areas;*

Bilateral support: 4 state universities; long history (over 20 years of support); UNA (agricultural), UNAN León (most of support in health sector), UNAN Managua (new program, multi-disciplinary program combining natural resource mgmt with health issues), and technical support to engineering university. Smaller grants to national research council CNO (links between govt and universities).

Most of health support goes to UNAN Leon.
support to 3 programs: each is coordinated by one institution, although there can be more institutions involved in the 3 sub-programs; each sub-program is linked to Swedish institution (often more than one). Number of actors involved in each program.

Goal is to support capacity building at universities. Has evolved from helping students to get Masters degree to now focused on reaching PhD level. Number of PhDs will finalize in the next few years – are coming to a shift or change in capacity level. Much more advanced than before.

Areas in which (agency) supports work:

1) demographic and health research – sub-program in area of methodology, sexuality health, child & adolescent health, adult health, environmental health. G1 8 system – on a long term basis try to follow health status of inhabitants in Leon. This project is closely linked to MOH in Nicaragua. A lot of implementation research as well by the university alone; without as much support from (agency).

2) occupational & environmental health: Works most with pesticides in agriculture; toxicology studies; linking to other group (surveillance system) to look at long-term effects of pesticides in rural areas; people involved in agriculture. Linked to regional initiative called ETLR health effects.

3) Infectious diseases (oldest cooperation). Focuses on dengue fever, diarrheal, parasitic diseases. Also on development of microbial resistance, related to usual medicines. They work

109

in most of the more traditional research on tropical diseases. They can be very good at finding funding from other orgs, since it is such a central area of health research.

More and more, the 3 groups are trying to merge their research and become stronger by using their capacities/competencies together.

- Cuba

24. What influences (agency's) choice of research program areas?

To be able to build capacity for research at 4 universities you have to be there for a long time and continue providing support. Most of the group support was decided 20 years ago to focus on these groups/areas. The groups themselves have identified new areas of research in response to priorities of Nicaragua. Try to be directly involved with coordinators of these programs to respond to their changes in direction – although there haven't been many. They have continued along the same track and are now becoming internationally competitive and able to respond to societal needs.

Also try to look at poverty reduction strategies/policy documents, but mainly based on. (AGENCY) is allowed to make own decisions because it has its own budget. There needs to be agreement within our organization. Research phases are discussed and linked to other phases, but mainly (agency) can take formal decisions on its own and not (national agency). But as time goes on, (agency) should be more and more linked to larger program funding.

25. What efforts have you made to address countries' priorities and needs? Taking into account country priorities, how do you decide what to fund?

* see above

26. When you fund research projects, what exactly are you funding? i.e. employee's salaries, project expenses, other?

To develop research competence; education & equipment, labs & libraries. Do not support salaries; the idea is that for the long-term support it is important for the researchers involved in this support are already employed by the universities. Ensuring that they will remain within the universities; the U's have to take responsibility of the staff. (agency) can support other costs – equipment, travel, subsistence grant (living expenses, etc.) while they are in (country). "Sandwich program" to encourage researchers to go back to Nicaragua with new training.

Consumables, travel, equipment. Counterparts in (country) who are more senior researchers, on occasion salaries paid for counterparts.

27. What level of influence do you feel you have on the health research conducted? If so, how?

Ideally we do not influence much; Nicaraguan researchers should set priorities, so it is more up to them. Little research is done if not funded by outside. Researchers have a tough time

finding time to do their "own" research. We do have an influence, because they may be one of the only funding streams available for research – quite high influence in that respect. Looking at the four universities, they have a high capacity in research that is to some extent due to long-term support from us. But we prefer to give broad support to various disciplines to build up a broad base of competence. Perhaps Nicaraguans could have decided to focus on a specific area, but this is not the case. 20 years ago, perhaps more strategic thinking on both (country)/Nicaraguan side, but has evolved to be more decided upon by Nicaragua.

28. Describe the process of funding a research project.

    a. Once you decide to make the grant, do you help tailor projects according to the funding sources you have, or fully accept an agency's grant proposal as is?

Phases of 4 years – recently offered grant of continuous support through 2008. Begin by doing external evaluation of research institution. Based on evaluation, We get recommendations regarding how support should/should not continue (and if it should continue on the same track or not). Framework recommendations are given regarding what the proposal should contain for the next 4 years. Universities may be encouraged to consolidate activities rather than diversifying (in order to not spread resources too thinly). They are allowed to come up with new research ideas. But do not open up to new universities. Invitation for continuous support was extended to just these 4 universities. Send universities for external reviews to int'l researchers, send comments to institutions who made the proposal. Have discussion about possible changes based on these comments.

    b. If their proposal seems unreasonable, do you help them set realistic goals?

