

# **Establishing health system financing research priorities in developing countries using a participatory methodology**

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## **Executive Summary**

*Background:* Donor funding for health systems financing research (HSFR) is inadequate and is often poorly aligned with national priorities. Previous priority setting exercises have generally been "top-down", involving a limited number of technical experts, or have failed to incorporate HSFR issues. And where agendas for Essential National Health Research have been established, they have not been consolidated into a clear agenda for donors. This paper describes work carried out by the Alliance and its partners to generate consensus about a core set of research issues that urgently require donor attention in order to facilitate research and policy development.

*Methodology:* There were three key inputs into the priority setting process: key informant interviews with health policy makers, researchers, community and civil society representatives across twenty-four low and middle income countries in four regions (Latin America, East Africa, South- East Asia and Middle East/North Africa); synthesis of relevant literature reviews to identify research completed to date; and inputs from 12 key informants (largely researchers) at a consultative workshop.

*Findings:* A list of nineteen priority research questions emerged from key informant interviews across the twenty-four low- and middle-income countries. While each broad research topic was common to several countries or regions, the more specific 'sub-topics' of interest varied considerably. The overview of systematic review provided little insight into the relative importance of the research questions. Many of the questions received little or no attention in the review literature. Even where questions had been addressed (or partially addressed) by the review literature, the authors of the review papers generally suggested that additional primary, or research of higher quality, was still required. However, this overview of reviews was instructive in showing which health financing topics have had comparatively little written about them, despite being identified as important by key informants. At the consultative workshop, a group of 12 researchers refined and ranked the priority research questions. The five top-ranked questions were as follows:

1. How do we develop and implement universal financial protection?
2. What are the pros and cons of the different ways of identifying the poor?
3. To what extent do health benefits reach the poor?
4. What are the pros and cons of implementing demand-side subsidies?
5. What is the cost-effectiveness of service delivery models and health systems strategies?

*Conclusions:* It is hoped that this work on HSF research priorities (along with similar work being conducted on human resources for health and non-state sector priorities) will complement calls for increased health system research and evaluation by providing concrete, specific suggestions as to where new and existing research resources can best be invested. The identified list of high priority, tractable HSF research questions are being communicated to research funders through Alliance HPSR publications and advocacy work, in order to seek to influence global patterns of HSF research funding.

## Introduction

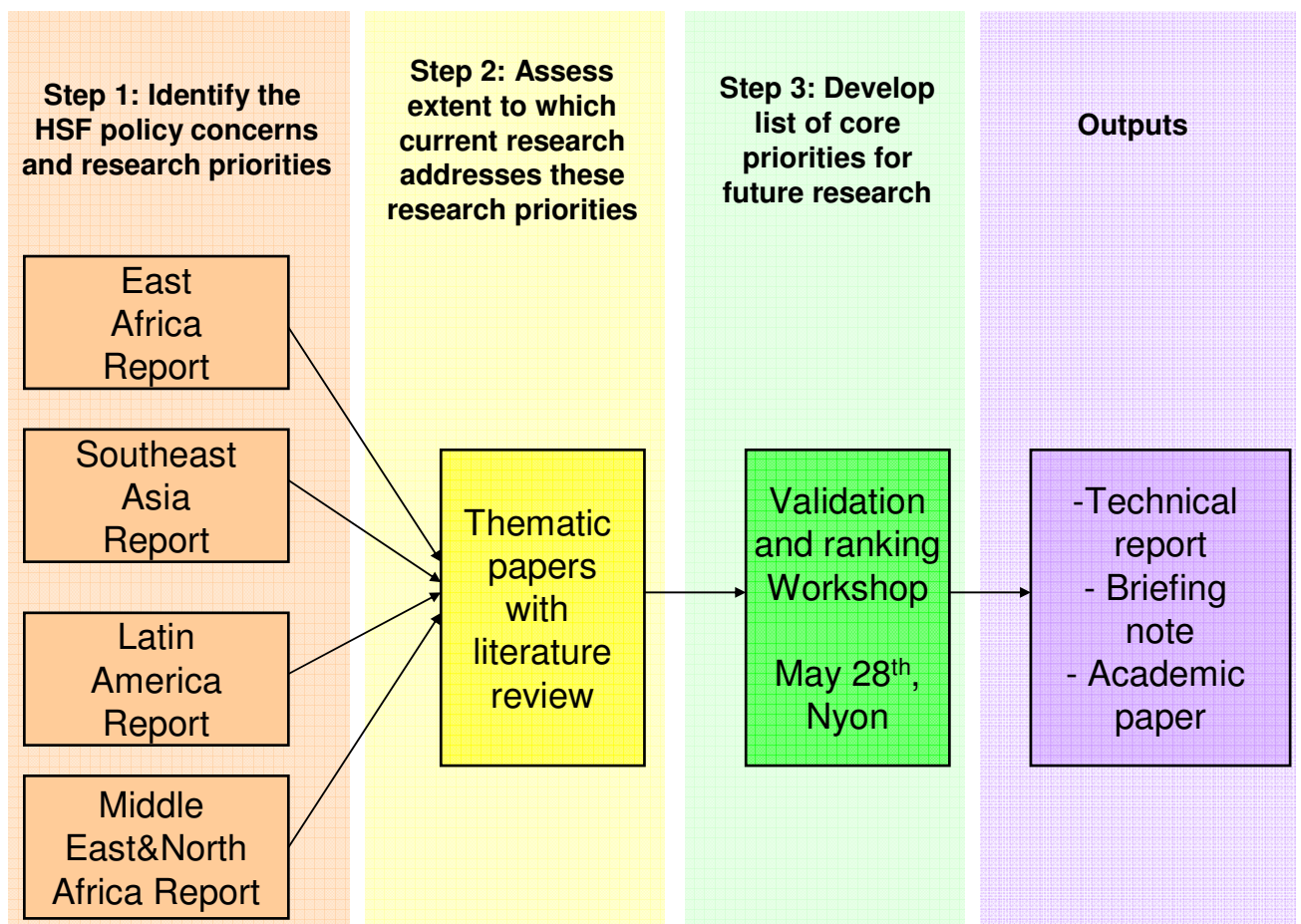
While it is clear that there is an urgent need for a more focused and highly tailored research agenda to address the specific questions facing policy makers in developing countries, donor funding for health system financing (HSF) research has been often poorly aligned with national priorities. Previous priority setting exercises have generally been "top-down", involving a limited number of technical experts, or have failed to incorporate HSF issues. And where agendas for Essential National Health Research have been established, they have not been consolidated into a clear agenda for donors. To advance this area of health policy and systems research related to HSF issues, the *Alliance for Health Policy and Systems Research* and its partners developed a work program to generate consensus about a core set of research issues that urgently require attention in order to facilitate policy development. The paper has the following three specific objectives:-

1. To identify the HSF policy concerns and research priorities of key stakeholders in low and middle income countries;
2. To assess the extent to which existing HSF research addresses these policy concerns and research priorities;
3. To develop a preliminary list of core research priorities that require urgent attention to facilitate policy development.

## Methodology

There were three key steps in this priority setting process, corresponding to the three objectives (**Figure 1**): (1) key informant interviews with health policy makers, researchers, community and civil society representatives across twenty-four low and middle income countries in four regions (Latin America, East Africa, South- East Asia and Middle East/North Africa) leading to a series of regional reports; and (2) overview of relevant literature reviews to identify research completed to date. Inputs from steps 1 and 2 were then discussed at a workshop of experts in the field of HSF research for ranking of the research issues, and brainstorming around the top-ranked issues.

**Figure 1. Priority setting process**



### *Regional reports*

The Alliance competitively awarded grants to four organizations in different regions. Investigators in all four regions (representing 24 countries) conducted literature reviews of both published and 'grey' literature and key informant interviews among policy makers,

researchers and community and civil society representatives.<sup>1</sup> The precise methodologies varied between the four regions and are summarized in **Table 1**.

**Table 1. Methodologies used in four regional case studies**

Region	East Africa	Southeast Asia	Latin America and the Caribbean	Middle East and North Africa
Regional hub	Makerere Institute of Social Research, Makerere University, Uganda	National Institute of Health Research and Development, Jakarta, Indonesia	Bitrán & Associates, Chile	American University of Beirut, Lebanon
Countries included	Tanzania Uganda	Indonesia Thailand Malaysia	Chile Peru Suriname El Salvador Bolivia Argentina Dominican Republic Costa Rica Nicaragua Panama	Algeria Egypt Jordan Lebanon Morocco Syria Tunisia Palestine Yemen
Literature review	Documents from: - government - multilateral and bilateral agencies - private health sector - research institutes	Documents from: - government - "regional agencies"	Scientific and grey literature, based on search of select databases and websites, restricted to documents produced 96-07	- Published reports - Documents from websites of "professional institutions and ministries of health"
Key-informant interviews	<u>Elite interviews:</u> - MoH officials - heads of depts and programmes <u>In-depth interviews</u> - heads of special programs/desk officers - heads of sections - heads of private facilities/NGOs - heads of research institutes (n=17 in Tanzania, 35 in Uganda)	"Officials from identified national institutions / units / organizations and regional or international organizations" - 13 to 25 respondents per country	In each country: - 7 policy makers - 2 researchers	Representatives of: - public sector - health professionals groups - academia - civil society groups, private sector, NGOs, faith-based organizations - Consumers
Categories investigated	1/ health policy concerns	1/ important current health	1/ current policies 2/ desired policies	1/ policy concerns 2/ policy priorities

<sup>1</sup> Regional authors were meant to summarize previous health research priority setting exercises in their region, and to highlight any HPSR issues that emerged. Unfortunately, this yielded little information of use to our study. In some regions and countries, relevant literature (grey or published) was extremely scarce (e.g. MENA). Even in countries where priority setting has been carried out (e.g. Malaysia and Tanzania) HPSR issues are dealt with using 'broad brushstrokes', alongside the many biomedical research issues. In a national priority setting exercise in Tanzania, for example, "health system research" and "training of health personnel in demanding areas" were included among the 12 priority research issues.

Region	East Africa	Southeast Asia	Latin America and the Caribbean	Middle East and North Africa
	2/ health research priorities	topics 2/ proposed health policy topics 3/ current information needs 4/ emerging research priorities	3/ current research 4/ desired research	3/ research questions
Were respondents presented with a list of policy / research options	No	Yes	First asked an open-ended question, but then presented with list for ranking exercise	Yes - presented with the first four (broad) categories of the conceptual framework

The data were analysed by the lead author (MKR) in several phases. First, regional reports were read, and health financing policy concerns and research priorities were extracted, and categorized using a conceptual framework modified from that of Kutzin (1) (**Annex 1**). Second, cross-cutting policy concerns and research priorities common to at least three of the regional reports were identified. Third, specific policy concerns and research priorities, as expressed by interview respondents, were extracted from the available country-level reports (Middle East and North Africa, and East Africa). This last step was intended to gain some sense of the consistency or breadth of topics included under any one of the cross-cutting policy concerns or research priorities.

