Published by Oxford University Press in association with The London School of Hygiene and Tropical Medicine *Health Policy and Planning* 2010;**25**:15–27

doi:10.1093/heapol/czp059

Eliciting policymakers' and stakeholders' opinions to help shape health system research priorities in the Middle East and North Africa region

Fadi El-Jardali,[1]* Jihad Makhoul,[2] Diana Jamal,[3] Michael Kent Ranson,[4] Nabil M Kronfol[5] and Victoria Tchaghchagian[3]

[1]Assistant Professor, Department of Health Management and Policy, Faculty of Health Sciences, American University of Beirut, Lebanon [2]Associate Professor, Department of Health Behavior and Education, Faculty of Health Sciences, American University of Beirut, Lebanon [3]Research Assistant, Department of Health Management and Policy, Faculty of Health Sciences, American University of Beirut, Lebanon [4]Technical Officer, Alliance for Health Policy and Systems Research, World Health Organization, Geneva, Switzerland and [5]President, Lebanese HealthCare Management Association

*Corresponding author. Assistant Professor, Department of Health Management and Policy, Faculty of Health Sciences, American University of Beirut, P.O. Box 11-0236, Riad El-Solh, Beirut 1107 2020, Lebanon. E-mail: fe08@aub.edu.lb, Telephone: +961-1-374374 ext. 4680-4692. Fax: +961-1-744470. Mobile: +961-3-357775.

Accepted 23 October 2009

Evidence-informed decisions can strengthen health systems. Literature suggests that engaging policymakers and other stakeholders in research priority-setting exercises increases the likelihood of the utilization of research evidence by policymakers. To our knowledge, there has been no previous priority-setting exercise in health policy and systems research in countries of the Middle East and North Africa (MENA) region. This paper presents the results of a recent research priority-setting exercise that identified regional policy concerns and research priorities related to health financing, human resources and the non-state sector, based on stakeholders in nine low and middle income countries (LMICs) of the MENA region. The countries included in this study were Algeria, Egypt, Jordan, Lebanon, Morocco, Palestine, Syria, Tunisia and Yemen.

This multi-phased study used a combination of qualitative and quantitative research techniques. The overall approach was guided by the listening priority-setting approach, adapted slightly to accommodate the context of the nine countries. The study was conducted in four key phases: preparatory work, country-specific work, data analysis and synthesis, and validation and ranking. The study identified the top five policy-relevant health systems research priorities for each of the three thematic areas for the next 3–5 years.

Study findings can help inform and direct future plans to generate, disseminate and use research evidence for LMICs in the MENA region. Our study process and results could help reduce the great chasm between the policy and research worlds in the MENA region. It is hoped that funding agencies and countries will support and align financial and human resources towards addressing the research priorities that have been identified.

Keywords health financing, human resources for health, non-state sector, low and middle income countries, Middle East and North Africa

KEY MESSAGES

- The top five research priorities for health financing, human resources for health and the role of non-state sector for the next 3–5 years are identified.
- Focusing on the policy-relevant research areas identified in this study will, help LMICs in the MENA region to make progress towards their national health goals and the health-related Millennium Development Goals.

Introduction

Evidence-informed decisions can strengthen health systems. Literature indicates that evidence from research is underutilized in policy (Innvær *et al*. 2002), and the Middle East and North Africa (MENA) region is no exception. Several reasons for this have been provided in the literature including limited production of policy relevant research on health systems, lack of awareness on how to use evidence in policy making, and lack of effective methods for dissemination of research findings (Lavis *et al*. 2006). In the MENA region, the need for evidence-informed health policies and better use of research evidence has been emphasized in several studies (Kammen *et al*. 2006; Omar *et al*. 2007). While little is known about the factors affecting the use of evidence by policymakers in the MENA region, literature indicates that one of the key barriers to integrating research into policy is that research evidence is not relevant to the policymakers' concerns (Lavis *et al*. 2006). To address this, there is a need to engage policymakers in research priority-setting exercises.

Policy-relevant research priority-setting exercises have been conducted in many developed and developing countries (COHRED 2006; Ham 2007). Literature suggests that engaging policymakers and stakeholders in research priority-setting exercises increases the likelihood of the utilization of research evidence by policymakers (COHRED 2006; Lavis *et al*. 2006). Such engagement can also promote the contribution of research to the health of the population and the performance of the health system (Global Forum for Health Research 2004).

There has been no previous priority-setting exercise in health policy and systems research in MENA countries, although broad health research priority-setting exercises have been recommended (COHRED and WHO EMRO 2000). Previous priority-setting exercises in the region were more disease-specific and did not include health systems research, and were usually driven by researchers rather than policymakers. This paper aims at presenting the results of a recent research priority-setting exercise that identified regional policy concerns and research priorities related to health financing, human resources and the non-state sector, based on the perceptions of key stakeholders. The nine countries included in this study are: Algeria, Egypt, Jordan, Lebanon, Morocco, Palestine, Syria, Tunisia and Yemen. These countries represent the majority of LMICs in the region. To our knowledge, this is the first health research priority-setting exercise in the MENA region in which a diverse group of stakeholders has participated.

Context

Available evidence suggests that health financing, human resources for health (HRH) and the role of the non-state sector are central to improving health systems and health outcomes. In fact, the WHO 2007 report on strengthening health systems presents the six building blocks of health system strengthening, which include health financing, HRH and health delivery (including non-state delivery) as essential components of their framework (WHO 2007). Below, we introduce the three topics within the context of the region.

Theme 1: Health financing

The way health systems are financed has important implications for access to health care services, equity, efficiency, quality of care and for health outcomes (Palmer *et al*. 2004). Financial barriers to access to care and the rise in out-of-pocket spending, accompanied by a slow growth in prepayment schemes in the form of social and private health insurance, have increased inequities in health care financing, exposing large segments of the population in different countries across different regions to catastrophic health care expenditures (Drechsler & Jütting 2007; McIntyre *et al*. 2008). MENA countries are no exception. Many LMICs in the MENA region have developed pluralistic health financing and delivery systems, which has led to a lack of coordination and inefficiency (Schieber *et al*. 1998). It is perceived that health financing systems in several LMICs have failed to equitably pool population health risks to protect citizens from the costs of catastrophic illnesses. Governments of LMICs have opted to search for additional sources of funding such as community-based health insurance or social health insurance (Task Force on Health Systems Research 2005). However, such schemes are generally small and offer a limited contribution towards overall health system goals. Despite some differences across countries, some challenges pertaining to health financing that are common across many countries include poor resource allocation, poor public–private partnerships and a lack of policies for financial sustainability, which are reflected in poor quality (Schieber *et al*. 1998).