Most institutions are very realistic on their budgets – sometimes 20% reduction in budget, but even using original budget realistic idea of possible research activities. Each year, twice a year, we follow-up and has close discussions. Funds are budgeted in for dissemination; core funding is for PhD students who come to (country) to defend their thesis (dissemination), also try to make special publications (often, these are more development-oriented). How does research link to MOH, for example? This is an issue that is being debated – in Nicaragua, to get information through to other stakeholders is slightly outside our agency. Our mandate is to more directly support research. This process "could be improved a little bit."

29. Approximately what percentage of your organizational budget is dedicated to the following areas of health research:

Of entire budget, 10% goes into Dept. for Research Cooperation. 20% of that 10% goes into health research.

       • development
       • health
       • research
    - developed countries

- developing countries

30. **What would facilitate your funding processes? What would help you to be more effective as a donor at the country-level**?

Administrative capacity – these institutions are quite weak in management of fund. We focus specifically on research, but sometimes has to rethink and support administration to strengthen admin. This could help to make the process more efficient. Also, with overall perspective, coordination of perspectives in Nicaragua –regional cooperation, improved linkages between organizations that are doing similar things.

"NYU/COHRED Health Research Priorities in Developing Countries Project"
Interview guide – country perspective

Interviewer: Cayce
Note taker: Nadia

Biographical information:
* Worked in the 1980's, during the war, in Nicaragua *(Ministry of Health)* and in Guatemala (*Chimaltenango Regional Development Project*); initially as an MD and later as a public health specialist (current position). The school of public health in Nicaragua was created in the 1980's and was primarily focused on epidemiology and strengthening of health systems applying operational research with the Ministry of Health. She is currently a "profesora honoraria" (visiting staff member) the UNAN School of Public Health in Nicaragua (1995) and the Faculty of Medicine of the UNAN Leon (2005).

(University) does a lot of collaborative health research through funding from the EU and the Netherlands NOW/WOTRO.   This research includes biomedical research, but in particular in Latin America the focus is on health systems capacity analysis, human resources for health and capacity building in the broadest sense (civil society, multisectoral approaches, participation in policy-making): training researchers, involving them in programmes that are conducted throughout South America. One particular example is the Health, Poverty, Environment and the Cities network program, another if the Fortsalud programme that involved training and research institutions in Bolivia, Brasil, Colombia, Ecuador and Nicaragua.   The urban health program received funding by the Dutch government and viua UNDP/WHO and is collaborative between centers in each area. The WHO funded the health and environment analyses in Nicaragua (HEADLAMP Health and Environment Analusis for Decision making) and the support to healthy municipalities programme; the EU funded the research proposals on health systems development in Nicaragua, El Salvador; CORDAID (Dutch NGO) supported the inclusion and exchange with Guatemala. Since 1996 the EU has funded health systems research in Nicaragua (and the CA region).

Dr. Barten completed her Phd research in Nicaragua, focusing on an urban health problem: environmental lead exposure of children in low-income settlements of Managua during the 1980s. Massive urban growth took place due to the war in Managua and the informal sector grew to include over 1,000 small cottage workshops that recycled car batteries. As a result they, and the children of Managua, in particular those with increased vulnerability due to malnutrition and poor living conditions, were exposed to lead. The initial research was conducted to map out the problem and to increase the capacity of all stakeholders. In future research, Dr. Barten became more involved in advocacy and awareness work. She pointed out the lack of a linear relationship between policymaking and information- and the need not only to include policy-makers from the very start but to conduct participatory action research in order to increase local capacity of communities.

1. What are the health research priorities in (country)?

They are documented in the National Health Plan, and are related mainly to the functions of the PAHO: prevention and care of the main causes of mortality, child care, prevention and mitigation of natural disasters. Barten believes strongly in the need to influence the

"upstream" social determinants of health and linking research to policy analysis. There is a high priority placed on biomedical research, despite the strong presence of civil society/NGOs in Nicaragua. NGO's do not always have more innovative approaches and are sometimes as ortodox due to influence of donors. CBOs need a greater voice in the face of the Ministry of Health. The current health research approach is fragmented and unisectoral.

1996-2000 participatory action research with approx. 100 CBOs in Nicaragua, El Salvador, and Guatemala. This was an in-depth study to strengthen capacity in relation to health-sector reform.

- **How do you believe that plan links (or could better link) to the health conditions?**

University focuses on capacity building of local researchers and policy makers to negotiate reform based on local analysis and to bring up proposals to inform health sector reforms. More work is needed to bridge the gap between theory and practice. Existing links are the National Development Plan which is focused on eradicating poverty. But these efforts are not linked to health policy.