#### *Systematic review and mapping of literature reviews*

**Search strategy.** The literature review was conducted in order to map out the current supply of HSF research, and to assess the extent to which existing research addresses the priorities expressed in key informant interviews. Our literature review was limited to existing systematic reviews. We defined systematic reviews as syntheses of most any kind of research literature -- primary, secondary, qualitative, quantitative, descriptive, experimental -- but with a description of the database(s) searched and some description of the criteria that were used to include or exclude papers. We searched Medline through the Ovid interface to generate a list of possible systematic reviews on health financing topics. Our search strategy consisted of three parts that were used in combination with each other: 1) search terms designed to generate a list of possible systematic reviews, 2) search terms designed to retrieve articles on health financing topics, and 3) search terms designed to restrict the Medline search to developing countries. We used search terms defined by Lavis *et al.* to detect "systematic reviews" (see **Annex 2**) and broadened this using a validated search strategy developed by Montori *et al.* so as to increase the sensitivity of the search (2, 3).<sup>2</sup> To retrieve articles on health financing topics, we used

<sup>2</sup> The study by Lavis *et al.* was designed to improve policy makers access to systematic reviews on the effects of governance, financial, and delivery arrangements, by identifying and coding these reviews according to a taxonomy that reflects the topics available. Part of their search strategy focused on identifying systematic reviews, and another focused on identifying financial topics, so we used this strategy as a starting point. Some of the search terms overlapped with the search strategy developed and validated by Montori *et al.*, so we combined the search strategies to create a more sensitive search.

terms developed by the Cochrane Effective Practice and Organization of Care (EPOC) group, as used previously by Lavis *et al.* to locate systematic reviews of effects on governance, financial and delivery arrangements. We included only the terms relevant to health financing topics, and added several terms to increase sensitivity to some health financing topics that may not be picked up by the original search (**Annex 2**). To select articles particular to developing countries, we again used terms from the Lavis *et al.* study that focused on publications concerning particular geographic areas or country development status (**Annex 2**). The three parts of our strategy were combined together using the 'AND' command to select only articles in all three categories, resulting in 1,548 citations. The search included all articles available in Medline through Ovid on April 30<sup>th</sup>, 2008.

Gray literature. In addition to our Medline search, we conducted a limited search of the gray literature. We searched five main websites: World Bank, ELDIS, OECD, Equinet, and WHO. Within the WHO website, we paid particular attention to the Commission on Macroeconomics and Health publications, the WHO/EURO Health Evidence Network website, and the Commission on Social Determinants of Health website. We searched these websites using combinations of the terms "health financing", "literature review", "synthesis", "review" or "cost effectiveness". Where publications were sorted by type, we browsed the category "Health Financing". We also hand searched the Disease Control in Developing Countries books (4, 5).

Selection criteria. We scanned the titles, abstracts, or full text of the 1,548 Medline citations and citations from the gray literature using three inclusion criteria and one exclusion criteria. To be included, the reviews must: 1) Provide indication that a search of a literature database had been conducted, 2) Include some selection criteria that explains what sorts of articles were accepted, and 3) Include some discussion of a health financing topic, not necessarily as a primary focus. Articles were excluded if they reviewed literature from a single, high-income country; all cross-country reviews were included, as were reviews from single low- or middle-income countries. Articles were excluded if they could not be included based on the abstract alone, and full text was not available through the libraries of McMaster University, the London School of Tropical Hygiene and Medicine, or the World Health Organisation. All Medline citations were screened by two independent reviewers (MKR, TJJ). Disagreements were resolved by consensus and retrieval of full text. Of the 1,548 Medline citations, based on initial screening there was consensus that 31 reviews be included, and after discussion about reviews on which the two screeners initially disagreed, there was consensus that 45 reviews be included. 16 reviews were included from the gray literature, resulting in 61 reviews.<sup>3</sup> Additionally, 42 reviews originally identified and coded by Lavis *et al.* into three categories (financial arrangements, pricing and purchasing, or the non-state sector's role in financing

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<sup>3</sup> Two additional reviews meeting our inclusion criteria were identified by external reviewers. For now, we restrict our results to papers retrieved from our through primary sources (Medline, Lavis *et al.* and select grey literature sources) in the interest of transparency and replicability.

healthcare) were also included,<sup>4</sup> so that a total of 103 systematic reviews on health financing topics were selected for coding (**Figure 2**).

Coding. We coded the 103 systematic reviews according to the primary and secondary health system financing themes. As well, we extracted from each paper the primary objective, and any suggestions made by the authors as to important topics for future research. Articles were excluded at this stage if: 1) it was a Cochrane review marked as "withdrawn" (4 papers); 2) on closer examination of the paper, it became apparent that it did not meet the inclusion criteria either because of methodological weaknesses (3 papers) or because the desired health financing topics were not touched upon (4 papers); 3) the focus of the study was a single high-income country (2 papers); or 4) data provided in title / abstract were not sufficient to code the paper and the full text of the paper was not available (1 paper).

Caution was exercised in comparing the results of the three different searches. The Medline and grey literature searches aimed to identify systematic reviews of all kinds (including reviews of descriptive / qualitative, non-effects studies) covering all of the research topics raised by regional key informants and with a focus on literature relevant to developing countries. The Lavis *et al.* search employed a narrower definition of "systematic review" (focusing on quantitative reviews about comparative effectiveness), did not cover all of the same research topics (cost-effectiveness, for example, was excluded), and it did not have a developing-country focus.

### *Consultative workshop*

A group of twelve experts in health economics and financing research were assembled on the 28<sup>th</sup> of May, 2008, in Nyon, Switzerland (**Annex 3**). The experts were purposively selected to represent a diverse group of countries / regions and research interests. Six of the twelve respondents are based at institutions in low- or middle-income countries. Four of the participants are based at universities, four at international organizations (the World Bank and WHO) and the remaining four work with government (one) and private or non-profit research institutions (three). In advance of the workshop, participants were provided with a draft paper based on the key informant interviews and the overview of reviews, and presenting an (unranked) list of emerging priority research questions. At the workshop, participants: (1) discussed the list of priority research questions; (2) decided on the criteria (nature and relative weighting) to be used in ranking the research questions; (3) ranked the research questions based on three criteria -- answerability<sup>5</sup>, potential impact on health and equity, and extent to which relevant

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<sup>4</sup> The paper by Lavis *et al.* was based on searches of two databases: (1) Medline (OVID); and (2) The Cochrane Library. The additional 42 papers identified by Lavis *et al.* were largely from the Cochrane Library.

<sup>5</sup> Answerability was understood by workshop participants to mean "the likelihood that the research question can be answered". Other groups / authors have used similar criteria, expressed in slightly different ways. For example, COHRED's Working Group on Priority Setting assessed (among other things) "feasibility of carrying out the research in terms of the technical, economic, political, socio-cultural and ethical aspects". The Ad Hoc Committee on Health Research assessed prioritized HPSR issues according to "Whether the research proposed will advance the current state of our knowledge about the issue, either globally or

research is lacking, and (4) discussed in some detail the kinds of research that could best address the four questions that ranked highest.

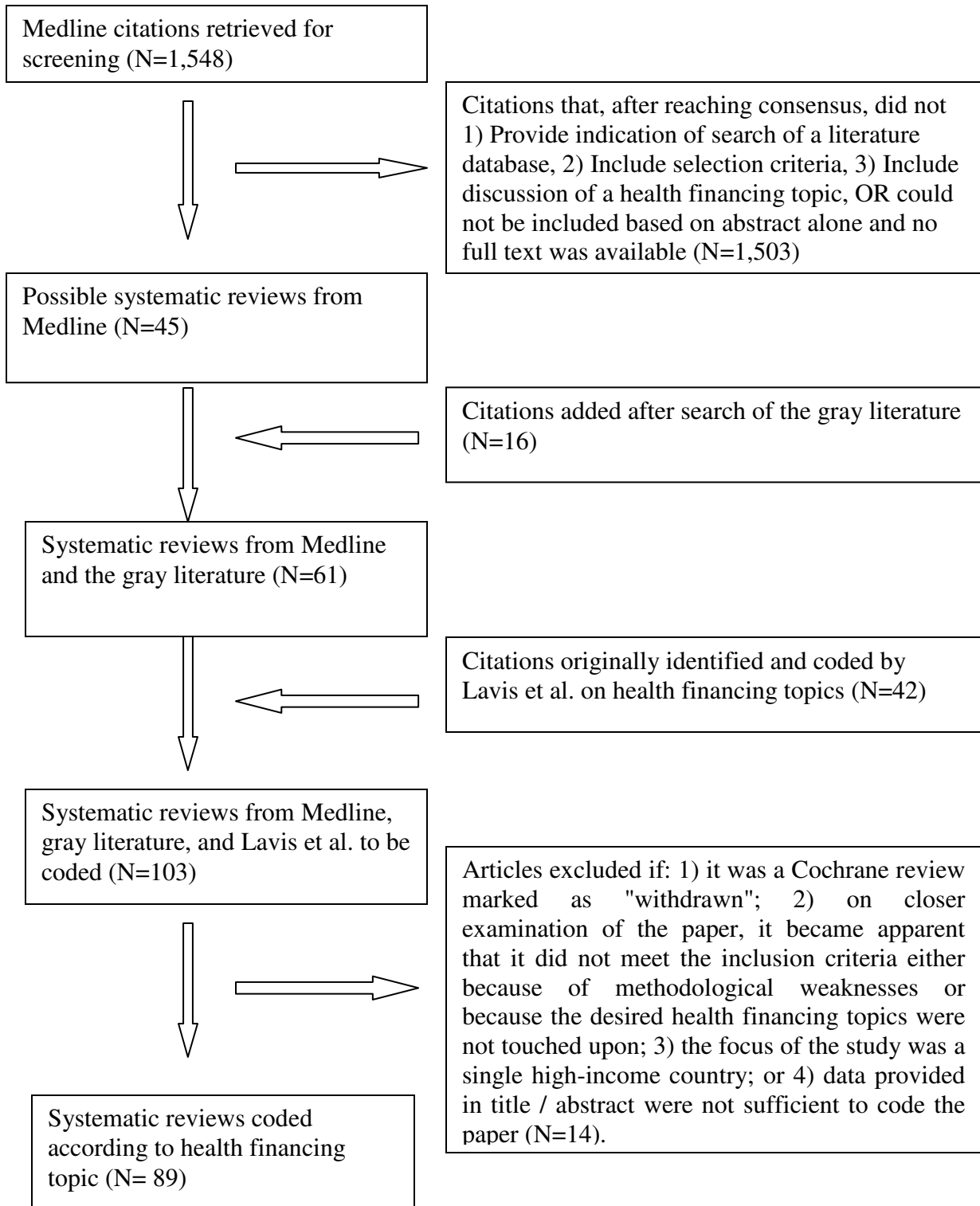
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locally" and "The extent to which there is an appropriate match between the issues being investigated and the research methods to be used".