Theme 2: Human resources for health

The lack of explicit strengthening of HRH policy, planning and management has been identified as an important reason for the failure of past attempts to reform health systems (Kolehmainen-Aitken 1998). The nine LMICs in the region lack sound HRH policies and have poor planning, limited capacity of educational and training programmes as well as inefficient management of HRH. The region has the second lowest HRH density (Africa has the lowest) among the six administrative regions of the WHO (WHO 2006). A recent study found that while increasing the numbers of HRH can improve population health indicators, it cannot be considered in isolation of socio-economic factors (such as education, poverty,

income, etc.) which also exert an effect on the health of the population (El-Jardali *et al*. 2007a). In fact, the shortage of HRH is more complex than a simple imbalance in supply and demand. Some issues hindering HRH development in MENA include shortage, inappropriate skills mix, underemployment, geographic maldistribution and poor work environments (EMRO 2005). In most countries in MENA, the competence of health care providers is often questioned due to inadequate/inappropriate training. In addition, there is a virtual absence of some types of health-care professionals; and in some cases health workers assume tasks beyond their scope of practice to compensate for such shortages. As is the case in other LMICs (Chen *et al*. 2004), poor countries of the MENA region also suffer from a lack of recruitment and retention strategies, emigration of skilled health personnel and absence of a minimum HRH database for better decision-making.

Theme 3: Role of the non-state sector

In many MENA countries, the state is no longer seen as the sole provider of health care services. In this region, the non-state sector encompasses many players including the private sector, non-governmental organizations (NGOs), the civil society, faith-based organizations and the informal sector (Elbayar 2005). Due to the pluralistic nature of health systems in LMICs in the region, the non-state sector plays a crucial role in the delivery of health services. Governments are increasingly recognizing that the health of populations is unlikely to improve without the active engagement of the non-state sector (Mason 2004). In several MENA countries, there has been a significant increase in the number and scope of operations of non-state providers. This is primarily due to the weak capacity of the state to provide comprehensive health care services that are responsive to population needs (Elbayar 2005). The blurry boundaries and lack of clarity on roles, responsibilities and accountabilities between the state and non-state sector have created critical challenges to LMICs in the region. Efforts by governments to engage the non-state sector are hindered by a lack of data regarding the sector, including size and scope, role, capacity and quality of services (Mason 2004).

Methods

This multi-phased study used a combination of qualitative and quantitative research techniques. The overall approach was guided by the listening priority-setting approach that was developed by Lomas *et al*. (2003) and slightly adapted to accommodate the context of the nine countries. Our study was conducted in four key phases: preparatory work, country-specific work, data analysis and synthesis, and validation and ranking (Figure 1). The research effort was coordinated by a team of researchers from the American University of Beirut. The nine countries were purposively selected based on their income classification (by the World Bank list of economies 2007) and in consultation with members of the Middle East and North Africa Health Policy Forum. The selection was also influenced by feasibility, budgetary and time constraints.

In the *first phase*, the research team conducted preparatory work in the form of a literature review of existing policy concerns and research priorities on the three themes. The research team reviewed scholarly databases (such as Medline, CINAHL, EMBASE) as well as websites of international organizations, and ministries of health and governmental agencies in the countries under study.

In this phase, researchers in each country were identified to help conduct the planned work. The choice of these local researchers was guided by defined criteria including previous experience in undertaking health systems research, good knowledge of the three thematic areas, potential to access relevant key informants, and the ability to commit to conducting the research. Once selected, local researchers identified the key country-specific informants from the public sector (such as ministries of health, finance, education, and labour); health professional groups and associations (such as orders of physicians, nurses, pharmacists, dentists; syndicates and associations); academic institutions (such as deans and directors of faculties of health sciences, departments of health management and policy, expert researchers); and the non-state sector (such as private hospitals, NGOs, civil society groups and faith-based organizations active in the health field as well as media representatives). The criteria used for the purposive selection of key informants were as follows:

- Senior and middle level policymakers from the public sector;
- Representatives from professional associations who are active in trying to shape and influence health policies;
- Researchers who are active in the realm of health systems research and/representatives from university departments and faculties that produce health systems research;
- Representatives of the non-state sector who are active in trying to shape and influence health policies.

During this phase, a methodology workshop that included the regional research team and the local researchers was conducted. In this workshop, an interview guide and schedule were developed for all countries, taking into consideration local contextual issues. The interview guide, consisting of a small set of open-ended questions, was used to guide individual interviews and focus group discussions in each country and allow the local researchers to investigate perceived policy concerns and research priorities. The tool also included probes that the local researchers used to guide and structure the discussion. To ensure a consistent approach, the lead research team trained the local researchers on using the interview tool for data collection in addition to methods for analysis and reporting.

The English version of the interview schedule was piloted in Lebanon during June 2007 after which slight modifications were made. The interview guide was later translated into local dialects and languages (Arabic and French).

In the *second phase*, data were collected by local researchers. The interviews were all audio-taped with the consent of the participants and subsequently transcribed and coded. Informed consent was obtained from all key informants according to the ethical protocol. The regional research team compared the content of selected audiotapes from each country with transcripts to ensure the accuracy of transcripts. During this phase, the local researchers also conducted preliminary analysis