2. Which internal and external organizations help fund current health research activities in (country)/ (your institution?)?

There is not much health systems research.
- NICA Salud is funded by the Global Fund.
- ASDI corporation of (country) funds research
- USAID – through district health systems
- EU funds collaborative efforts, the school of public health, the (university) Institute for International Health, the Universite Libre de Bruxelles (ULB), the Antwerpen School of Tropical Medicine.
- "sandwich programs" support Phd research, including short trips for researchers to the Netherlands. This support is focused on equity, health policy, health systems and poverty reduction research.

3. How do funders or other entities influence the health research conducted? What level of interaction do you have with the health ministry or other institutions (collaborations)?

There is a joint definition of agendas and different funder approaches. Little research is done regarding equality, the role of social determinants.
The Ministry of Health basically replicates the agendas of donor organizations.

4. Can you describe what kind of health research is conducted, i.e. basic research, communicable, non-communicable, health systems? What is mostly done?

ASDI- epi rsch quant and qual
Health systems
In the academic context- biomedical research on communicable/chronic diseases (always looking at health effects, downstream, as opposed to looking at determinants)
Health policy

5. Can you also describe the challenges you encounter when setting rules, procedures, and regulations?

Big problems we have in order to base priorities on real issues (in particular in attempts to take the community perspective into account); there is often no seed money available in order to do a good project to figure out what are the main research questions, taking into account various stakeholders ie cbos, unis, govts

If draft a proposal among researchers, no funding is available. Established a trust with the university at Nicaragua, trust is important.

European rsch- first one was a horizontal, participatory process, EU enabled us to do that to strengthen the capacity of civil society orgs, an important phas in the research process was to define concepts ie what is the definition of participation – taking into account the different visions, experiences-; There was a lot of opposition of more orthodox researchers- graduatlly more acceptance.

Def of concepts, selection of most major health experiences, and analysis, had a regional conference in Nicaragua, people from local experiences and civil society came

Need to have better negotiation capacity

6. Who are the stakeholders involved at each stage of the research process?

Ministry of health consent, some bureaucratic procedures which can be very lengthy, university, to what extent can we make our research more relevant or excluded from these processes

Healthy municipalities project in Nicaragua to always have reps from NGO and CBO as one of major stakeholders, does not ensure that you will have good end product, but will have?

7. What assessment has been done on your health research capacity? We would like to hear about research priority setting at your institution and overall.

UNAN Leon has been subject by major assessments to the Swedish capacity, health promotions, health systems rsch.

Public health school- part of global fund

8. What is the role of your organization in coordinating external funding?

In 1980s during the war, one photocopy machine for 60 students, but incredible commitment from people to conduct relevant, operational research, although there were very few donors stimulating this research.

School of Public Health/UNAN Leon- the conf on global health there was very limited representation there from Nicaragua- within the ministerial summit

9. How are donor reports regarding health research disseminated publicly?

The international journals tend to be in English, local dissemination is much more difficult, but not always the case. Ensured "lead reports" was distributed to policy makers, but nothing was done, but there is no linear relationship between research and action among the policy makers to enforce action (see previous remarks) – lack of policy coherence is an important problem. Also, cooption of many health professionals and researchers as their own funding may depend on external donors, so critical conclusions tend to be avoided.

10. What coordination or mechanism to exchange information regarding health research has taken place?

Within each project there is a communication mechanism- webpages, pubs, email, meetings
The EU supported research on Health systems development in Central America (1997-2001) was very important, as it promoted a regional and local coordination of the research, ownership by local research institutions and a more horizontal dialogue between european and partners in Central America. However, sometimes, agendas are totally controlled by one European entity, top down process, propose reference framework, the weak capacity of local research to counteract that trend of donor influence research.

11. Additional Comments:

"NYU/COHRED Health Research Priorities in Developing Countries Project"
Interview guide – country perspective

Interviewers: Nadia Ali
Notetaker: Cayce Hill

1. What are the health research priorities in (country)?

- **How do you believe that plan links (or could better link) to the health conditions?**

2. Which internal and external organizations help fund current health research activities at your organization?

COHRED has worked with the (country) to identify priority health research issues

3. Now we would like to find out more about the relative influence of each stakeholder (e.g. foreign funders, national funders-where they exist, ministries of health, other ministries, researchers-medical school and university, health care providers, community) involved on the health research conducted. (note also if specific stakeholders have *no* influence)

- [ ] **How much interaction do you have with the health ministry or other institutions (collaborations)? What level of input does the Ministry of Health have in the research process?**

3. How do funders or other entities influence the health research conducted? What level of interaction do you have with the health ministry or other institutions (collaborations)?