6. Working Group on Priority Setting. Priority setting for health research: lessons from developing countries. *Health policy and planning*. 2000 Jun;15(2):130-6.

7. Ad Hoc Committee on Health Research Relating to Future Intervention Options. Investing in health research and development. Geneva: World Health Organization; 1996.

**Figure 2: Development of a set of systematic reviews coded according to health financing topic**



## Results

### *Policy concerns*

Certain broad policy concerns emerged in all four (or most -- three out of four) of the regions. Across the regions, respondents identified the need to:

- Identify and mobilize additional financial resources for health care;
- Develop, or expand, coverage under social health insurance;
- Improve the allocative efficiency of health care spending;
- Make health care financing more equitable;
- Improve stewardship / governance (of health care financing) and financial management.

The precise nature of these concerns and / or the ways in which they were expressed varied by region and by country.

Identify and mobilize resources. In all regions, respondents expressed the need to mobilize additional financial resources for health. Recommendations as to how new resources should be generated varied, as illustrated by the following suggestions made by informant(s) in Latin America and the Caribbean:-

- Seek additional resources from the central government, for example, by increasing taxes or dedicating a greater percentage of existing resources to health (Argentina, El Salvador);
- Increase financing from the Municipal (or local) Governments (Bolivia);
- Establish a tobacco tax to recover the costs of treating smoking-related diseases (Costa Rica);
- Invest mining resources in health programs (Peru).

Across all four regions, respondents disagreed as to whether external donor funding should be increasingly tapped as a source of revenue. In some countries (particularly Latin America) respondents expressed a desire to decrease reliance on external / international sources of health care funding. In Peru, it was felt that "international cooperation" should be better managed. One Ugandan respondent expressed the problem with donor funding as follows:

*The challenge of donor funding is that it is driven by their interests. Secondly the process of fund acquisition is stringent, so the funds come late and delay activities.*

But in some other countries (e.g. Bolivia and Syria) it was felt that donor funding should be encouraged. In Syria, it was even suggested that donor funding could be facilitated by removing any "administrative obstacles".

Develop or expand social (health) insurance. The nature of policy concerns about SHI varied across countries. In some countries respondents were concerned as to how to design or implement SHI. For example, the Ugandan Ministry of Health is in the process of drafting a National Social Health Insurance law. One concern is that, initially, only

formal sector workers will be covered, possibly exacerbating inequities in access to health care. In Jordan, respondents felt the existing public insurance programs (Civil Insurance Plan and Military Health Insurance Plan) should be consolidated and expanded, creating a universal health insurance program.

Elsewhere, there is concern about how to increase the number of people covered by social health insurance, particularly among socio-economically disadvantaged groups. Many respondents identified the need to expand coverage under existing social health insurance programs (e.g. Bolivia, El Salvador, Peru). In Costa Rica, there is concern that wealthier people may be opting out of the social health insurance as private insurance becomes increasingly available. In Palestine, the population covered under the Government Health Insurance system was rapidly expanded by exempting "intifada victims" (80% of the population) from paying premiums and co-payments. This has had serious, negative effects on the sustainability of the system.

The nature of the benefits package under SHI was of concern to some. In Thailand, there was concern that the Universal Coverage scheme should cover preventive care and long term disability resulting from illness. Respondents in Argentina felt that there should be increased coverage for pharmaceuticals, as drug costs are the largest source of out-of-pocket payments.

Improve allocative efficiency. Across many countries, respondents expressed the concern that health care resources are not currently being spent on the most cost-effective interventions. In some countries, including Cost Rica, Suriname, and countries in the Middle East and North Africa, an "imbalance" of health care spending was perceived, where too much was spent on curative or rehabilitative services, and not enough on preventive services. In Jordan, specific policies were recommended to prevent over-utilization of high-cost services; for example, developing criteria for utilization of expensive diagnostic procedures and referral to tertiary hospitals. The lack of local / context-specific cost-effectiveness information, required for evidence-based resource allocation, was cited as a problem in several countries, including Uganda.

Make health care financing more equitable. Concerns about the equity of health financing were raised in many countries (oftentimes in such broad terms as to make it difficult to distinguish between equity of financing and equity of provision). "Increased equity in health financing" ranked highest among policy concerns ranked by LAC countries. Specific concerns included: that financial resources should be oriented towards strengthening capacity for services, especially in the poorest jurisdictions (Argentina); and that social insurance subsidies for the poor should be increased (Peru). In Yemen, it was felt that those planning health care resource allocations should focus on equity, and that health insurance be employed as a mechanism for improving "fairness". Tanzania and Uganda expressed concerns the equity of user fees. In Tanzania, respondents felt something should be done to address the charging of user fees to people who should be exempt from paying according to government policy (including children under five years of age). Similarly, in Uganda, fees charged by private not-for-profit facilities are felt to discourage utilization by those unable to pay.

Improve stewardship / governance and financial management. Issues related to financial decision making and management, at all levels of the health care system, came up in all regions and across many countries. In several countries, such as Costa Rica and Tunisia, respondents suggested that health care workers at hospitals and clinics should be provided with training in financial management with the aim of improving technical efficiency. In Egypt, for example, it was felt that lack of managerial skill in health facilities is the main reason behind the budget deficit. In Jordan, development of a cost accounting and analysis system for healthcare institutions was recommended, and that each hospital or health facility have an independent budget and its own accounts (to increase accountability for decisions). In Algeria, it is a policy priority to "introduce hospital management...(and) to equip the executives for financial management."

Concerns were also expressed about financial management at higher levels. In Egypt, it was felt that there is limited financial management capacity among staff at the Ministry of Health and Population. In Palestine, it was felt that irregular communications between the Ministries of Health and Finance result in delay of payments (from MoF to MoH), restricting the number of willing suppliers and possibly leading to higher prices.

Problems related to corruption at all levels were raised in many countries (but not significantly highlighted in any of the regional reports). In Costa Rica, there was a call to address corruption by private sector administrators and physicians who sell their services to the Costa Rican Social Security Fund.

### *Research priorities*

Listed below are nineteen research priorities (categorized according to the conceptual framework and not arranged in order of importance) that emerged from the regional reports. These nineteen questions formed the basis of the priority ranking exercise (see "ranking of research questions", below). The number of research priorities identified on any one topic corresponds approximately to the frequency with which the topic was discussed in regional reports. While each broad research topic was common to several countries or regions, the more specific 'sub-topics' of interest varied quite considerably. Under each of the research priorities a sample of country-specific questions has been provided to illustrate this diversity.

### Collection

1/ What method(s) should be used to determine the amount of money to be made available for different programs or projects?

Identified as a priority in:

- *Indonesia:* Estimating the amount of local health budget needed for delivering quality services.
- *Uganda:* Holistic costing of required health strategy -- an assessment should provide answers regarding the health burden of a country, the cost in relation to per capita

GDP of the Ugandans and the health standards to be adopted in the delivery of health care

2/ How can additional resources for the health sector be mobilized, and what are the strengths and weaknesses of different mechanisms for mobilizing resources?

Identified as a priority in:

- *Algeria*: What could be the role of the mutualist movement in the reinforcement of financial means of health? What would be its contribution?
- *Indonesia*: Roles of central and local (province, district, city) governments in financing of Essential Public Health Services; Developing a model for health budget advocacy at national/province/district/city level; Mapping of local fiscal capacity and health program priorities.
- *Tanzania*: Careful studies are made to inform the policy makers how to improve their "financing envelope"; Research that would convince district council decision makers to give attention (and resources) to financing health care.
- *Yemen*: What evidence is needed to advocate for increased resources to the health sector?

3/ What are optimal levels of external / donor funding? What mechanisms can be put in place to ensure that donor funding is driven by national health systems goals? [This was inferred from the policy concerns and not explicitly stated in any of the country or regional reports.]

### Pooling

4/ How do we develop and implement social health insurance?

Identified as a priority in:

- *Egypt*: What are the steps and mechanism to prepare the community for the expected compulsory health insurance premiums? How to develop the contents of health insurance law based on the concept of "social" insurance rather than "commercial and for profit" insurance? What are the steps needed to improve the financial management for the future implementation of the new health insurance law? How to maintain the financial sustainability for the new health insurance law? What are the steps and contents for a national survey to answer "how much money each family is willing to pay as premiums for health insurance?" How to restructure the curative care providers to conform with the new health insurance system?
- *Indonesia*: Development of sustainable Social Health Insurance model; Study on social health insurance membership, utilization, pooling system and payment mechanism to health providers; Development of health utilization review and monitoring system for social health insurance.
- *Jordan*: What are the costs, benefits and feasibility of unifying the public health insurance schemes in one plan? What are the magnitude, causes and costs of health insurance coverage duplication?
- *Palestine: Short term priorities*: How can the MoH improve the current structure of the Governmental Health Insurance (GHI) Department? How can the MoH improve the demand-side incentives for efficient health care use in the current governmental health

insurance system? *Long term priorities:* What are the current models of health insurance systems employed in Palestine by the various health care providers (governmental, NGO, private and UNRWA)? How successful are these models and what are their advantages and disadvantages?

- *Uganda:* With hardly any information or financial analysis to guide decision making, cost-benefit analysis of the health sector to support the proposed scheme is a priority research area. Among the issues are mechanisms of collection of money and disbursement, accrediting institutions to provide health services and inclusion, equity and affordability of the scheme.

5/ What is current population coverage under SHI and how can it be increased?

Identified as a priority in:

- *Indonesia:* Study on coverage of health insurance for the poor

6/ What is the equity impact of SHI and how can it be improved?

Identified as a priority in:

- *Egypt:* How to develop health insurance premium based on “Family Health Status Index” (and not based on the family income)?
- *Indonesia:* Development of social health insurance model for the poor

7/ What benefits should be included or excluded from coverage under SHI?

Identified as a priority in:

- *Egypt:* What is the mechanism for developing more than one scenario for the health insurance based on different packages of services?
- *Indonesia:* Study on appropriate contents of current health insurance benefit package;
- *Peru:* Produce actuarial studies to define health benefit packages

8/ How do we ensure that private health insurers contribute towards national health system goals?

Identified as a priority in:

- *Algeria:* What are the advantages and the disadvantages of an introduction of the private medical insurance in Algeria? Does one need a total liberal system or a form of supplementary private insurance?
- *Egypt:* What are the packages of services that can be provided through private health insurance companies?
- *Indonesia:* Study on roles of private sector in social insurance; Study on the role of private health insurance in ensuring fairness and financial risk protection

### Purchasing

9/ What are the relative strengths and weaknesses of different purchasing (or provider payment) mechanisms?

Identified as a priority in:

- *Algeria:* How to develop the system of contracting for the control of the costs of health?