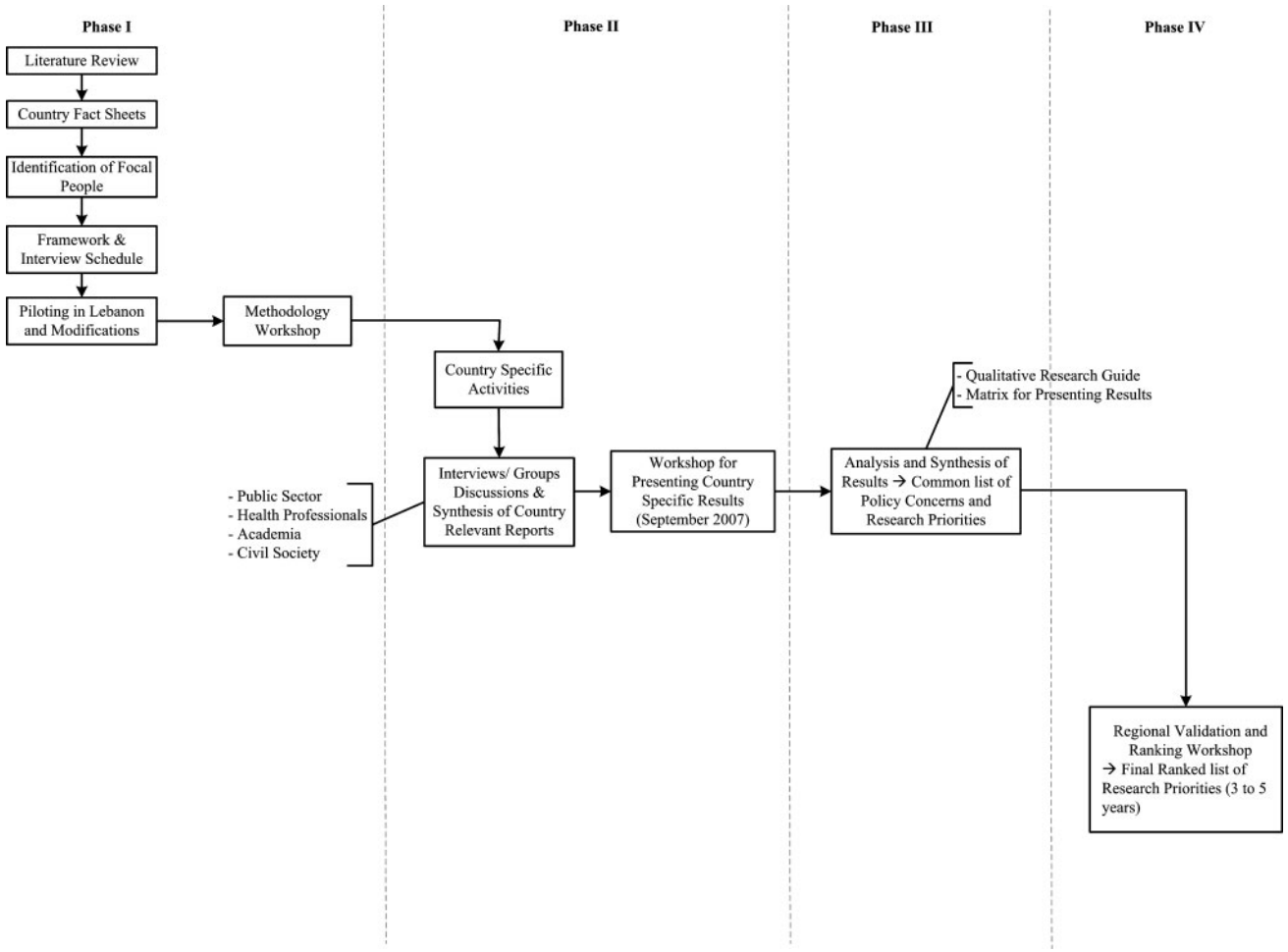

Figure 1 Summary of key project activities.

and sent their report of findings, together with the data collected and the transcripts, to the regional research team.

Once country-specific work was complete, another workshop was held where local researchers presented their country-specific findings. The regional research team and local researchers discussed the results, including key challenges, lessons learned and next steps. Such discussion helped inform and guide phases three and four of this study.

During the *third phase*, data from the nine countries were analysed by the regional research team using thematic analysis. Findings from the nine countries were coded and brought together in a spreadsheet that included all three themes to better manage the rich data. Open coding was first conducted: findings were broken into chunks that relate to similar concepts or ideas. Axial coding was then conducted: this involved organizing the emerging concepts into themes (Kendall 1999). The qualitative data were then analysed by recurring themes and emerging patterns. The common policy concerns and research priorities that emerged across the nine countries were grouped under three common lists, each pertaining to a theme.

In the *fourth phase*, and once common policy concerns and research priorities were identified, a regional validation and ranking workshop was held. The objectives of this workshop were to: (1) validate the common list of policy concerns and research priorities related to three thematic areas that emerged; and (2) rank the research priorities (for 3–5 years) on the three themes. The overall goal was to reach a consensus among policymakers, researchers and other stakeholders on a policy-relevant research agenda on the three themes.

This workshop brought together 26 policymakers, researchers and representatives of the non-state sector from the nine countries (eight policymakers, 13 researchers and five representatives of the non-state sector) in addition to the three regional research team members and four support staff. These participants had been previously interviewed by local researchers in the study countries, and were selected in part as researchers perceived them to be relatively well-informed about the three themes of interest. A number of female key informants were included, in order to strike a gender balance. Each of the countries suggested at least three potential participants based on the criteria above.

The workshop spanned 2 days where policy concerns and research priorities were validated and ranked using a pre-defined framework. On the first day, participants validated policy concerns and research priorities by scoring each item on

a 3-point Likert scale (1 = unimportant; 2 = important; and 3 = very important). Research priorities exceeding 50% agreement on 'very important' were ranked on the second day. The ranking on the second day was divided into three rounds, one for each theme. Ranking was based on (Varkevisser *et al*. 1991):

- *Relevance*: of the research priorities to policy concerns
- *Urgency*: are they needed within the next 3–5 years?
- *Feasibility*: are the research priorities do-able in your country?
- *Applicability*: once we have evidence on these research priorities, can they drive policy changes?
- *Originality*: has this priority not already been addressed in your country?

The criteria were ranked on a 3-point Likert scale (1 = low, 2 = medium and 3 = high). Participants decided to give equal weight to all criteria and therefore total scores in addition to means and standard deviations were computed. The five items with the highest mean scores under each of the three themes were designated as top research priorities. Additionally, scores were calculated by type of participant; that is, the means and standard deviations for each item were calculated for each sub-group of participants.

Findings

This section presents the common policy concerns and research priorities that emerged across the nine countries for each of the three themes. A total of 23 focus groups, and 54 key informant interviews were held, and the total number of participants in the nine countries was 206. The first part of the findings outlined below represents the outcome of thematic analysis of the data collected from the nine countries. The list of common policy concerns and research priorities for each theme is summarized in Table 1.

Theme I: Health financing

Policy concerns

A number of respondents expressed that countries are suffering from inadequate health spending which is reflected in poor health and quality of care. Across all the nine countries, respondents voiced serious concerns about the poor quality of services resulting from inadequate spending:

> *Heath financing cannot be separated from quality of care. You cannot expect good quality of services when you have poor health financing.* (Key informant in Algeria)

This concern is potentially an outcome of the absence of a social insurance system to protect the population, particularly high-risk groups:

> *The health insurance law neglects the concept of social insurance and only focuses on for-profit insurance.* (Key informant in Egypt)

These issues are exacerbated by the lack of regular needs assessment which impedes ministries of health and population from allocating resources efficiently to meet population needs. Inefficient allocation is a byproduct of centralized health systems which are not flexible enough to adapt to emerging needs. This is, in turn, an outcome of limited communication between ministries of health and ministries of finance to resolve issues around limited funding, payment of private providers or other similar issues, as stated by respondents in several countries:

> *Communication between ministries of health and financing should be improved. The Ministry of Finance believes it is allocating more than it should to health care expenditure, while the Ministry of Public Health reported that the funding it receives is not sufficient.* (Key informant in Lebanon)

Closely related to this was the mechanism of paying private providers, which is mostly unregulated and unmonitored. The combined policy concerns summarized above have resulted in lack of social justice and equity, which encompasses not only funding allocation but also health care delivery.