The Department of Health has a health policy group that looks at priorities and subcontracts studies to push that agenda. A study was completed 6 years ago that examined how donor agencies drive policymaking in the (country).

4. Can you describe what kind of health research is conducted, i.e. basic research, communicable, non-communicable, health systems? What is mostly done?

5. Can you also describe the challenges you encounter when setting rules, procedures, and regulations?

There are currently structural changes taking place in the health sector, with regards to health insurance and health financing policies. Recently, more policymaking responsibility has been devolved to the regional level, and more service provision responsibility to the local entities. The local entities are no longer required to report to the national level DOH. This means that local priorities may be different than national priorities, but the situation allows funders and policymakers more latitude and leverage at the local level. Family planning research has been a challenge because the president is not supportive of it, but it can be supported at a local level. For example, the USAID program called LEAD has been directed more at the local level.

Also, as far as documenting health-related activities, health program interventions are undercounted. Likewise, health services are usually not fully counted when research priority decisions are being made.

6. To what extent do funders get involved in the procedures or practices for setting health research priorities and securing funds? Please tell us more about this.

6. Who are the stakeholders involved at each stage of the research process?

Stakeholders meet annually and must include members of civil society (NGOs, etc.). The two primary stakeholders involved in the priority setting process are the Ministry of Health (concentrating on financing and accreditation policies) and the (country) Health Insurance Ccorporation.

7. What assessment has been done on your health research capacity? We would like to hear about research priority setting at your institution and overall.

The ENHR office has recommended a mechanism for reporting health research priorities. This office used to track more information than it currently does.

8. What is the role of your organization in coordinating external funding?

9. How are donor reports regarding health research disseminated publicly?

Mechanisms for dissemination of research outcomes often depends on donor requirements. For example, USAID releases all study outcomes to the public but the World Bank is more selective. More information, from the DOH annual journal reporting on the stakeholder meeting, can be found on the Department of Health website and the (AGENCY) database.

- **Where are the results reported (is access to publications limited to donors or the MOH, or are publications more accessible than this)?**

- **How do others (e.g. researchers, organizations) get access to the reports if they want them?**

10. What coordination or mechanism to exchange information regarding health research has taken place?

SHARED
(AGENCY) database
DOH annual report on stakeholder meeting

"NYU/COHRED Health Research Priorities in Developing Countries Project"
Interview guide – country perspective

Interviewers: Nadia Ali
Notetaker: Cayce Hill

1. Please tell us about your role at the (AGENCY).

2. Is there a formal national health research plan in (country)?

Research plans are generated by the Department of Health (DOH) and (AGENCY). These agencies usually try to collaborate to make their plans consistent.

   •   **If yes, what are the health research priorities?**
DOH priorities usually focus on the most important public health concerns while (AGENCY) is mostly concerned with assisting in the development of the health care industry.

   •   **If no, what should the national priorities be?**

1. What are the health research priorities in (country)?

   •   **How do you believe that plan links (or could better link) to the health conditions?**
DOH should take the effort to consult with the local governments in formulating its health research priorities.

2. Which internal and external organizations help fund current health research activities at your organization?

Most of our health research activities are funded by foreign donors and managed by DOH.

COHRED has funded much our work on tracing the flow of health research funds in the (country) and in identifying priority health research issues.

3. Now we would like to find out more about the relative influence of each stakeholder (e.g. foreign funders, national funders-where they exist, ministries of health, other ministries, researchers-medical school and university, health care providers, community) involved on the health research conducted. (note also if specific stakeholders have *no* influence)

A significant amount of health research activity is supported by foreign donors. Most follow donor priorities, although some donors do take the time to consider government priorities, especially if funding is through a loan. (AGENCY) follows a priority-setting process that is initiated using broad-based consultations that include community-based organizations and institutions. The resulting priorities guide the allocation of (AGENCY) research funds.

☐ **How much interaction do you have with the health ministry or other institutions (collaborations)? What level of input does the Ministry of Health have in the research process?**

We work closely with DOH counterparts if our research is funded by donor funds managed by DOH. The process of collaboration is usually defined by a formal system of reporting and oversight that is often a part of the engagement contract. A multi-disciplinary research project usually involves a number of collaborating institutions which are mandated to work cooperatively in pursuit of project objectives.

3. How do funders or other entities influence the health research conducted? What level of interaction do you have with the health ministry or other institutions (collaborations)?