- *Egypt*: How to use outsourcing protocols as a tool improving of health services?
- *Indonesia*: Study on effective and efficient payment of health care facilities; Study on uses of DRGs as basis for payment of health care provider
- *Jordan*: What are the costs and benefits of outsourcing tertiary services? What are the impacts of sharing expensive technology and support services (i.e. laundry, catering, medical waste disposal, blood banking) on micro and macro economics in Jordan?
- *Palestine*: What are the mechanisms for establishing unified contractual agreements between the MoH and internal and external private and NGO health care providers? How can the MoH build its internal capacity in negotiating bilateral agreements with health care providers?

### Allocation / Provision

10/ What is the burden of different diseases (nationally or among certain population sub-groups)?

- *Egypt*: How can we evaluate the burden of diseases? How to improve the mortality and morbidity data collection?
- *Jordan*: What are the diseases pattern of the non Jordanian labor and the cost of treatment?
- *Yemen*: What are priorities of spending in the health sector and what is the burden of disease?

11/ What is the cost-effectiveness of current activities?

Identified as a priority in:

- *Indonesia*: Study on health technology assessment to improve efficiency and effectiveness of health care; Study on cost-effectiveness of health interventions
- *Palestine*: Is it cost-effective and feasible to establish tertiary care centers in Palestine? For what type of tertiary care can these centers operate? Are these coherent with the local planning strategies? What are the costing models needed on a national level to establish new treatment centers in Palestine/and or use existing services?
- *Syria*: Cost-effectiveness: Are the medical procedures cost effective? What is size of the problem of low productivity of hospital beds in the public sector, and how can be managed?
- *Tanzania*: Cost effectiveness studies are highly needed to recommend cost effectiveness strategies and cost effective, impact making interventions.
- *Tunisia*: How to improve and reinforce the national programs of public health of first line in order to rationalize the expenditure of health?

12/ What is the appropriate allocation of resources towards preventive versus curative care?

Identified as a priority in:

- *Indonesia*: Study on sustainable health financing: ideal proportion of funding for public goods and private goods programs, between public and private sectors at all level

### Fees

13/ What is the impact of user fees (equity, catastrophic expenditures, quality, etc.)? What can be done to ensure that user fees do not prevent the poor from accessing health care?

Identified as a priority in:

- *Tanzania*: Research on modalities to raise matching funds to compensate those in the private sector who will have to render services for which charging is restrained by the law or the health policy.

#### Cross-cutting

14/ To what extent do health services currently reach the poorest? [This was inferred from the policy concerns and not explicitly stated in any of the country or regional reports.]

15/ What are appropriate criteria for means testing and identifying the poor?

- *Indonesia*: Study on appropriate poor criteria for households and or individual in Indonesia

16/ How can demand-side incentives be used to improve equity of utilization? [This was inferred from the policy concerns and not explicitly stated in any of the country or regional reports.]

17/ How can capacity be built for good financial management at the level of health care facilities (public and private)?

- *Egypt*: What is the mechanism to improve the administrative system at the health facilities? How to improve the managerial skills at the level of health facilities to avoid current budget deficit?
- *Tanzania*: The financial management difference between the government (weak management) and non-government (strong management) units can be studied so as to transfer lessons of experience from the private to the government health sector; Research for developing a management system to better manage "on-the-spot financial sourcing" (does this refer to user fees?)

18/ How can capacity be built for good financial management at higher levels (district, provincial, national)?

Identified as a priority in:

- *Egypt*: How can we improve the technical capacity for the working staff at the Ministry of Health and Population in the field of health finance?
- *Indonesia*: Effective roles and responsibilities of national/province/district/city governments in health financing; Improving the stewardship roles of government in financing of health care facilities

19/ How big is the problem of corruption in health systems financing and how can this problem be addressed? This was expressed as a policy concern in several of the reports but was not translated into a research question(s).

## Overview of systematic reviews

### Topics of existing reviews

The Medline search yielded 38 systematic review papers, the grey literature search 15 papers and a further 36 papers were identified from among those previously identified by *Lavis et al* (for a total of 89, see **Figure 2**). Among the latter group, four were protocols for reviews, rather than completed systematic review papers, which have been excluded from further analysis. The remaining 85 review papers are plotted in **Table 2** against the nineteen research questions that emerged from key informant interviews.

Very few systematic reviews have addressed issues related to resource mobilization or collection. A paper by Bremen *et al.* (8) reviewed literature on structural adjustment -- programs aimed at enhancing economic growth through macroeconomic stability and elimination of market distortions. Other systematic reviews have looked at the mobilization of resources for a specific set of services, such as mental health services (9) or maternal health services (10). Only two systematic reviews looked at issues related to donor assistance; one reviewed the experience of donor assistance in Poland (11) while the other reviewed private initiatives aimed at drug development for neglected diseases. For the most part, these are quite specific and are very descriptive in nature.

There are few systematic reviews on pooling as well. A paper by Mills (12), which reviews the evidence on strategies to achieve universal coverage, most closely addresses the concerns and questions raised by key informants. The paper by Hadley looks at the association between insurance status and health (13). The two papers that have a developing country focus (14, 15) both review the experience with community-based health insurance (CBHI). The other systematic review on health insurance looks at the practices of social insurance officers (16), and is likely to be of greatest interest in settings where a social insurance scheme has already been established.

A number of studies, particularly from developed countries, looked at the comparative strengths and weaknesses of different purchasing arrangements. Investigators have looked, for example, at target payments, capitation, salary, fee-for-service, fundholding and managed care. The body of work in developing countries has focused more narrowly on contracting (15, 17, 18).

There were many reviews of the cost-effectiveness of interventions, in both developing and developed countries. (Cost-effectiveness studies conducted in developed countries are not adequately reflected in **Table 2**, as they were screened out of the *Lavis et al.* search.) For example, Walker looked at the cost-effectiveness of HIV/AIDS prevention strategies in developing countries (19) and Darmstadt *et al.* at the cost-effectiveness of interventions to prevent neonatal deaths (20).

The systematic reviews relating to user fees are few, and diverse in nature. The review by McIntyre *et al.*, for example, reviews evidence on the household level impact of out-of-pocket payments, and indirect costs of illness (21). Other reviews look at the burden

of a specific group of illnesses on individuals or households (22, 23). Another study reviews the international experience with medical savings accounts (24). Interestingly, the related studies from developed countries are of quite a different nature and tend to examine use of user fees in changing patient behaviours. Some reviews have examined the use of user fees in order to reduce emergency department attendance (25, 26), others have examined the effects of caps and co-payments on rational drug use (27).

Few systematic reviews have examined the association between socio-economic status and health care utilization, nor interventions that might lead to improved equity of access. Descriptive reviews of equity of access have generally had a disease focus. For example, Say *et al.* review inequalities in the use of maternal health care in developing countries (28) and Moreira *et al.* look at the determinants of oral health among the elderly in Brazil (29).

There have also been a number of reviews of financial demand-side interventions aimed at increasing the equity of health care utilization. Legarde *et al.*, for example, look broadly at conditional cash transfers for improving uptake of health interventions in low- and middle-income countries (30).

No systematic reviews looked at the important issues of financial management and corruption.

#### Questions for future research raised in review papers

From all of the systematic review papers, we also extracted the authors' comments regarding gaps in existing research and suggestions for future research. We anticipated that this might permit us to remove questions from our list of nineteen (if, for example, authors felt that the field had been exhaustively researched) or tailor our research questions (if the question had been partially addressed, but a more specific question remained). For the most part, however, authors simply noted the paucity of relevant studies, and suggested that more studies, of higher quality, be performed. In particular, authors called for: longer-term and longitudinal studies (e.g. 23, 31, 32); more studies in developing countries (e.g. 33, 34, 35); studies using a randomized controlled, repeated measures, interrupted time series, or controlled before-after design (e.g. 27, 34, 36, 37); studies that examine relatively distal outcomes, like patient health status (e.g. 36); evaluations that are carefully planned, prior to implementation of a new intervention (e.g. 37); case study work of improved quality (e.g. 15, 38); and multicentre case studies that look across countries (e.g. 15, 32, 39). In none of the papers did authors suggest that the existing research was sufficient.

**Table 2. Results of overview of systematic reviews.**

Research topic / question	Medline (N = 38)	Grey literature (N = 15)	Lavis <i>et al.</i> (N = 32)
<b>Collection</b>			
1/ What method(s) should be used to determine the amount of money to be made available for different programs or projects?	-	-	-
2/ How can additional resources for the health sector be mobilized, and what are the strengths and weaknesses of different mechanisms for mobilizing resources?	(9, 10)	(8)	-
3/ What are optimal levels of external / donor funding? What mechanisms can be put in place to ensure that donor funding is driven by national health systems goals?	(11, 40)	-	-
<b>Pooling</b>			
4/ How do we develop and implement social health insurance?	(15, 41)	(12)	(13, 16, 41)
5/ What is current population coverage under SHI and how can it be increased?	-	-	-
6/ What is the equity impact of SHI and how can it be improved?	-	-	-
7/ What benefits should be included or excluded from coverage under SHI?	-	-	-
8/ How do we ensure that private health insurers contribute towards national health system goals?	-	-	-
<b>Purchasing</b>			
9/ What are the relative strengths and weaknesses of different purchasing (or provider payment) mechanisms?	(15, 17, 18, 40, 42, 43)	(44, 45)	(36, 37, 46-59)
<b>Allocation / Provision</b>			
10/ What is the burden of different diseases (nationally or among certain population sub-groups)?	-	-	-
11/ What is the cost-effectiveness of current activities?	(19, 31, 34, 35, 60-68)	(20, 69-74)	-
12/ What is the appropriate allocation of resources towards preventive versus curative care?	-	(75)	-
<b>Fees</b>			
13/ What is the impact of user fees (equity, catastrophic expenditures, quality, etc.)? What can be done to ensure that user fees do not prevent the poor from accessing health care?	(15, 21-24, 39) -	(76)	(25-27, 77-79)
<b>Cross-cutting</b>			
14/ To what extent do health services currently reach the poorest?	(28, 29, 38, 80, 81)	(32)	(52)
15/ What are appropriate criteria for means testing and identifying the poor?	-	-	-
16/ How can demand-side incentives be used to improve equity of utilization?	(15, 30, 33)	-	-
17/ How can capacity be built for good financial management at the level of health care facilities?	-	-	-
18/ How can capacity be built for good financial management at higher levels (district, provincial, national)?	-	-	-

<b>Research topic / question</b>	<b>Medline</b> (N = 38)	<b>Grey literature</b> (N = 15)	<b><i>Lavis et al.</i></b> (N = 32)
19/ How big is the problem of corruption in health systems financing and how can this problem be addressed?	-	-	-

### *Ranking of research questions*

Participants at the workshop spent time discussing the nineteen questions generated from the regional reports, towards developing a common understanding of the questions. In some cases, minor changes were made to the wording of questions so as to make the meaning of the questions clearer. These discussions did result in shortening the list of questions from 19 down to 17 (**Annex 4**). In one case a question was omitted as it was considered to be outside the realm of health economics and financing, and in the second case two questions were lumped together as one, as they were felt to be very similar.