Research priorities

Based on the identified policy challenges, a range of research priorities on health financing emerged from respondents in the nine countries. A priority that was most frequently mentioned by respondents related to the need to assess population health needs in an effort to make health financing more efficient and responsive. This included identifying ways and means to assess population health needs, increase the level of health spending, determine poor and underprivileged population groups, assess population health status and burden of disease, and assess household ability to pay for health care. Identifying ways and means to enhance quality of health services provided to patients emerged in the study countries.

The issue of developing an equitable health system emerged frequently within the study countries. Respondents highlighted a need to better define the elements of an equitable health system and also to identify ways to guarantee equity through an effective social health insurance system. Developing a solid social health insurance system emerged in association with the issue of equity, whereby respondents placed high priority on identifying best practices that can help countries develop and implement a national social health insurance system. Identifying ways to develop and implement strong and effective contracting mechanisms with the private and the non-state sector was identified as a common research priority. As discussed in the policy concerns, countries complained of insufficient health financing which reflects on expenditures, spending and health outcomes. As such, respondents proposed identifying inequities in financing, and causes of high expenditures, particularly the high level of out-of-pocket spending in the nine LMICs. They also recommended identifying best practices for ensuring better use of existing financial resources and improving allocative efficiency to ensure value for money, in addition to developing methods for tracking of financial resources invested in health care. Another research priority related to identifying ways to improve coordination between governmental bodies. This would include better

Table 1 Common policy concerns and research priorities across the three themes

Theme	Policy concerns	Research priorities
Health financing	1. Poor health spending 2. Poor quality of care 3. Absence of a social security insurance system 4. Lack of regular needs assessment 5. Centralization of services and limited communication between ministries 6. Lack of a structured mechanism of paying private providers 7. Lack of social justice and equity	1. Assessment of population health needs and resources 2. Enhancing quality of services rendered to patients 3. Develop a more equitable system 4. Develop a solid social health insurance system 5. Enhance public–private partnerships 6. Increase health financing 7. Improve coordination between governmental bodies
Human resources for health	1. Poor HRH planning and lack of data 2. Shortages 3. Geographic and sectoral mal-distribution 4. Lack of programmes for continuing education and training 5. Lack of updated curricula and educational programmes 6. Lack of re-licensing policies for health professionals 7. Lack of performance evaluation 8. Lack of financial and non-financial incentives 9. Out-migration 10. Lack of regulation of foreign-educated health workforce and non-national health workers 11. Poor social image of some segments of the health workforce	1. Improving HRH planning 2. Developing a minimum HRH database 3. Improving education and training 4. Improving HRH management
Non-state sector	1. Poor regulation of the non-state sector 2. No monitoring of performance 3. Mistrust between state and non-state sectors 4. Limited information on services provided, quality and capacity 5. Lack of needs assessment (poor coordination) and duplication of services 6. Misuse and over-utilization of services in the non-state sector 7. Unclear role for the civil society 8. Dual employment in both sectors	1. Build effective public–private partnerships 2. Determine the magnitude and capacity of the non-state sector 3. Structure the roles and responsibilities of the non-state sector 4. Performance evaluation

clarification of the functions of and coordination process between ministries (such as ministries of health and of finance) in improving health financing and the quality of services.

Theme 2: Human resources for health

The policy concerns and priorities that emerged from the nine countries in relation to HRH are divided into three broad areas: planning, education and training, and management (and regulation).

Policy concerns

The nine countries suffer from poor HRH planning, which is encumbered by the lack of basic data and information on the numbers, types and qualifications of health workers. Across all nine countries, respondents stated that the lack of data hinders planning and decision-making on HRH related issues, particularly health worker shortages in terms of numbers and specialities. In two of the nine countries, respondents said that the shortages have forced them to rely on foreign-trained health workers (as in the case of Algeria and Tunisia). But this process is unstructured and has displaced nationally trained health workers in the aforementioned countries.

A number of respondents in several countries stated that their countries are suffering from major geographic and sectoral mal-distribution of health workers. The majority of health workers are concentrated in urban areas, leaving rural areas severely underserved. The mal-distribution of health workers especially between urban and rural and between public and private sectors was expressed as a major policy concern by respondents

across all nine countries. Several respondents in some countries said that this is due to poor planning and limited supply. For others, geographic mal-distribution was linked to distribution of health facilities and medical and nursing schools:

> *Problems of geographical mal-distribution exist where some areas have very low numbers of qualified personnel . . . educational institutions are mostly located in the capital Beirut and most people stay and work in Beirut after graduation.* (Key informant in Lebanon)

Another policy concern expressed by respondents across all the nine countries was the lack of a formal continuing education and training programme that enables health workers to stay up-to-date and also to advance in their career. The outdated curricula and educational programmes in many countries further complicate this issue as respondents expressed serious concerns about the content and quality of the educational programmes that train and prepare students to enter the health workforce:

> *The current quality of the educational programmes is reflected in the type of graduates. You cannot expect to produce highly competent and trained health professionals without a reform of educational institutions in terms of the quality and content of current programmes and the physical infrastructure as well.* (Key informant in Algeria)

The issue of the lack of re-licensing programmes and the need for better regulation of health professionals was also raised by respondents in several countries, particularly as it relates to quality of care provided by health workers:

> *The current licensing system for health professionals is similar to the driving licensing system: once a health professional obtains his or her license, they have it forever.* (Key informant in Palestine)

Across the nine countries, respondents stated that formal systems of performance evaluation are lacking and this is contributing to the challenges in providing quality care to patients. These two issues of re-licensing and performance evaluation were found to go hand in hand when speaking of quality of care rendered to patients:

> *Poor medical practice is a result of absence of re-licensing and poor evaluation of performance. It might be informative to assess the degree of physicians' malpractice, and I would not be surprised if findings prove that over 30% of fatal cases are a result of medical malpractice.* (Key informant in Egypt)

A number of respondents in several countries said that health workers prefer working in the private sector than the public sector as the former offers higher wages. Many respondents expressed concerns related to dual employment, as health workers in the public sector may often choose to engage in dual employment in the private sector to complement their poor wages. To them, this poses serious human resources management challenges.