The Department of Health has a health policy group that looks at priorities and subcontracts studies to push that agenda. A study was completed 6 years ago that examined how donor agencies drive policymaking in the (country).

4. Can you describe what kind of health research is conducted, i.e. basic research, communicable, non-communicable, health systems? What is mostly done?

Most research is done in connection with a program on service delivery. This is usually driven by the need to formulate cost effective ways of providing interventions to address pressing public health issues. This tendency is reinforced by a recent decision of the Ministry of Health to pursue a health sector reform agenda. As a result, a significant amount of resources are devoted to health systems research.

5. Can you also describe the challenges you encounter when setting rules, procedures, and regulations?

There are currently structural changes taking place in the health sector, with regards to health insurance and health financing policies. Recently, more policymaking responsibility has been devolved to the regional level, and more service provision responsibility to the local entities. The local entities are no longer required to report to the national level DOH. This means that local priorities may be different than national priorities, but the situation allows funders and policymakers more latitude and leverage at the local level. Family planning research has been a challenge because the president is not supportive of it, but it can be supported at a local level.. For example, the USAID program called LEAD has been directed more at the local level.

Also, as far as documenting health-related activities, health program interventions are undercounted. Likewise, health services are usually not fully counted when research priority decisions are being made.

6. To what extent do funders get involved in the procedures or practices for setting health research priorities and securing funds? Please tell us more about this.

7. Who are the stakeholders involved at each stage of the research process?

Stakeholders meet annually and must include members of civil society (NGOs, etc.). The two primary stakeholders involved in the priority setting process are the Ministry of Health (concentrating on financing and accreditation policies) and the (country) Health Insurance Corporation.

7. What assessment has been done on your health research capacity? We would like to hear about research priority setting at your institution and overall.

The ENHR office has recommended a mechanism for reporting health research priorities. This office used to track more information than it currently does.

8. What is the role of your organization in coordinating external funding?

9. How are donor reports regarding health research disseminated publicly?

Mechanisms for dissemination of research outcomes often depends on donor requirements. For example, USAID releases all study outcomes to the public but the World Bank is more selective. More information, from the DOH annual journal reporting on the stakeholder meeting, can be found on the Department of Health website and the (AGENCY) database.

- **Where are the results reported (is access to publications limited to donors or the MOH, or are publications more accessible than this)?**
Results are usually reported during dissemination workshops. However, whether one is held usually depends on funder requirements and the project design.

- **How do others (e.g. researchers, organizations) get access to the reports if they want them?**
Reports are usually accessed through the agency conducting the research or the donor agency funding it. Most agencies allow reports to be reproduced upon request. (AGENCY) usually tries to upload copies of research outputs on to their website. The same holds true for SHARED Asia-Pacific.

10. What coordination or mechanism to exchange information regarding health research has taken place?

SHARED
(AGENCY) database
DOH annual report on stakeholder meeting

"NYU/COHRED Health Research Priorities in Developing Countries Project"
Interview guide – country perspective

Interviewer: Cayce Hill
Note taker: Nadia Ali

1. Please tell us about your role at the (AGENCY).

I head the research management and development division of the (country) Council for Health Research and Development. My role is to oversee the planning and formulation   (in collaboration and in consultation with various stakeholders) of the health research agenda, manage the day to day activities of project officers who monitor funded projects, and direct funding allocation, monitoring and evaluation of funded projects. I am also responsible for directing technical assistance/support to research projects and programs of local institutions, and directing the secretariat functions of the national ethics committee and one of the technical working groups of the (country) National Health Research System.

2, Is there a formal national health research plan in (country)?

Yes, there is a national health research plan and this was set in 1999   We are currently planning the formulation of a national health research plan (for 2005-2010). But we have been already been provided general and broad directions in the country's Medium Term (country) Development Plan which was launched late last year (2004).

Right now we are still in the planning stage together with our major partners the Department of Health and the Commission of Higher Education in determining the strategies to use in the priority setting activities in the different regions of the country and the formulation of a national health research agenda which will address the Medium Term (country) Development Plan, the Millennium Development Goals and other initiatives set by the country.

- If yes, what are the health research priorities?

The general directions in our Medium Term (country) Development Plans indicate that we have to focus on biomedical concerns and on operational/service delivery and policy concerns. Broadly, these biomedical concerns include natural products development for priority health concerns, development of pharmaceutical products for priority health problems, development of other technologies and processes for priority health problems and the development of telehealth. The operational/service delivery/policy concerns are in consonance with the country's Health Sector Reform Agenda and the broad areas for research include health care financing, local health systems development, public health programs, standards and regulations and hospital management.

- If no, what should the national priorities be?

    What are the health research priorities in (country)?