Based on a literature review of previous priority setting exercises, Alliance HPSR staff proposed three criteria for ranking the remaining 17 questions:

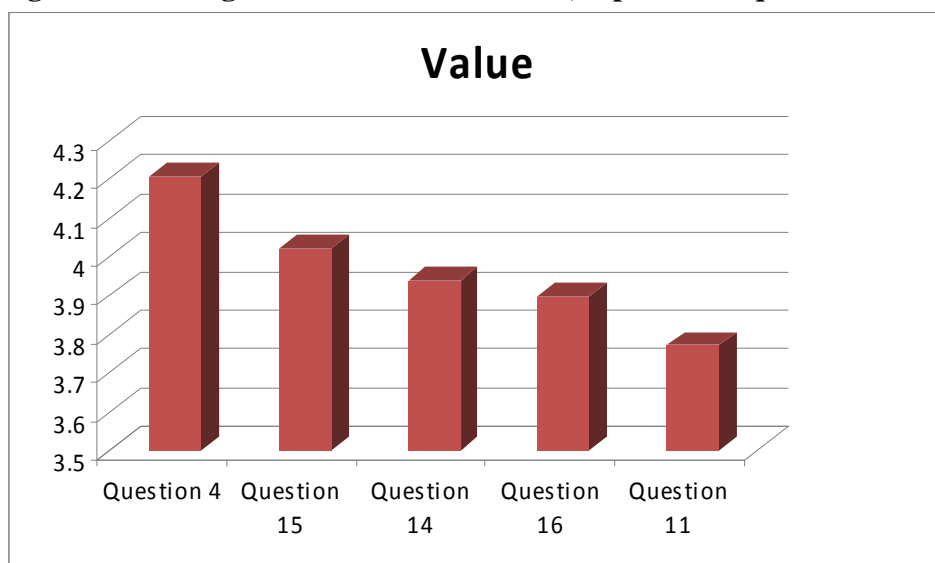
- Can the research question be answered?
- Is there a lack of research on this topic?
- Are the results of the research likely to be beneficial to social welfare? (This was intended to include both health and equity impacts.)

Participants agreed on these three criteria, but decided that the last of these criteria should receive twice the weight of the other two criteria, in the combined index. Each of these criteria was applied to the 17 priority research questions using a five-point Likert scale (1 = no; 5 = yes). Each of the 12 participants assigned scores individually using a self-administered questionnaire. Index scores were then calculated for each individual (applying the above mentioned weighting) and summed across individuals, giving equal weight to each individual.

Figure 3 illustrates the average scores for the five, top-ranked research questions. These values were not sensitive to the differential weighting of the three ranking criteria; when equal weights were applied to the three criteria, the top five questions remained exactly the same, although the order of questions 14 and 16 was reversed (these results not shown). The questions identified as most important by each of the three criteria are illustrated in **Annex 5**.

Finally, for the four top-ranked research questions, the group discussed in some detail how the research question might be addressed (e.g. more specific research questions that might fall within the broader one, appropriate methodologies, whether there should be a focus on a particular country or countries). **Table 3** summarizes the discussions on some of the more specific research questions that might be addressed by investigators, towards addressing the four broader research questions.

**Figure 3. Average index score for the five, top-ranked questions**



Question 4: How do we develop and implement universal financial protection?

Question 15: What are the pros and cons of the different ways of identifying the poor?

Question 14: To what extent do health benefits reach the poor?

Question 16: What are the pros and cons of implementing demand-side subsidies?

Question 11: What is the cost-effectiveness of service delivery models and health systems strategies?

**Table 3. Summary of group discussion**

Broad research question	More specific research questions	Other issues from group discussion
<b>1. How do we develop and implement universal financial protection?</b>	<ul style="list-style-type: none"> <li>- How do we manage the mix of different mechanisms that provide financial protection, such as tax-based funding, social health insurance and community-based health insurance?</li> <li>- What are the different "pathways" that countries take in order to achieve universal protection?</li> <li>- What are the different approaches for measuring financial protection?</li> <li>- How might economic, political and social context facilitate, or hinder, universal protection?</li> </ul>	<p><i>Research methods</i> -- could include case studies, modelling (based on case studies) to look at the relevance for other countries, prospective assessments of implementation, quasi-experimental studies.</p> <p><i>Country or regional focus</i> -- Particularly important for LICs or countries undergoing rapid change.</p> <p><i>Important resources</i> -- work done by Commission on Social Determinants and Health.</p>
<b>2. What are the pros and cons of the different ways of identifying the poor?</b>	<ul style="list-style-type: none"> <li>- What methods are currently used to identify the poor, in the health sector and in other sectors?</li> <li>- What are the pros and cons of targeting health benefits to the poor, versus expanding total population coverage?</li> <li>- What are the "costs" to society of methods that are not sufficiently sensitive or specific?</li> </ul>	<p><i>Research methods</i> -- cross-sectoral research, anthropological / sociological research, evaluative research of different methods in use, longitudinal studies of how people move in and out of poverty over time and determinants of this movement, research on the costs of mis-targeting.</p> <p><i>Country or regional focus</i> -- do not overlook urban poor; different targeting</p>

		<p>methods may be required for urban versus rural.</p> <p><i>Important resources</i> -- existing research networks, resources available through DfID, World Bank, Institute of Development Studies.</p>
<p><b>3. To what extent do health benefits reach the poor?</b></p>	<ul style="list-style-type: none"> <li>- If interventions are not reaching the poor, why not? What is the relative importance of supply-side or service delivery problems, versus lack of demand for services?</li> <li>- Evaluations should be carried out as programmes are implemented, to see who gets the benefits.</li> <li>- Studies should look not only at health service utilization, but at health outcomes.</li> <li>- What strategies are most successful for improving the reach of health benefits among the poor?</li> </ul>	<p><i>Research methods</i> -- quasi-experimental or longitudinal studies. Interventions to be studied could include: social assistance grants, free hospital care, investments in infrastructure in rural areas, vouchers, advertising or education to increase awareness of benefits.</p>
<p><b>4. What are the pros and cons of implementing demand-side subsidies?</b></p>	<ul style="list-style-type: none"> <li>- What is the impact of different demand-side subsidies, such as cash subsidies and entitlements in kind, conditional and non-conditional subsidies?</li> <li>- What are the pros and cons of demand-side subsidies that are channelled through health care providers?</li> <li>- How do demand-side subsidies impact on health service providers?</li> <li>- Can we draw on experiences from outside the health sector?</li> </ul>	<p><i>Research methods</i> -- qualitative research in research where new interventions are to be piloted, summarize evidence from previous studies, research that draws on experience from other sectors, evaluations of interventions already implemented.</p>

## Discussion

### *Summary*

A list of nineteen priority research questions emerged from key informant interviews across the twenty-four low- and middle-income countries. While each broad research topic was common to several countries or regions, the more specific 'sub-topics' of interest varied considerably. The overview of systematic review provided little insight into the relative importance of the research questions. Many of the questions received little or no attention in the review literature. Even where questions had been addressed (or partially addressed) by the review literature, the authors of the review papers generally suggested that additional primary, or research of higher quality, was still required. However, this overview of reviews was instructive in showing which health financing topics have had comparatively little written about them, despite being identified as important by key informants. At the consultative workshop, a group of 12 researchers refined and ranked the priority research questions. Included among those ranked highest were questions about: universal financial protection, ways of identifying the poor (means testing), ways of extending benefits to the poor and demand-side financing.

### *Strengths and weaknesses of methodology*

The study has several important methodological strengths:

- The process used in all three steps of the study have been carefully documented and described, and thus should be quite replicable.
- An iterative process was used to generate the list of questions, favouring those that were expressed by more than one country, and increasing the generalizability to other developing countries.
- The study sampled a very diverse group of stakeholders, including researchers, policy makers, civil society representatives, and community members -- across four regions and twenty-four countries.
- This study focuses primarily on the research needs of developing countries -- few other research priority setting processes have had such a focus.
- By focusing on select HPSR thematic areas (HSF, human resources for health and the non-state sector) this study has been able to generate and rank quite specific research questions. Previous priority setting exercises have tended to deal with HPSR in a fairly broad / cursory manner, without breaking research issues down into questions that can easily be turned into aims and objectives for research.

The methodological weaknesses are several:

- The priorities identified (from Step 1: regional key-informant interviews) largely reflect the views of policymakers. It was observed by researchers (including those assembled for the consultative workshop) that many of the research questions were not very innovative nor forward looking, perhaps because they reflect the challenges that policy makers are facing now. Researchers at the consultative workshop commented, for example, on the absence of research questions relating to: roles of institutions in rapidly changing or post-conflict contexts or the determinants of technical efficiency and how these can be optimized.
- Middle Income Countries were over-represented in the regional key informant work (and LICs under-represented). This could be contributing, for example, to the focus on social health insurance versus community-based health insurance.
- Lack of standardization in study methodology across regions: It is very difficult to compare results, for example, between LAC where a relatively more quantitative (and deductive) approach was used and MENA where the approach was more qualitative (and inductive). Similarly, it has been difficult to compare between the many different policy and research categories investigated. For example, as per **Table 1**, the different policy categories looked at included: policy concerns, important current health topics, proposed health policy topics, current policies, desired policies and policy priorities. There were different interviewers in most of the 24 countries, which of course hinders standardization. The types of respondents also varied across countries; only MENA, for example, interviewed "consumers" of health care.
- There are weaknesses in the analysis and presentation of qualitative data in some country- and regional-level reports. Data from interviews were in some cases presented alongside data from background documents and the authors own perceptions, leaving one unclear as to what was actually expressed by respondents.
- Regions, countries and respondents were purposefully (rather than randomly) selected. Thus there may be concerns about the representativeness and generalizability of the results.
- The capacity for performing methodologically rigorous systematic reviews is relatively nascent in some developing countries. Reviews that do not meet all the rigorous standards of systematic reviews in developed countries could still be valuable in mapping the availability of health financing research in developing countries. Thus, we used purposefully broad selection criteria when screening for systematic reviews. This means, however, that the reviews included and presented may vary considerably in terms of quality.

*Policy implications: what next?*

A stronger body of knowledge about which health policy and health system strengthening strategies are effective, and which are not, is urgently needed (82, 83). But funding for HPSR is inadequate. But with recent increases in funding for health systems

strengthening, there have also been calls for appropriate investments in evaluation and research (83, 84) - the most recent being a call for health systems research and learning in the context of the G8 Hokkaido Toyako Summit (85). It is hoped that this work on health system financing research priorities (along with similar work being conducted on health workforce and non-state sector priorities) will compliment these calls by providing concrete, specific suggestions as to where new and existing research resources can best be invested.