Closely linked to this concern were the poor financial and non-financial incentives offered to health workers in the study countries. This is one of the main triggers to the excessive exodus of health workers through emigration, and the poor social image of some professions (i.e. nursing) as stated by some respondents:

> *The list of factors driving migration of health workers is quite long. It includes poor financial and even non-financial incentives, poor and unsafe work environment, lack of recognition of some professionals and even the unstable political situation.* (Key informant in Lebanon)

In countries that depend on foreign-trained health workers, respondents emphasized the need to regulate this workforce so that locally trained professionals are not disregarded in favour of the former. This was reported in Algeria and Tunisia where foreign-trained physicians are often favoured over locally trained physicians. A final concern expressed by respondents across the nine countries was the poor social image of health care providers, namely nurses, which affects entry into the profession, attrition and overall shortages.

Research priorities

Based on the identified policy challenges, a range of research priorities on HRH emerged from key informants in the nine countries. In terms of HRH planning, research priorities include identifying ways and means to: develop simulation models to help with HRH planning, obtain more accurate estimates on the existing health workforce to better determine future needs, and conduct HRH mapping and gap analysis. In this context, creating a minimum HRH database emerged as a research priority in the nine countries. This database could include information on the number and distribution of the existing workforce at a country level to assist in determining supply and demand at the policy level.

In terms of education and training, research priorities include identifying ways and means to: improve education and training of health workers in the nine countries; revise and improve educational and training curricula; examine the role and impacts of accreditation on improving programmes; examine the role and impact of re-licensing health professionals on quality of care.

As for HRH management, research priorities include identifying ways and means to: better manage existing HRH through better recruitment and retention strategies; develop context-specific incentive mechanisms (financial and non-financial) to manage and retain HRH and reduce attrition and turnover; assess performance and productivity through performance evaluation; study reasons for out-migration; and measure staff and patient satisfaction.

Theme 3: Role of the non-state sector

The policy concerns and priorities that emerged from the nine countries in relation to the role of the non-state sector are divided into three broad areas: regulation, coordination, and quality and performance monitoring.

Policy concerns

One of the major policy concerns that were expressed by respondents across the nine countries was the poor regulation of the non-state sector by the state. This issue encompasses poor stewardship by government, limited regulatory capacity of the government, and the lack of a strategic vision about the role and responsibility of this sector by the state. Under this concern, respondents identified issues related to lack of effective public–private partnerships. They expressed concerns related to mistrust between the state and the non-state sector, which in turn make some existing partnerships and contracting mechanisms ineffective and inefficient. This was of particular concern in countries where private health insurance markets have developed significantly:

> *The private sector is flourishing without oversight or any form of evaluation. Partnership is limited, communication is poor and effective regulation is needed.* (Key informant in Algeria)

While respondents acknowledged the critical importance of the non-state sector, they expressed concerns related to poor coordination which resulted in duplication between public and non-state sectors in terms of functions and service delivery. Misuse and over-utilization of services, particularly in the private sector emerged as a key concern in many study countries:

> *A liberal economy allowed the private sector to purchase advanced technological equipment and make people use it whether they need it or not. This is a waste of money resulting in unneeded and unjustified cost escalation.* (Key informant in Lebanon)

When attempting to explain the reasons for poor coordination, respondents in several countries expressed concerns about the marginalization of the non-state sector, particularly civil society groups in terms of policy dialogues and the need to involve them through defining its role and responsibilities:

> *The essential problem is the lack of participation of the non-state sector in the decision-making process and policy development.* (Key informant in Tunisia)

In terms of quality, respondents across all nine countries expressed concerns related to the limited information available for the state in relation to the quality of services provided by the non-state sector. Respondents discussed the absence of mechanisms to monitor the performance of the non-state sector. This is due to lack of quality standards that are mandated by the state sector:

> *There is a need for monitoring mechanisms to enhance their performance.* (Key informant in Palestine)

Research priorities

Based on the identified policy concerns, respondents identified a range of common research priorities. In terms of regulation, research priorities included ways and means to make public–private partnerships effective; to define the role, responsibility, contribution and accountability of the non-state sector through a national health system plan.

In terms of coordination, research priorities included identifying ways and means to improve coordination; optimize resources and complementarities of service provision and functions between the two sectors; determine the magnitude and capacity of the non-state sector; and engage the non-state sector in policy dialogue and systems planning.

As for quality and performance monitoring, research priorities included identifying ways and means to monitor and evaluate the performance and service provision of the non-state sector including client satisfaction, and to develop mandatory quality standards and explore the impact of accreditation.

Policy-relevant research priorities (3–5 years)

As discussed in the methods section, research priorities that exceeded 50% agreement as very important were ranked on the next day of the workshop based on relevance, urgency, feasibility, applicability and originality. The top five research priorities with the highest mean scores under each of the three themes are outlined in Tables 2, 3 and 4.

It should be noted that weighting of individual item ranks by type of key informant revealed some interesting fluctuations in ranking research priorities. As shown in Table 2, the item on the role of social health insurance in guaranteeing equity ranked highest for policymakers, but it ranked 5th among researchers and academics and 6th among representatives of the non-state sector. As shown in Table 3, the item on methods to measure HRH performance and productivity ranked highest for policymakers, but it ranked 8th among researchers and academics and 4th among representatives of the non-state sector. As for the non-state sector theme, Table 4 shows a bit more consistency of responses across the type of informants. For instance, they ranked the item on regulating and monitoring the quality of care in the private sector as the most important research priority. However, the item on areas where the state and civil society groups can complement each other ranked 2nd for policymakers, but it ranked 7th for researchers and academics and 6th for representatives of the non-state sector.

Discussion

Our study provides clear insights into stakeholders' views on future health system research priorities in LMICs in the MENA region. By using a multi-phased iterative process and by engaging policymakers and stakeholders, the study identified the top five research priorities for health financing, human resources for health and the role of the non-state sector for the next 3–5 years.