124

- How do you believe that plan links (or could better link) to the health conditions?

2. Which internal and external organizations help fund current health research activities in (country)/ (your institution?)?

There are several internal organizations that fund current health research activities in the country. These include our organization, The (country) Council for Health Research and Development and our mother agency, the Department of Science and Technology , fhe Department of Health, the Commission of Higher Education and other government agencies provide some research funds. Some state universities, private academia, foundations, non-government organizations have their own research funds. A few local government units and some local pharmaceutical companies also fund some health research activities.

There are also several external organizations that fund current health research or health research related activities. These include international organizations like WHO, WB and, Asian Development Bank. Other international donors like JICA, JSPS (both Japanese), GTZ (German Agency) , USAID, AUSAID (Australian), Fogarty International, and other international non-government organizations provide some funding for health research related activities.

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3. Now we would like to find out more about the relative influence of each stakeholder (e.g. foreign funders, national funders-where they exist, ministries of health, other ministries, researchers-medical school and university, health care providers, community) involved on the health research conducted. (note also if specific stakeholders have *no* influence)

Foreign funders which are based either internationally or have their local offices fund projects within their set of priorities which are in line with the country's priorities too. Non-government agencies in particular have their own agenda and fund projects which suit their needs as well as country needs.

National funders which are based in the national capital provide funds to national priorities. Some local funders like the (country) Council for Health Research and Development, the Department of Health and the Commission on Higher Education provide funds for researches conducted at the regional (sub-national) levels to address the priorities of these areas. The local pharmaceutical or food companies fund researches within their priorities. Local offices of multinational pharmaceutical companies also provide some support to projects within their set of priorities. Some schools and state universities also provide funds for researches and these are

125

in line with the institutional, sub-national or national research agenda set by different sectors (health, agriculture, fishery, industry and energy etc).

These funding agencies provide the directions on what types of researches are to be supported by their respective agencies.

Researchers in medical schools and university and health care providers are involved as health researchers and also influence the design and implementation of research. The community is also involved in the research process either as one of the partners of research (in the case of participatory action researches) or as subjects of research in some cases.

How much interaction do you have with the health ministry or other institutions

(collaborations)? What level of input does the Ministry of Health have in the research process?

The Department of Health plays a critical role in the research process. The department's program officers are consulted and serve as resource persons in the review process. We have to make sure that projects are attuned to the priorities of the health department and are endorsed and approved by the head of the program even before the project is reviewed by the Governing Council where the Minister of Health (or his representative) sits as the co-chair.

At the sub-national or regional level, the health research projects are approved by the regional health offices and aligned with the regional or national agenda. In the case of 5 (of the 16) regions of the country which have an organized committee for health research, the regional health director sits as chair or one of the major officers of the committee. The regional committee (composed of several region based experts) reviews and approves the implementation of health projects submitted by region based experts. These projects have to be attuned to the regional agenda that has been set by the committee (through consultations).

4. Can you describe what kind of health research is conducted, i.e. basic research,

communicable, non-communicable, health systems? What is mostly done?

There are basic and applied researches conducted in the country. We have researchers on communicable and non communicable diseases, We have researches focusing on natural products development, herbal medicine, food fortification, food, nutrition, environmental health and occupational health, diagnostics and biologicals. There are also studies on health systems and health policies and devolution of health services and health delivery related concerns.

Most researchers have been operational in nature related to health service delivery or health systems.

5. Can you also describe the challenges you encounter when setting rules, procedures, and regulations?

The challenge with rules and regulations is implementing these and ensuring that all abide.

The challenge in developing procedures is to be flexible to account for differences across cultures and conditions.

6. To what extent do funders get involved in the procedures or practices for setting health research priorities and securing funds? Please tell us more about this.

I can only talk about our agency which sets the national agenda and provide funds for researches especially those in the regions. We are involved in the priority setting process by giving the expert a terms of reference which describes her/his duties and what we expect in the consultation process and in the final output. We are often present in these consultations to facilitate discussions. We only provide some inputs in the discussions but we leave the expert to decide what technique (i.e key informant interview, survey, round table discussion or workshop) to use in generating the research priorities. We require a consultation process to take place with all stakeholders from the public, private sectors, academe, NGO and people organizations (representing the communities), local governments and funding agencies to input / validate the set of priorities.

Funds for priorities are provided by government (in our case) based on the programs we have identified for funding. The budget requirements pass through congressional and senate committees.

7. Who are the stakeholders involved at each stage of the research process?

All stakeholders are involved in the priority setting process as participants in the various consultations that craft the research agenda.