## **Acknowledgements**

Thanks to David Evans, George Gotsadze and Fadi El-Jardali for commenting on the manuscript, and to Di McIntyre, Meng Qingyue and Amanda Glassman for their thorough technical reviews of the paper. We also wish to thank the many colleagues who contributed to the Alliance's priority setting work, including: Delius Asimwe and Gaspar Munishi (East Africa report); Gonzalo Urcullo, Rodrigo Muñoz and Ricardo Bitrán (Latin American and the Caribbean report); Soewarta Kosen, Siripen Supakankunti and Syed Mohamed Aljunid (Southeast Asia report); Fadi El-Jardali, Judy Makhoul, Diana Jamal and Victoria Tchaghchaghian (MENA report); Shirley Williams; the many country-based investigators; and participants in the workshop in Nyon (**Annex 3**).

## Annex 1. Modified Kutzin (2001) Framework

### Functions of health care financing system and priority research questions

Functions	Priority policy questions	Cross Cutting Issues
Collection (sources of) funds	<ul style="list-style-type: none"> <li>▪ How to increase overall resource envelope for health care (from budgets, through introduction of social insurance, pre-paid schemes or through user fees, or through combination of the above?)</li> <li>▪ What are benefits of social (national) insurance or tax financed systems?</li> <li>▪ Need for and/or feasibility of hybrid schemes?</li> <li>▪ What might be the role of Community Based Health Insurance (CBHI) in raising pre-paid resources for health and how to link with the health financing system?</li> </ul>	<ul style="list-style-type: none"> <li>▪ Impact on equity and access</li> <li>▪ Impact of decentralization</li> <li>▪ Public-private partnerships</li> <li>▪ Community mobilization/ participation in governance, social support networks)</li> </ul>
Pooling of health care revenues	<ul style="list-style-type: none"> <li>▪ Where and how to pool funds:               <ul style="list-style-type: none"> <li>○ On central, sub-national, district or on area health board level</li> <li>○ In social insurance funds or private insurance companies</li> <li>○ In member owned “mutual” funds or CBHI</li> <li>○ In fund holding providers or provider-based insurance schemes</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Impact on equity and access</li> <li>▪ Impact of decentralization</li> <li>▪ Public-private partnerships</li> </ul>
Allocation	<ul style="list-style-type: none"> <li>▪ How to allocate financial resources between central/sub-national/community levels or between levels/types of services (public health interventions, PHC and hospital sector)               <ul style="list-style-type: none"> <li>○ What are roles of central and local government (in lieu of decentralization) with regards to financing service provision (essential package of services) and/or</li> <li>○ With regards to reaching poor/vulnerable – removing or decreasing financial access barriers</li> </ul> </li> <li>▪ Costs and cost-benefits of various interventions</li> <li>▪ Economic evaluation and cost-effectiveness of resource allocation and alternative use of resources.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Impact on equity and access</li> <li>▪ Impact of decentralization</li> <li>▪ Public-private partnerships</li> </ul>
Purchasing and provider payment	<ul style="list-style-type: none"> <li>▪ Contracting arrangements and performance agreements for various types of services</li> <li>▪ Provider payment forms by levels and type of care               <ul style="list-style-type: none"> <li>○ Public health interventions</li> <li>○ Primary health care</li> <li>○ Hospital care</li> </ul> </li> <li>▪ Costing of services</li> <li>▪ Incentives/motivations of payment mechanisms               <ul style="list-style-type: none"> <li>○ On providers</li> <li>○ On quality of care</li> <li>○ On consumers</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Impact on equity and access</li> <li>▪ Provider autonomy</li> <li>▪ Public-private partnerships</li> </ul>
Fees	<ul style="list-style-type: none"> <li>▪ User fees and cost sharing arrangements</li> </ul>	<ul style="list-style-type: none"> <li>▪ Impact on equity and access</li> </ul>

## Annex 2: Search strategy used by Lavis et al. and our adapted search strategy

	Original search terms	Additions/Modifications by this paper
Terms to generate a list of possible systematic reviews	(meta-analysis.tw. or meta-analysis.pt. or systematic review.tw.)	meta-analysis.mp. or review.pt. or search:.tw.
Terms to retrieve articles on health financing topics (first 10 terms shown)	*Fee-for-Service Plans/ or fee? for service.tw. or *Physician Incentive Plans/ or incentive?.tw. or *Reimbursement Mechanisms/ or *Reimbursement, Incentive/ or reimburse\$.tw. or *Prepaid Health Plans/ or *Group Practice, Prepaid/ or prepaid.tw. or *Capitation Fee/ or capitation.tw. or *"Salaries and Fringe Benefits"/ or *Income/ or ((salary or salaries or salaried or income? or pay\$ or wages or fringe benefit?) adj2 provid\$).tw. or *Prospective Payment System/ or (prospective payment? or prospective pricing).tw. or ((provider? or institution? or group? or patient?) adj2 (incentive? or reward? or benefit?)).tw. or *Financing, Organized/ or ((provider? or patient?) adj2 (grant? or allowance or reward? or benefit?)).tw. or (penalty or penalties).tw. or exp *Formularies/ or (formulary or formularies).tw. or premium?.tw. or exp *Insurance/ or (co payment? or copayment?).tw. or exp *"Fees and Charges"/ or *Fees, Medical/ or *Fees, Pharmaceutical/ or *Prescription Fees/ or (fee or fees or remunerat\$ or user payment or patient payment).tw. or ((financ\$ or econom\$ or pay\$) adj (incentive? or intervention? or program? or system? or mechanism? or strateg\$ or compensat\$)).tw. or	exp *Budgets/ or *Financing, Government/ or exp *National Health Programs/ec or *Health Policy/ec or *International Cooperation/ or *Developing Countries/ec or *Health Planning Support/ec or exp *Contract Services/ec or *Efficiency, Organizational/ec or *Hospitals, District/ec or *Cost-Benefit Analysis/ or *Evidence-Based Medicine/ec or *Health Services Accessibility/ or exp *Financing, Personal/ or *Catastrophic Illness/ec or *Health Expenditures/ or *Financial Management/ or *Fraud/ec

	insurance\$.tw. or *Resource Allocation/ or *Health Care Rationing/	
Terms to select articles particular to developing countries	((developing or less developed or third world or under developed or poor or low\$ income or middle income or "low and middle income") adj (countries or country or nation?)).tw.	Combining this search using 'AND' instead of 'OR' to restrict our results to these areas

**Annex 3: List of participants at meeting, " Identifying and building consensus on health financing research priorities", Nyon, Switzerland, 28 May 2008**

**Dr Irene A. Agyepong**

Regional Director of Health  
Ghana Health Service

**Dr Abbas Bhuiya**

Senior Scientist and Head  
Social and Behavioural Sciences Unit  
Poverty and Health Programme  
ICDDR,B  
Bangladesh

**Mr Ricardo Bitran**

President, Bitrán y Asociados Ltda.  
Chile

**Dr George Gotsadze**

Director  
Curatio International Foundation Georgia

**Dr Pablo Gottret**

Lead Economist, Health  
The World Bank

**Dr Shanlian Hu**

Director and Professor  
Training Center for Health Management  
School of Public Health of Fudan University

**Professor Anne Mills**

Professor of Health Economics and Policy  
Head of Department  
Public Health and Policy  
London School of Hygiene and Tropical  
Medicine

**Dr David H. Peters**

Associate Professor  
Health Systems Program  
Department of International Health  
Johns Hopkins University  
Bloomberg School of Public Health

**Dr Ravindra Rannan-Eliya**

Director  
Institute for Health Policy  
Sri Lanka

**Mrs Shirley Williams**

WHO Temporary Adviser

**WHO Participants**

**Dr David Evans**

Director  
Health Systems Financing  
Health Systems and Services

**Dr Xu Ke**

Health Financing Policy  
Health Systems Financing  
Health Systems and Services

**Alliance HPSR**

**Dr Sara Bennett**, Manager HSS/HSR

**Dr Taghreed Adam**, HSS/HSR

**Dr M. Kent Ranson**, HSS/HSR

**Ms Hannah Sarah Faich**, HSS/HSR

**Mr Tyler Law**, HSS/HSR

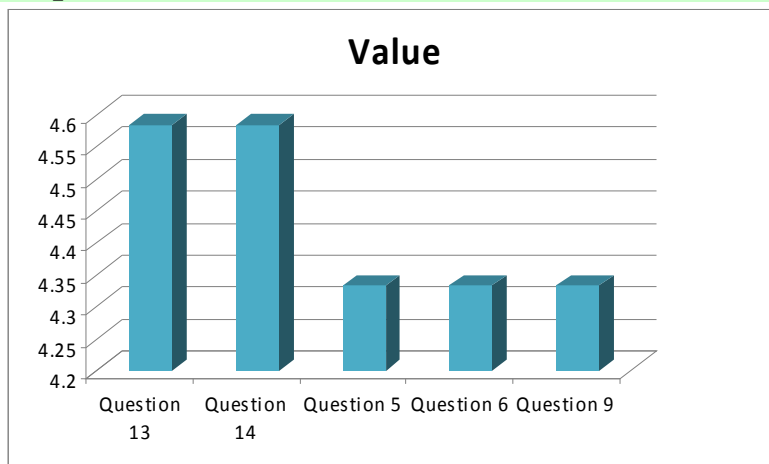
#### Annex 4. Changes to the research questions made at the workshop

Before workshop	Changed to:
<b>Collection</b>	
1/ What method(s) should be used to determine the amount of money to be made available for different programs or projects?	How much should be spent on health, and what method(s) should be used to determine this amount?
2/ How can additional resources for the health sector be mobilized, and what are the strengths and weaknesses of different mechanisms for mobilizing resources?	How can resources for the health sector be mobilized, and what are the strengths and weaknesses (costs, benefits, and willingness to contribute) of different mechanisms and mixes of mechanisms for mobilizing resources?
3/ What are optimal levels of external / donor funding? What mechanisms can be put in place to ensure that donor funding is driven by national health systems goals?	What mechanisms can be put in place to ensure that development assistance is driven by national health systems goals?
<b>Pooling</b>	
4/ How do we develop and implement social health insurance?	How do we develop and implement universal financial protection?
5/ What is current population coverage under SHI and how can it be increased?	What is current population coverage under SHI and how can it be increased?
6/ What is the equity impact of SHI and how can it be improved?	What is the equity impact of SHI and how can it be improved?
7/ What benefits should be included or excluded from coverage under SHI?	What benefits should be included or excluded from coverage under SHI?
8/ How do we ensure that private health insurers contribute towards national health system goals?	How do we ensure that private health insurers contribute towards national health system goals?
<b>Purchasing</b>	
9/ What are the relative strengths and weaknesses of different purchasing (or provider payment) mechanisms?	What are the relative strengths and weaknesses of different purchasing (or provider payment) mechanisms?
<b>Allocation / Provision</b>	
10/ What is the burden of different diseases (nationally or among certain population sub-groups)?	OMIT
11/ What is the cost-effectiveness of current activities?	What is the cost-effectiveness of service delivery models and health systems strategies?
12/ What is the appropriate allocation of resources towards preventive versus curative care?	What method(s) should be used to determine the amount of money to be made available for different programs, projects, or population groups?
<b>Benefits/fees</b>	
13/ What is the impact of user fees (equity, catastrophic expenditures, quality, etc.)? What can be done to ensure that user fees do not prevent the poor from accessing health care?	What is the impact of user fees (equity, catastrophic expenditures, quality, etc.)? What can be done to ensure that user fees do not prevent the poor from accessing health care?
<b>Cross-cutting</b>	
14/ To what extent do health services currently reach the poorest?	To what extent do health benefits reach the poor?
15/ What are appropriate criteria for means testing and identifying the poor?	What are the pros and cons of the different ways of identifying the poor?
16/ How can demand-side incentives be used to improve equity of utilization?	What are the pros and cons of implementing demand-side subsidies?
17/ How can capacity be built for good financial management at the level of health care	How can capacity be built for good financial management at all levels of the health system?

facilities?	
18/ How can capacity be built for good financial management at higher levels (district, provincial, national)?	
19/ How big is the problem of corruption in health systems financing and how can this problem be addressed?	To what extent or how does corruption affect health systems, and how can the problem be addressed?