In terms of health financing, the top five research priorities that emerged from overall ranking of all stakeholders were: elements of equitable financing; household ability to pay for health care; linking population health needs to health spending; role of the social health insurance system in guaranteeing equity; and identifying best practices to develop and implement a national social health insurance system. For HRH, the top five research priorities were: means to develop HRH information systems in ministries of health and national observatories; gaps in existing education and training programmes; information on

Table 2 Ranking of research priorities related to health financing

Health financing	Overall ($n=26$)		Weighted by...					
			Policymakers ($n=8$)		Academics/researchers ($n=13$)		Non-state sector ($n=5$)	
	Rank	Mean (SD)	Rank	Mean (SD)	Rank	Mean (SD)	Rank	Mean (SD)
2.1 Elements of an equitable health financing system	1	2.53 (0.35)	2	2.65 (0.38)	4	2.47 (0.36)	4	2.50 (0.26)
1.4 Household ability to pay for health care	2	2.46 (0.65)	6	2.50 (0.76)	1	2.55 (0.53)	8	2.10 (0.82)
1.3 Linking population health needs to health spending	3	2.44 (0.43)	9	2.23 (0.58)	2	2.50 (0.29)	1	2.70 (0.35)
2.2 Role of the social health insurance system in guaranteeing equity	4	2.44 (0.39)	1	2.68 (0.30)	5	2.38 (0.39)	6	2.27 (0.46)
3.1 Identifying best practices to develop and implement a national social health insurance system	5	2.43 (0.40)	3	2.60 (0.35)	8	2.27 (0.39)	2	2.55 (0.44)
5.1 Clarifying functions and coordination processes between ministries (for example the ministries of health and of finance) to improve health system financing and quality of services	6	2.41 (0.46)	8	2.35 (0.51)	3	2.48 (0.40)	5	2.30 (0.62)
4.3 Means to track financial resources invested in health care to ensure value for money	7	2.40 (0.41)	4	2.60 (0.35)	9	2.22 (0.42)	3	2.55 (0.34)
4.2 Accurate estimation of the health expenditure from the public and the private sectors including out-of-pocket expenditure	8	2.38 (0.49)	5	2.55 (0.42)	6	2.30 (0.45)	7	2.25 (0.75)
1.2 Population health status and needs	9	2.28 (0.42)	7	2.38 (0.49)	7	2.30 (0.32)	9	2.05 (0.53)

Table 3 Ranking of research priorities related to human resources for health (HRH)

Human resources for health	Overall ($n=26$)		Weighted by...					
			Policymakers ($n=8$)		Academics/researchers ($n=13$)		Non-state sector ($n=5$)	
	Rank	Mean (SD)	Rank	Mean (SD)	Rank	Mean (SD)	Rank	Mean (SD)
2.2 Means to develop HRH information systems in ministries of health and national observatories	1	2.59 (0.27)	4	2.69 (0.30)	2	2.51 (0.24)	1	2.80 (0.28)
4.2 Gaps in existing education and training programmes	2	2.54 (0.38)	2	2.77 (0.23)	5	2.42 (0.42)	3	2.60 (0.20)
3.8 Information on patient satisfaction	3	2.50 (0.43)	7	2.57 (0.55)	4	2.48 (0.39)	6	2.47 (0.50)
1.1 Accurate estimates and needs in numbers and specialities (mapping)	4	2.48 (0.52)	10	2.23 (0.81)	1	2.55 (0.34)	2	2.73 (0.12)
4.1 Ways that can enable education and training programmes to meet the population health needs	5	2.46 (0.41)	3	2.74 (0.25)	6	2.31 (0.43)	5	2.50 (0.14)
3.3 Methods to measure HRH performance and productivity	6	2.45 (0.39)	1	2.77 (0.29)	8	2.25 (0.33)	4	2.60 (0.35)
1.2 Develop simulation models for HRH planning	7	2.43 (0.46)	8	2.37 (0.64)	3	2.49 (0.40)	7	2.33 (0.31)
3.4 Elements of performance evaluation	8	2.37 (0.39)	5	2.68 (0.30)	7	2.31 (0.36)	8	2.13 (0.46)
3.1 Develop incentive mechanisms to better manage the existing stock of HRH	9	2.30 (0.61)	6	2.63 (0.24)	9	2.25 (0.67)	9	1.80 (0.72)
3.7 Ways to improve staff satisfaction	10	2.15 (0.54)	9	2.30 (0.55)	10	2.18 (0.50)	10	1.73 (0.70)

Table 4 Ranking of research priorities related to the role of the non-state sector

Role of the non-state sector	Overall ($n=26$)		Weighted by...					
			Policymakers ($n=8$)		Academics/researchers ($n=13$)		Non-state sector ($n=5$)	
	Rank	Mean (SD)	Rank	Mean (SD)	Rank	Mean (SD)	Rank	Mean (SD)
4.1 Ways to regulate and monitor the quality of care in the private sector	1	2.52 (0.35)	1	2.54 (0.36)	1	2.47 (0.33)	1	2.65 (0.41)
3.2 Ways to optimize the use of the existing resources of the non-state sector to meet health system objectives	2	2.46 (0.36)	6	2.43 (0.52)	5	2.42 (0.28)	2	2.65 (0.30)
1.4 Ways for the public and private sectors to complement their service delivery	3	2.42 (0.35)	5	2.46 (0.22)	2	2.45 (0.24)	5	2.25 (0.72)
1.3 Areas where the state and civil society groups can complement each other	4	2.38 (0.41)	2	2.53 (0.21)	7	2.32 (0.39)	6	2.25 (0.72)
3.3 National database on the non-state sector	5	2.38 (0.47)	9	2.35 (0.50)	3	2.45 (0.30)	8	2.20 (0.85)
1.1 Foundation/elements for building strong public–private partnerships	6	2.37 (0.29)	8	2.35 (0.37)	8	2.32 (0.23)	3	2.55 (0.30)
4.2 Accreditation standards for private sector	7	2.33 (0.59)	3	2.53 (0.69)	11	2.23 (0.53)	7	2.25 (0.60)
1.5 Ways to develop effective contracting mechanisms with the private and other non-state sectors	8	2.32 (0.51)	4	2.49 (0.49)	12	2.18 (0.49)	4	2.45 (0.64)
2.2 National plan for the contribution of the non-state sector	9	2.29 (0.55)	7	2.40 (0.55)	4	2.43 (0.42)	12	1.65 (0.55)
4.3 Measuring client satisfaction	10	2.29 (0.54)	10	2.31 (0.58)	6	2.35 (0.39)	9	2.05 (0.91)
2.1 Defining the role and responsibility of the non-state sector	11	2.19 (0.61)	12	2.14 (0.72)	9	2.29 (0.57)	10	2.00 (0.63)
3.1 Scope, resources and kind of services provided by the non-state sector	12	2.18 (0.52)	11	2.17 (0.62)	10	2.25 (0.41)	11	1.93 (0.81)

patient satisfaction; accurate estimates and needs in numbers and specialities; and ways that can enable education and training programmes to meet the population health needs. And on the role of the non-state sector, the top five research priorities were: ways to regulate and monitor the quality of care in the private sector; ways to optimize the use of the existing resources of the non-state sector to meet health system objectives; ways for the public and private sectors to complement their service delivery; areas where the state and civil society groups can complement each other; and a national database on the non-state sector.