The researchers which are based in academia, research institutions or non-government organizations serve as implementing or proponent agencies that propose research projects (based on the set priorities) and implement these projects. The researchers are involved in the conceptualization, design and implementation of the research protocol. They are also responsible in the dissemination of the research results to the intended end-users (i.e. public, health managers, health industry)

The donor or funding agencies are involved in funding, monitoring and evaluation of the funded projects and providing the venue for public dissemination in a public forum (with health managers and in both electronic and conventional publications). The donor agency as in our case also facilitates the transfer of technology (for technology based researches) if the implementing agencies have no technology transfer system in place.

8. What assessment has been done on your health research capacity? We would like to hear about research priority setting at your institution and overall.

There have been surveys done earlier on health research capacity. There is a technical working group on capacity development of the (country) National Health Research System which looks into this concern.

Our institution is a public agency, we set priorities for the country but we do not implement researches. We contract our researches to the academe, private and public research institutions or to non-government agencies that provide us scientifically meritorious and ethical research protocols.

The priorities of the Council are based on regional consultations that have been processed, consolidated and validated to generate the national health research agenda. These priorities are influenced by initiatives of the government and the country like the Medium Term (country) Development Plan, the Millennium Development Goals, the Health Sector Reform Agenda, the Science and Technology Agenda and other initiatives like gender and development, and sustainable development.

The Council sets and advocates (in collaboration with the stakeholders) for the national research agenda for the whole country. However, because of limited funds the Council is inclined to support part of the national agenda that is more supportive of the science and technology sector since (AGENCY) is one of the agencies of the Department of Science and Technology. The Department of Health provides support funds for projects within their priorities (e.g. health sector reform priorities) too.

9. What is the role of your organization in coordinating external funding?

We manage external funds for health projects. These can be international or local funding.

For bilateral or multilateral agreements (which pass through government) we prepare capsule proposals for possible assistance, identify priorities for capability development and priority areas of the country in the health science and technology sector.

We are currently working with the Department of Health and the National Health Institutes, (country) as part of the (country) National Health Research System to mobilize resources and seek external research funds for the country. Discussions with possible donors or sources of research funds have already started.

10. How are donor reports regarding health research disseminated publicly?

These are usually done in a public forum or through publications or both. Results of completed projects are always reported to the end-users (like the health managers, public or health industry or cooperating or donor agency)

Access to publications may be done by writing to the donor agency or to the proponent. In some cases, where intellectual property rights or issues are a concern, access may have to be limited to non-proprietary issues.

11. What coordination or mechanism to exchange information regarding health research

has taken place?

We have the Health Research Development Information Network a local database of local health researches. The data come from the various institutions with health research related activities in the country including information provided by students and faculty. This initiative started before the SHARED initiative.

With the (country) National Health Research System, a more efficient sharing of research information will be addressed. The technical working group on research utilization has identified strategies how these can be achieved.

12. Additional Comments:

(AGENCY) is one of the sectoral councils of the Department of Science and Technology. (The other councils are on agriculture and forestry, marine, energy, industry and advanced sciences)

(AGENCY) is mandated by an executive order to oversee the health research activities of the country. Hence the Council sets the agenda in the country (in consultations with the stakeholders and in different regions of the country), provide funds for research projects (at the national and sub-national levels), human resource development (i.e. scholarships, trainings and fellowships) and research information and utilization (i.e publications, databases, discussion groups, websites, public forum and technology transfer services).

Although the (AGENCY) is not an agency of the Department of Health, we work closely with the Department in health research or related concerns. Officials of the Department of Health form part of our pool of experts or consultants and are members of our technical or review committees. The Secretary of Health sits as chair of the Governing Council of (AGENCY).

Both the Department of Health, the (AGENCY) are the prime movers of the (country) National Health Research System.

"NYU/COHRED Health Research Priorities in Developing Countries Project"
Interview guide – country perspective

Interviewer: Nadia Ali
Note taker: Cayce Hill

1. Please tell us about your role at the University.
Professor of Clinical Epidemiology and Medicine (Infectious Diseases)—teach in the M.S.
Clinical Epidemiology program (research design & methods, research ethics), thesis adviser,
attend clinical conferences and do clinical rounds; sit in the Ethics Review Board of the
University's National Institutes of Health.