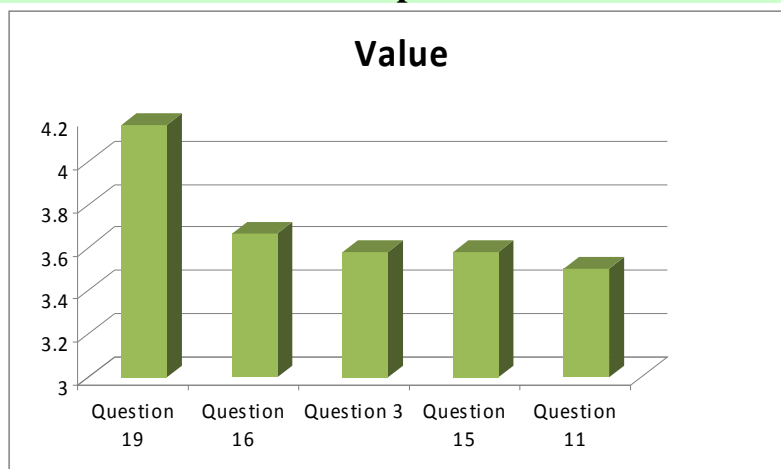
## Annex 5. Top-ranked priority research questions by the three ranking criteria

### Can research question be answered?



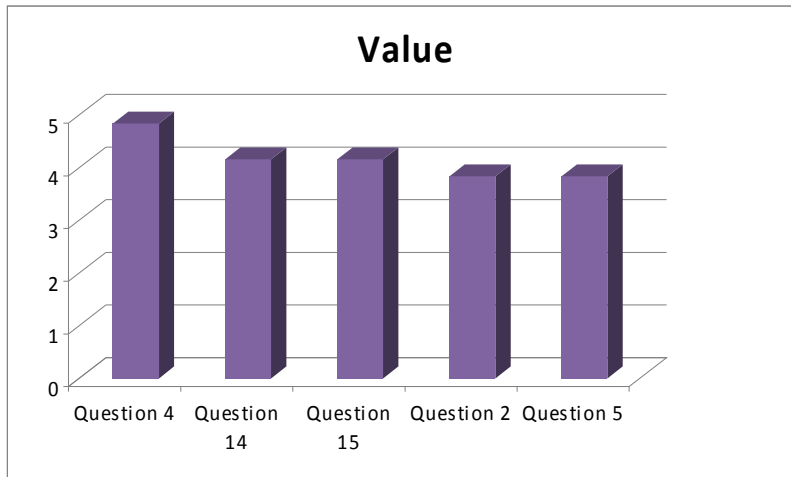
1. What is the impact of user fees (equity, catastrophic expenditures, quality, etc.)? What can be done to ensure that user fees do not prevent the poor from accessing health care? 13
2. To what extent do health benefits reach the poor? 14
3. What is current population coverage under SHI and how can it be increased? 5
4. What is the equity impact of SHI and how can it be improved? 6
5. What are the relative strengths and weaknesses of different purchasing (or provider payment) mechanisms? 9

### Is there a lack of research on this topic?



1. To what extent or how does corruption affect health systems, and how can the problem be addressed? 19
2. What are the pros and cons of implementing demand-side subsidies? 16
3. What mechanisms can be put in place to ensure that development assistance is driven by national health systems goals? 3
4. What are the pros and cons of the different ways of identifying the poor? 15
5. What is the cost-effectiveness of service delivery models and health systems strategies? 11

## Are the results of the research likely to be beneficial to social welfare?



1. How do we develop and implement universal financial protection? 4
2. To what extent do health benefits reach the poor? 14
3. What are the pros and cons of the different ways of identifying the poor? 15
4. How can resources for the health sector be mobilized, and what are the strengths and weaknesses (costs, benefits, and willingness to contribute) of different mechanisms and mixes of mechanisms for mobilizing resources? 2
5. What is current population coverage under SHI and how can it be increased? 5

## References

1. Kutzin J. A descriptive framework for country-level analysis of health care financing arrangements. *Health policy (Amsterdam, Netherlands)*. 2001 Jun;56(3):171-204.
2. Lavis JN, Hammill AC, Wilson MG, Boyko JA, Grimshaw J, Oxman AD, et al. Systematic Reviews That Can Inform Health Systems Management and Policymaking. Unpublished report dates 2 November 2007. 2007.
3. Montori VM, Wilczynski NL, Morgan D, Haynes RB. Optimal search strategies for retrieving systematic reviews from Medline: analytical survey. *BMJ (Clinical research ed)*. 2005 Jan 8;330(7482):68.
4. Jamison DT, Mosley WH, Measham AR, Bobadilla JL, editors. *Disease Control Priorities in Developing Countries*. New York, N.Y.: Oxford University Press; 1993.
5. Jamison DT, Breman JG, Measham AR, Alleyne G, Claeson M, Evans DB, et al., editors. *Disease Control Priorities in Developing Countries: Second Edition*. New York, N.Y.: Oxford University Press; 2006.
6. Working Group on Priority Setting. Priority setting for health research: lessons from developing countries. *Health policy and planning*. 2000 Jun;15(2):130-6.
7. Ad Hoc Committee on Health Research Relating to Future Intervention Options. *Investing in health research and development*. Geneva: World Health Organization; 1996.
8. Breman A, Shelton C. Structural Adjustment and Health: A literature review of the debate, its role-players and presented empirical evidence. Paper No. WG6 : 6. Geneva: WHO: Commission on Macroeconomics and Health; 2001.
9. Dixon A, McDaid D, Knapp M, Curran C. Financing mental health services in low- and middle-income countries. *Health Policy & Planning*. 2006 May;21(3):171-82.
10. Borghi J, Ensor T, Somanathan A, Lissner C, Mills A, Lancet Maternal Survival Series steering g. Mobilising financial resources for maternal health.[see comment]. *Lancet*. 2006 Oct 21;368(9545):1457-65.
11. Sabbat J. International assistance and health care reform in Poland: barriers to project development and implementation. *Health policy (Amsterdam, Netherlands)*. 1997 Sep;41(3):207-27.
12. Mills A. Strategies to achieve universal coverage: are there lessons from middle income countries? Geneva: WHO, Commission on Social Determinants and Health, Health Systems Knowledge Network; 2007.

13. Hadley J. Sicker and poorer--the consequences of being uninsured: a review of the research on the relationship between health insurance, medical care use, health, work, and income. *Medical Care Research & Review*. 2003;60(2:Suppl):Suppl-75S.
14. Ekman B. Community-based health insurance in low-income countries: a systematic review of the evidence. [Review] [67 refs]. *Health Policy & Planning*. 2004(5):249-70.
15. Palmer N, Mueller DH, Gilson L, Mills A, Haines A. Health financing to promote access in low income settings-how much do we know?[see comment]. *Lancet*. 2004 Oct 9-15;364(9442):1365-70.
16. Soderberg E, Alexanderson K. Gatekeepers in sickness insurance: a systematic review of the literature on practices of social insurance officers. [Review] [61 refs]. *Health & Social Care in the Community*. 2005;13(3):211-23.
17. Ensor T, Weinzierl S. Regulating health care in low- and middle-income countries: Broadening the policy response in resource constrained environments. *Soc Sci Med*. 2007 Jul;65(2):355-66.
18. Peters DH, Mirchandani GG, Hansen PM. Strategies for engaging the private sector in sexual and reproductive health: how effective are they? *Health Policy & Planning*. 2004 Oct;19 Suppl 1:i5-i21.
19. Walker D. Cost and cost-effectiveness of HIV/AIDS prevention strategies in developing countries: is there an evidence base? *Health Policy & Planning*. 2003 Mar;18(1):4-17.
20. Darmstadt GL, Bhutta ZA, Cousens S, Adam T, Walker N, de Bernis L. Evidence-based, cost-effective interventions: how many newborn babies can we save? *Lancet*. 2005 Mar 12-18;365(9463):977-88.
21. McIntyre D, Thiede M, Dahlgren G, Whitehead M. What are the economic consequences for households of illness and of paying for health care in low- and middle-income country contexts? *Soc Sci Med*. 2006 Feb;62(4):858-65.
22. Reynales-Shigematsu LM. [Literature review of health care costs of diseases attributable to tobacco consumption in the Americas]. *Salud Publica Mex*. 2006;48 Suppl 1:S190-200.
23. Patel V, Kleinman A. Poverty and common mental disorders in developing countries. *Bulletin of the World Health Organization*. 2003;81(8):609-15.
24. Dixon A. Are medical savings accounts a viable option for funding health care? *Croatian medical journal*. 2002 Aug;43(4):408-16.
25. Guo B, Harstall C. Strategies to reduce emergency department overcrowding (DARE structured abstract). *Cochrane Database Syst Rev*. 2006.