Based on the ranking results of the three themes, there was fluctuation in ranking across the types of key informants (Tables 2, 3 and 4). This might reflect the different background and interests of key informants and also their perceived impact in addressing these research priorities. Each type of key informant might be interested in issues where they can have the most pronounced impact and role in eliciting change. It should be noted, however, that there was some general similarity between researchers and representatives of the non-state sector, whereas policymakers' views tended to differ from their counterparts. For instance, the top five research priorities that ranked highest for policymakers were: role of the social health insurance system in guaranteeing equity; elements of an equitable health financing system; identifying best practices to develop and implement a national social health insurance system; means to track financial resources invested in health care to ensure value for money; and accurate estimation of health expenditure from the public and the private sectors including out-of-pocket expenditure.

The findings of this study closely correspond with research findings from LMICs in other regions. For instance, improving equity in financing, increasing health spending and designing effective social health insurance systems appeared to be priorities for LMICs in other regions (Ranson *et al*. 2008a). As for HRH, resolving issues related to shortages in numbers, specialities as well as mal-distribution (geographic regions and sectors) also extend to other LMICs in different regions (Ranson *et al*. 2008b). In terms of the priorities related to the non-state sector, the need for monitoring to ensure provision of quality services and the need to build effective partnerships between the public and private sectors also emerged as priorities for other regions (WHO 2008). In addition, our findings correspond to some of the priorities set out by the Task Force on Health Systems Research (2004), including community-based financing and health insurance; equitable, effective and efficient health care; health information systems; better planning of HRH; improving governance and accountability; and effective approaches to intersectoral engagement in health. The Task Force on Health Systems Research (2004) indicated that such priorities should be met if the Millennium Development Goals are to be attained.

Strengths and limitations

Our study has four main strengths: (1) it is the first participatory and interpretive priority-setting exercise conducted in LMICs in the MENA region; (2) we sampled a very diverse group of stakeholders, including policymakers, academia, professional associations, private sector and civil society representatives across the nine countries; (3) we used a multi-phased process which combined qualitative and quantitative research techniques; and (4) we focused primarily on policy-relevant research needs of LMICs in the region where few other research priority-setting processes have had such a focus.

Our study has four main limitations. First, there is a lack of sufficient and up-to-date reports and data on the three themes in the nine countries. Much of the health system literature in the region is unpublished and not easily accessible to the public. This created some challenges in preparing the interview schedule, and more importantly, several local researchers were not able to refer to relevant evidence in preparation for the interviews.

Second, due to the nature of interviews and group discussion, data collection and analysis at the country level did not distinguish between responses given by policymakers, researchers and representatives of the non-state sector when identifying concerns and priorities. Therefore, we were unable during the third phase to define concerns and priorities related to the three themes as expressed by each type of informant. We tried to mitigate this issue during the regional workshop whereby responses of different types of informants were analysed, and similarities and differences were observed.

Third, while key informants at the country level were able to identify policy concerns, some faced difficulty in translating them into research priorities. This can explain in part why there was not full correlation between policy concerns and research priorities. This mis-match is partly due to limited knowledge on translating policy concerns into research priorities. This can be potentially accounted for by the fact that not all policy concerns require research, in some instances, they require political judgment or action. For instance, when it comes to insufficient health spending, research may have limited capacity in addressing this issue compared with action by policymakers to increase budgetary allowances to the health sector. This limitation also highlights the need for a common platform for stakeholders to understand key health systems challenges and concerns in order to arrive at well-identified research priorities.

The last limitation of this study was that respondents were purposefully (rather than randomly) selected so the findings might not be representative of all stakeholders.

Implications for funders, policymakers and researchers

The Ministerial Summit on Health Research in Mexico in 2004 and the Global Ministerial Forum on Research for Health in Bamako in 2008 focused on the need to use research evidence as a major policy-planning tool. In November 2008, 53 countries officially represented at the Global Ministerial Forum on Research for Health issued the Bamako Call to Action, urging national governments and international development agencies to continue to promote and finance the application of evidence-informed policies; and to engage policymakers and practitioners in using evidence to inform decision-making. It is hoped that focusing on the policy-relevant research areas that were identified in this study will help LMICs in the MENA region to make progress towards the national health goals and health-related Millennium Development Goals.

Our study process and results could help reduce the great chasm between the policy and research worlds in the MENA region. It is hoped that funding agencies and countries will support and align financial and human resources towards addressing the research priorities and knowledge gaps that have been identified. Funding for health system research should become aligned with national and regional priorities. Innvær *et al*. (2002) reported that the direct use of research evidence is greatest in the case of commissioned research to fill a knowledge gap identified by stakeholders.

The demand for change in the way health policies are made in several countries in the MENA region is high. It is also hoped that the priorities generated from this study become integrated into current and future strategic plans of the Ministries of Health and related ministries in the nine study countries. The availability of policy-relevant evidence and good articulation of options along with institutional flexibility would increase the pace of health system reform in the region. It is important to note that increasing the supply of policy-relevant evidence will offer an imperfect and unsustainable solution if not complemented by improvements in the capacity of health policy units—public (i.e. different ministries) or private (i.e. civil society, professional associations)—to identify and assimilate such research evidence to inform policymakers.

Our study provides a user driven research agenda which would help assist researchers in identifying areas for research and research questions. There is a need to translate the identified policy-relevant research priorities (3–5 years) into 'researchable' research questions, as some are at present quite broad. In addition, there is a need to map out which aspects of those priorities are already addressed by existing research and which ones require additional primary research. Due to time constraints, it is essential that some of those priorities get answered through synthesis of existing evidence. Given the limited health system and policy research in the region, there is a need to look at how to assess the relevance and applicability of the international body of research to the policy concerns and priorities identified in our study. Customizing systematic reviews may play a role in informing policy and decision-making in health systems of the MENA region. Future research should also focus on studying the health systems policy-making process in selected MENA countries, and also undertake country case studies to explore mechanisms and models where evidence and policy can successfully intersect.

Study findings can help inform and direct future plans and activities for the MENA Health Policy Forum in contributing to the development of evidence-informed policies in the LMICs in the region.

Acknowledgements

This multi-country study was conducted in collaboration with the Middle East and North Africa (MENA) Health Policy

Forum, jointly funded by the Alliance for Health Policy and Systems Research and the International Development Research Centre.

Special thanks go to the board members and advisory committee of MENA Health Policy Forum for their input and support during this research study. We are grateful for Drs Donald Franklin and Ahmad Galal for providing guidance, feedback and support throughout the study period.