2. Is there a formal national health research plan in (country)?
   • If yes, what are the health research priorities?
The Dept. of Health, Republic of the (country), focused on research priorities for Health
Sector Reform in 2002 – 2004. For CY 2004, these priorities were:
1. Assessment of allocation and utilization of health budgets at the Local Government Unit
level
2. Assessment of community-based healthcare financing mechanisms
3. Feasibility studies on health reinsurance
4. Functionality, replicability and sustainability of Inter-local Health Zones
5. Impact assessment of continuous quality improvement mechanisms in hospitals
6. Cost-effectiveness of networking activities among hospitals
7. Assessment of health care waste characterization and management practices
8. Impact of clinical practice guidelines
9. Burden of disease and quality of life studies on accidents, injuries and disabilities

The (country) Council on Health Research and Development (AGENCY)) has also
developed its own national HR plan.

In 2003, the Dept. of Health and (AGENCY) forged a Memorandum of Understanding in
order to better integrate the plans and programs of these two agencies and established the
(country) National Health Research System.

   • If no, what should the national priorities be?

131

3. What are the health research priorities in (country)?

The priorities were set through consultations with ENHR in 1991. ENHR's main "client" at that time was the Ministry of Health, and work was focused on how to improve the service and delivery of the MOH.

  • **How do you believe that plan links (or could better link) to the health conditions?**

4. Which internal and external organizations help fund current health research activities in (country)/ (your institution?)?

World Bank, Ministry of Health, (country) Council on Health Research for Development (has its own annual budget for biomedical research), COHRED (technical assistance for ENHR office)

5. How do funders or other entities influence the health research conducted? What level of interaction do you have with the health ministry or other institutions (collaborations)?

Sometimes funders have too much influence. The calls for proposals are usually in certain areas of research. Once salaries for personnel are taken from MOH research funds, there is not much left in the budget for actual research. Sometimes the mandate of a certain organization falls in line with the calls for proposals, though (e.g. TDR).

The faculty in the University of the (country) Department of Clinical Epidemiology are consulted as experts by the Ministry of Health and are commissioned to do specific projects that the Ministry wants.

4. Can you describe what kind of health research is conducted, i.e. basic research, communicable, non-communicable, health systems? What is mostly done?

Most calls for proposals focus on tropical disease & health systems research. The (AGENCY) funds biomedical research, but there is a lack of systems funding by the Ministry of Health.

5. Can you also describe the challenges you encounter when setting rules, procedures, and regulations?

Funding base is in adequate in the (country). Capacity is limited – resources to support human resources, infrastructure, and research "culture" are needed. More community-based and local projects are lacking, Need more funding for social science work, rather than biomedical. The utilization of health research is important – the MOH awareness of this is greater than it was in earlier periods. Each change in political administration brings changing priorities.

6. To what extent do funders get involved in the procedures or practices for setting health research priorities and securing funds? Please tell us more about this.

Funders are invited to national research priority setting workshops and exercises and participate in the stakeholder consultations. The workplans or calls for proposals that the funding agencies have also developed within their respective agencies are also a source of inputs in the priority setting exercises.

7. Who are the stakeholders involved at each stage of the research process?

The stakeholders involved include: Researchers, Department of Health (uses own government funds as well as loans and grants from various bilateral/multilateral agencies like the World Bank and USAID), Department of Science & Technology (have their own council for health research: The (country) Council for Health Research and Development, or (AGENCY)); (AGENCY) (funds biomedical research), civil society including CBOs, professional societies (but the medical sector is still much stronger).

8. What assessment has been done on your health research capacity? We would like to hear about research priority setting at your institution and overall.

SHARED and (AGENCY) databases. The (AGENCY) has done two assessments of the health research capacity in the country.

9. What is the role of your organization in coordinating external funding?

No role.

10. How are donor reports regarding health research disseminated publicly?

About 20% of research reports get into international literature. Local literature is made public but is not peer reviewed, so quality is inconsistent. The MOH and universities have volumes of unpublished studies.

- **How do others (e.g. researchers, organizations) get access to the reports if they want them?**

By writing directly to the authors/investigators and requesting for a copy. Some local journals have the articles on the web. There are some medical libraries and learning resource centers that have journals and/or website access to journals. For the gray literature, one just has to go to the university libraries or directly to the Ministry of Health where consultants' reports are stacked/filed.

There is also an Annual Health Research Forum sponsored by the (AGENCY) and Ministry of Health (country) National Health Research System) to disseminate findings from selected research programs/studies of national importance.

11. What coordination or mechanism to exchange information regarding health research has taken place?

In 1991 the Ministry of Health committed resources to ENHR (not much – see documentation of this period to find out about studies that were carried out). Information from Centers of Excellence and institutions has been combined in an attempt to make a regional database. One problem is that researchers do not always share their work.

In 2003, the Ministry of Health and the (AGENCY) forged a Memorandum of Understanding creating the "(country) National Health Research System" so that there would be better integration of health research plans, programs and activities of these 2 agencies.