26. New Zealand Health Technology Assessment Clearing H. Emergency department attendance: a critical appraisal of the literature (DARE structured abstract); 1998.
27. Austvoll DA, Aaserud M, Vist G, Ramsay C, Oxman AD, Sturm H, et al. Pharmaceutical policies: effects of cap and co-payment on rational drug use. *Cochrane Database Syst Rev.* 2008(1).
28. Say L, Raine R. A systematic review of inequalities in the use of maternal health care in developing countries: examining the scale of the problem and the importance of context. *Bulletin of the World Health Organization.* 2007 Oct;85(10):812-9.
29. Moreira RdS, Nico LS, Tomita NE, Ruiz T. [Oral health of Brazilian elderly: a systematic review of epidemiologic status and dental care access]. *Cad Saude Publica.* 2005 Nov-Dec;21(6):1665-75.
30. Lagarde M, Haines A, Palmer N. Conditional cash transfers for improving uptake of health interventions in low- and middle-income countries: a systematic review. *Jama.* 2007 Oct 24;298(16):1900-10.
31. Jaana M, Pare G. Home telemonitoring of patients with diabetes: a systematic assessment of observed effects. *J Eval Clin Pract.* 2007 Apr;13(2):242-53.
32. Walters S, Suhrcke M. Socioeconomic inequalities in health and health care access in central and eastern Europe and the CIS: a review of the recent literature. Working paper 2005/1. Venice: WHO European Office for Investment for Health and Development; 2005.
33. Volmink J, Garner P. Systematic review of randomised controlled trials of strategies to promote adherence to tuberculosis treatment.[see comment]. *BMJ (Clinical research ed.)* 1997 Nov 29;315(7120):1403-6.
34. Kok-Jensen A, Viskum K. [Therapeutic strategies for patients with tuberculosis]. *Ugeskr Laeger.* 1998 Aug 3;160(32):4603-5.
35. Buxton M, Hanney S, Jones T. Estimating the economic value to societies of the impact of health research: a critical review. *Bulletin of the World Health Organization.* 2004 Oct;82(10):733-9.
36. Gosden T, Forland F, Kristiansen IS, Sutton M, Leese B, Giuffrida A, et al. Impact of payment method on behaviour of primary care physicians: a systematic review. *Journal of Health Services & Research Policy.* 2001;6(1):44-55.
37. Gosden T, Forland F, Kristiansen IS, Sutton M, Leese B, Giuffrida A, et al. Capitation, salary, fee-for-service and mixed systems of payment: effects on the behaviour of primary care physicians. *Cochrane Database of Systematic Reviews: Reviews.* 2000(3).

38. Scheppers E, van Dongen E, Dekker J, Geertzen J, Dekker J. Potential barriers to the use of health services among ethnic minorities: a review. *Fam Pract.* 2006 Jun;23(3):325-48.
39. Gaal P, McKee M. Fee-for-service or donation? Hungarian perspectives on informal payment for health care. *Soc Sci Med.* 2005 Apr;60(7):1445-57.
40. Trouiller P, Olliaro P, Torreele E, Orbinski J, Laing R, Ford N. Drug development for neglected diseases: a deficient market and a public-health policy failure.[see comment]. *Lancet.* 2002 Jun 22;359(9324):2188-94.
41. Ekman B. Community-based health insurance in low-income countries: a systematic review of the evidence. *Health Policy & Planning.* 2004 Sep;19(5):249-70.
42. Davidova J, Praznovcova L, Lundborg CS. Pricing and reimbursement of pharmaceuticals in the Czech Republic and Sweden. *Pharm World Sci.* 2008 Jan;30(1):57-64.
43. Akaho E, MacLaughlin EJ, Takeuchi Y. Comparison of prescription reimbursement methodologies in Japan and the United States. *J Am Pharm Assoc (2003).* 2003 Jul-Aug;43(4):519-26.
44. Kingma M. Can Financial Incentive Influence Medical Practice? *Human Resources Development Journal.* 2003;3(2).
45. Øvretveit J. What are the best strategies for ensuring quality in hospitals? Copenhagen: WHO Regional Office for Europe's Health Evidence Network (HEN); 2003.
46. Carroll NV. How effectively do managed care organizations influence prescribing and dispensing decisions? *American Journal of Managed Care.* 2002;8(12):1041-54.
47. Chaix-Couturier C, Durand-Zaleski I, Jolly D, Durieux P. Effects of financial incentives on medical practice: results from a systematic review of the literature and methodological issues. *International Journal for Quality in Health Care.* 2000;12(2):133-42.
48. Faulkner A, Mills N, Bainton D, Baxter K, Kinnersley P, Peters TJ, et al. A systematic review of the effect of primary care-based service innovations on quality and patterns of referral to specialist secondary care. *British Journal of General Practice.* 2003;53(496):878-84.
49. Giuffrida A, Gosden T, Forland F, Kristiansen IS, Sergison M, Leese B, et al. Target payments in primary care: effects on professional practice and health care outcomes. *Cochrane Database of Systematic Reviews: Reviews.* 1999(4).
50. Gosden T, Pedersen L, Torgerson D. How should we pay doctors? A systematic review of salary payments and their effect on doctor behaviour. *Qjm.* 1999;92(1):47-55.

51. Gosden T, Torgerson DJ. The effect of fundholding on prescribing and referral costs: a review of the evidence. *Health policy (Amsterdam, Netherlands)*. 1997;40(2):103-14.
52. Waters H, Hatt L, Peters D. Working with the private sector for child health. *Health Policy & Planning*. 2003;18(2):127-37.
53. Grimshaw JM, Winkens RAG, Shirran L, Cunningham C, Mayhew A, Thomas R, et al. Interventions to improve outpatient referrals from primary care to secondary care. *Cochrane Database of Systematic Reviews: Reviews*. 2005(3).
54. Jang R. Medicaid formularies: a critical review of the literature. *Journal of Pharmaceutical Marketing & Management*. 1988;2(3):39-61.
55. Sempowski IP. Effectiveness of financial incentives in exchange for rural and underserved area return-of-service commitments: systematic review of the literature. [Review] [17 refs]. *Canadian Journal of Rural Medicine*. 2004;9(2):82-8.
56. Smith RD, Wilton P. General practice fundholding: progress to date. *British Journal of General Practice*. 1998;48(430):1253-7.
57. Steiner A, Robinson R. Managed care: US research evidence and its lessons for the NHS. *Journal of Health Services & Research Policy*. 1998;3(3):173-84.
58. Sturm H, Austvoll DA, Aaserud M, Oxman AD, Ramsay C, Vernby A, et al. Pharmaceutical policies: effects of financial incentives for prescribers. *Cochrane Database of Systematic Reviews: Reviews*. 2007(3).
59. Town R, Kane R, Johnson P, Butler M. Economic incentives and physicians' delivery of preventive care: a systematic review. [Review] [19 refs]. *a*. 2005;28(2):234-40.
60. Iglesias CP, Drummond MF, Rovira J, Group NP. Health-care decision-making processes in Latin America: problems and prospects for the use of economic evaluation. *Int J Technol Assess Health Care*. 2005;21(1):1-14.
61. Bates I, Manyasi G, Medina Lara A. Reducing replacement donors in Sub-Saharan Africa: challenges and affordability. *Transfus Med*. 2007 Dec;17(6):434-42.
62. Hyder AA, Waters H, Phillips T, Rehwinkel J. Exploring the economics of motorcycle helmet laws--implications for low and middle-income countries. *Asia Pac J Public Health*. 2007;19(2):16-22.
63. Haines A, Sanders D, Lehmann U, Rowe AK, Lawn JE, Jan S, et al. Achieving child survival goals: potential contribution of community health workers.[see comment]. *Lancet*. 2007 Jun 23;369(9579):2121-31.

64. Gilmartin J, Wright K. The nurse's role in day surgery: a literature review. *Int Nurs Rev.* 2007 Jun;54(2):183-90.
65. Pegurri E, Fox-Rushby JA, Damian W. The effects and costs of expanding the coverage of immunisation services in developing countries: a systematic literature review. *Vaccine.* 2005 Feb 18;23(13):1624-35.
66. Sullivan LE, Metzger DS, Fudala PJ, Fiellin DA. Decreasing international HIV transmission: the role of expanding access to opioid agonist therapies for injection drug users. *Addiction.* 2005 Feb;100(2):150-8.
67. Floyd K. Costs and effectiveness--the impact of economic studies on TB control. *Tuberculosis (Edinb).* 2003;83(1-3):187-200.
68. Walker D, Fox-Rushby JA. Economic evaluation of communicable disease interventions in developing countries: a critical review of the published literature. *Health Econ.* 2000 Dec;9(8):681-98.
69. Doran C. Economic Evaluation of Interventions for Illicit Opioid Dependence: a review of evidence. Geneva, Switzerland: World Health Organization; 2007 17-21 September, 2007.
70. Österberg E. What are the most effective and cost-effective interventions in alcohol control? Copenhagen: WHO Regional Office for Europe's Health Evidence Network (HEN); 2004.
71. Thornicroft G, Tansella M. What are the arguments for community-based mental health care? Copenhagen: WHO Regional Office for Europe's Health Evidence Network (HEN); 2003.
72. Gilbert A, Cornuz J. Which are the most effective and cost-effective interventions for tobacco control? Copenhagen: WHO Regional Office for Europe's Health Evidence Network (HEN); 2003.
73. Hutton G. Considerations in evaluating the cost-effectiveness of environmental health interventions (WHO/SDE/WSH/00.10). Geneva: WHO (Protection of the Human Environment); 2000.
74. World Health Organization. Standards for Maternal and Neonatal Care. Integrated Management of Pregnancy and Childbirth (IMPAC). Geneva: WHO (Department of Making Pregnancy Safer); 2006.
75. McKee M. What are the lessons learned by countries that have had dramatic reductions of their hospital bed capacity? Copenhagen: WHO Regional Office for Europe's Health Evidence Network (HEN); 2003.

76. Thomson S, Mossialos E. What are the equity, efficiency, cost containment and choice implications of private health-care funding in western Europe? Copenhagen: WHO Regional Office for Europe's Health Evidence Network (HEN); 2004.
77. Espallargues M, Gallo P, Mv Pons JMV, Sampietro-Colom L. Situation and approaches to waiting lists in Europe (DARE structured abstract). Health Technology Assessment Database. 2000(1).
78. Lexchin J, Grootendorst P. Effects of prescription drug user fees on drug and health services use and on health status in vulnerable populations: a systematic review of the evidence. [Review] [39 refs]. *Int J Health Serv.* 2004;34(1):101-22.
79. Aaserud M, Dahlgren AT, K"sters JP, Oxman AD, Ramsay C, Sturm H. Pharmaceutical policies: effects of reference pricing, other pricing, and purchasing policies. *Cochrane Database of Systematic Reviews: Reviews.* 2006(2).
80. Finger RP. Cataracts in India: current situation, access, and barriers to services over time. *Ophthalmic Epidemiol.* 2007 May-Jun;14(3):112-8.
81. Hanratty B, Zhang T, Whitehead M. How close have universal health systems come to achieving equity in use of curative services? A systematic review. *Int J Health Serv.* 2007;37(1):89-109.
82. Travis P, Bennett S, Haines A, Pang T, Bhutta Z, Hyder AA, et al. Overcoming health-systems constraints to achieve the Millennium Development Goals. *Lancet.* 2004 Sep 4-10;364(9437):900-6.
83. Murray CJ, Frenk J, Evans T. The Global Campaign for the Health MDGs: challenges, opportunities, and the imperative of shared learning. *Lancet.* 2007 Sep 22;370(9592):1018-20.
84. Victora CG, Black RE, Bryce J. Learning from new initiatives in maternal and child health. *Lancet.* 2007 Sep 29;370(9593):1113-4.
85. Reich M, Takemi K, Roberts M, Hsiao W. Global action on health systems: a proposal for the Toyako G8 summit. *The Lancet.* 2008;371(9615):865-9.