We are grateful to the World Health Organization, Eastern Mediterranean Region, Division of Health Systems Development for providing support across several phases of this research. Special thanks to Drs Belqacem Sabri and Sameen Siddiqui who facilitated our contacts with country focal points, and assisted in the preparation phase (including the methodology workshop in Cairo). The authors would like to also thank the World Bank, Human Development Department, Middle East & North Africa Region and their country representatives for assisting us in accessing relevant grey literature and in facilitating our contacts at the country level.

Special thanks go to the focal persons who helped conduct the planned work at the country level and who are the authors of country-specific reports. These are Drs Larbi Lamri (Algeria), Hassan Salah (Egypt), Musa Ajluni (Jordan), Himeur Abdelghani and Belghiti Alaoui (Morocco), Joan Jubran, Tawfiq Nasser and Salwa Najjab (Palestine), Yaser Al Saleh and Waleed Al Faisal (Syria), Noureddine Cherni (Tunisia) and Jamal Nasher (Yemen).

The authors wish to extend their appreciation to all policy-makers and stakeholders in the nine countries who gave of their time for interviews and participation in the country focus groups.

The authors would like also to thank Ms Zeinab Rahal, Ms Maha Jaafar and Mr Rami Itani for their help during the regional workshop.

References

Chen L, Evans T, Anand S *et al.* 2004. Human resources for health: overcoming the crisis. *The Lancet* **364**: 1984–90.

Council on Health Research for Development and WHO EMRO. 2000. International Conference on Health Research for Development, Regional Consultative Process Eastern Mediterranean. Online at: http://cohred.org/cohred/content/291.pdf

Council on Health Research for Development. 2006. *Priority setting for health research: toward a management process for low and middle income countries*. Online at: http://www.cohred.org/priority_setting/COHREDWP1%20PrioritySetting.pdf

Drechsler D, Jütting J. 2007. Different countries, different needs: the role of private health insurance in developing countries. *Journal of Health Politics, Policy and Law* **32**: 497–534.

Eastern Mediterranean Regional Office (EMRO). 2005. The work of WHO in the Eastern Mediterranean Region. Annual Report of the Regional Director. Eastern Mediterranean Regional Office (EMRO) of World Health Organization. Online at: http://www.emro.who.int/rd/annualreports/2005/index.htm

El Jardali F, Jamal D, Abdallah A, Kassak K. 2007. Human resources for health planning and management in the Eastern Mediterranean Region: facts, gaps and forward thinking. *Human Resources for Health* **5**: 9.

Elbayar K. 2005. NGO laws in selected Arab States. *International Journal of Not-for-Profit Law* **7**(4). Online at:http://www.icnl.org/KNOWLEDGE/IJNL/vol7iss4/special_1.htm

Global Forum for Health Research. 2004. *The 10/90 Report on Health Research 2003–2004*. Geneva: Global Forum for Health Research. Online at: http://www.globalforumhealth.org/Media-Publications/Publications/10-90-Report-2003-2004.

Ham C. 1997. Priority setting in health care: learning from international experience. *Health Policy* **42**: 49–66.

Innvær S, Vist G, Trommald M, Oxman A. 2002. Health policy-makers' perceptions of their use of evidence: a systematic review. *Journal of Health Service Research and Policy* **7**: 239–44.

Kammen J, de Savigny D, Sewankambo N. 2006. Using knowledge brokering to promote evidence-based policy making: the need for support structures. *Bulletin of the World Health Organization* **84**: 608–12.

Kendall J. 1999. Axial coding and the grounded theory controversy. *Western Journal of Nursing Research* **21**: 743–57.

Kolehmainen-Aitken RL. 1998. Decentralization and human resources: implications and impact. *Human Resources Development Journal* **2**: 1–14.

Lavis JN, Lomas J, Hamid M, Sewankambo NK. 2006. Assessing country-level efforts to link research to action. *Bulletin of the World Health Organization* **84**: 620–8.

Lomas J, Fulop N, Gagnon D, Allen P. 2003. On being a good listener: setting priorities for applied health services research. *Milbank Quarterly* **81**: 363–88.

Mason JL. 2004. Nongovernmental organization sustainability support in the Middle East. *New Directions for Philanthropic Fundraising* **46**: 61–70.

McIntyre D, Garshong B, Mtei G *et al.* 2008. Beyond fragmentation and towards universal coverage: insights from Ghana, South Africa and the United Republic of Tanzania. *Bulletin of the World Health Organization* **86**: 871–6.

Omar S, Alieldin N, Khatib O. 2007. Cancer magnitude, challenges and control in the Eastern Mediterranean Region. *Eastern Mediterranean Health Journal* **13**: 1486–96.

Palmer N, Mueller DH, Gilson L, Mills A, Haines A. 2004. Health financing to promote access in low income settings – how much do we know? *The Lancet* **364**: 1365–70.

Ranson MK, Law TL, Bennett S. 2008a. *Establishing health system financing research priorities in developing countries using a participatory methodology.* Alliance for Health Policy and Systems Research and World Health Organization. Geneva: World Health Organization.

Ranson MK, Chopra M, Munro S, Dal , Poz M, Bennett S. 2008b. *Establishing human resources for health research priorities in developing countries using a participatory methodology.* Alliance for Health Policy and Systems Research and World Health Organization. Geneva: World Health Organization.

Schieber G, Maeda A, Klingen N. 1998. Health reform in the MENA Region. *Forum 5(1)*. Cairo: Economic Research Forum.

Task Force on Health Systems Research. 2004. Informed choices for attaining the Millennium Development Goals: towards an international cooperative agenda for health-systems research. *The Lancet* 364: 997–1003.

Task Force on Health Systems Research. 2005. The Millennium Development Goals will not be attained without new research addressing health system constraints to delivering effective interventions. Online at: http://www.who.int/rpc/summit/en/Task_Force_on_Health_Systems_Research.pdf

Varkevisser C M, Pathmanathan I, Brownlee A. 1991. *Designing and conducting health system research projects. Vol. 2: Data analyses and report writing*. Amsterdam: Royal Tropical Institute.

World Health Organization (WHO). 2006. *Working Together for Health: The World Health Report 2006*. Geneva: World Health Organization.

World Health Organization (WHO). 2007. *Everybody's Business: Strengthening Health Systems to Improve Health Outcomes: WHO's Framework for Action*. Geneva: World Health Organization.

World Health Organization (WHO). 2008. Identifying Priority Research Questions: Theme 3: Non-state sector issues in low and middle income countries. Alliance for Health Policy and Systems Research and World Health Organization. Online at: http://www.who.int/alliance-hpsr/researchsynthesis/Alliance_HPSR_NonStateSector_TwoPager.pdf