Priority setting and implementation in a centralized health system: a case study of Kerman province in Iran

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The question of how priority setting processes work remains topical, contentious and political in every health system across the globe. It is particularly acute in the context of developing countries because of the mismatch between needs and resources, which is often compounded by an underdeveloped capacity for decision making and weak institutional infrastructures. Yet there is limited research into how the process of setting and implementing health priorities works in developing countries. This study aims to address this gap by examining how a national priority setting programme works in the centralized health system of Iran and what factors influence its implementation at the meso and micro levels. We used a qualitative case study approach, incorporating mixed methods: in-depth interviews at three levels and a textual analysis of policy documents.

The data analysis showed that the process of priority setting is non-systematic, there is little transparency as to how specific priorities are decided, and the decisions made are separated from their implementation. This is due to the highly centralized system, whereby health priorities are set at the macro level without involving meso or micro local levels or any representative of the public. Furthermore, the two main benefit packages are decided by different bodies (Ministry of Health and Medical Education and Ministry of Welfare and Social Security) and there is no co-ordination between them. The process is also heavily influenced by political pressure exerted by various groups, mostly medical professionals who attempt to control priority setting in accordance with their interests. Finally, there are many weaknesses in the implementation of priorities, resulting in a growing gap between rural and urban areas in terms of access to health services.

Keywords Health care priority setting, benefit package, implementation, Iran
**KEY MESSAGES**

- The processes of setting and implementing health priorities should be integrated to enhance their feasibility of service provision.
- The decision making team on health priorities should include representation from a range of stakeholders, in particular policy implementers and the public.
- The health priority setting decision-making process should be based on transparent criteria, in order to provide a rationale behind the decisions made to providers and the public alike.
- Health policy makers should always be aware of the political environment they work in, since decision making on health priorities is as much a political as it is a technical process.

**Introduction**

All health systems across the world need to prioritize health services. Among the key reasons are the scarcity of resources, with the demand for funding outstripping the available resources (Bate et al. 2007), and concerns about equity in the distribution of and access to services (Hoedemaekers and Dekkers 2003). Health care priority setting is of particular importance in developing countries, where a mismatch between needs and resources is often compounded by an underdeveloped capacity for decision making, and weak institutional infrastructures (Baltussen et al. 2006). Priority setting in developing countries is perceived to be difficult and full of uncertainties, due to the lack of reliable evidence, analytical methods for identifying priority options and coherent processes for decision making (Kapiriri et al. 2003). This gives rise to a proliferation of approaches to priority setting and has provoked an ongoing debate about the best way to conduct this process. The most recent debate is how to make the process more explicit (transparent), based on defendable evidence, rather than an implicit, informal process supported by heuristics or intuition (Mitton and Donaldson 2004; Rosen 2006). Needs assessment and health economics evaluation methods therefore constitute the main technical approaches to setting health priorities (Donaldson and Mooney 1991).

While there is a wealth of literature describing priority setting processes at the macro (national) level in many health systems, this mostly focuses on developed countries (for example, Ham 1997; Busse 1999; Calltorp 1999; Rissanen and Hakkinen 1999; Stepan and Sommersguter-Reichmann 1999; Pedersen et al. 2005; Sabik and Lie 2008). Most of the studies on priority setting focus on evaluating the fairness of the process using the Accountability for Reasonableness (also known as A4R) framework (Daniels and Sabin 2002). Most importantly, while there is a growing body of knowledge on the decision makers’ perspectives on the priority setting process (e.g. Gibson et al. 2004; Mitton and Prout 2004), we have only a very limited understanding from the implementers’ perspectives (Kinnunen et al. 1998; Mshana et al. 2007). Because of the limited research on health priority setting in developing nations (Hrabac et al. 2000; Gonzalez-Pier et al. 2006; Kapiriri et al. 2007), there is a distinct lack of evidence about how priorities are decided and implemented at all levels of the system.

This research aims to address these gaps by examining how a macro-level priority setting programme works in a centralized health care system, and what factors influence its implementation at the meso and micro levels, using Iran as a case study. The national-level decision making bodies in the Iranian health system, such as the Ministry of Health and Medical Education (MOHME) and the Ministry of Welfare and Social Security (MOWSS), are not new, but there is a paucity of information available about the priority setting processes they use and the factors governing their decisions. In other words, the rationale behind health priority decisions has not been made explicit or publicly discussed. Moreover, despite the introduction of new technical priority setting tools into the Iranian health system, such as Burden of Disease (BOD), it is unclear how those tools are understood and applied in practice. Alongside the lack of detailed information about the process of priority setting, there is an equal knowledge gap in terms of how priorities are implemented at a service delivery level. In addressing these knowledge gaps, the research presented in this paper sought to answer two specific research questions:

1. How does a macro-level health care priority setting process work in practice in the centralized health system of Iran?
2. What factors influence the process of priority setting and implementation in this system?

Qualitative methodologies were chosen as the most suitable means for our investigation, because of the type of research questions addressed (what and how health priorities are set and put in practice), the novelty of the research topic in this specific context and the complexity of the phenomenon under investigation (Creswell 2009). The study is one of the rare empirical examples exploring the perceptions of policy makers at the macro level, key decision makers at the meso (provincial/regional) level, and health authorities at the micro (local/district) level of the health system with regards to the national priority setting process and its implementation.

By providing empirical evidence in an area that has not been previously investigated, research makes a contribution to knowledge, through three distinct ways. First, it identifies factors influencing the process of setting and implementing priorities in a specific context, namely the centralized health system of Iran. Second, it evaluates how the system of priority setting works at various levels by examining the views of both policy makers and policy implementers. Third, it explores the priority setting programme from two perspectives, namely, the process (how benefit packages underpinning priority setting are developed at the macro level of a health system), and the
outcomes (how the benefit packages are implemented at the meso and micro levels of a health system).

In the remainder of the paper we describe the context and methods before presenting the findings of the study. We then discuss these and put forward a number of policy implications resulting from the study.

**Context**

Iran has a population of nearly 75 million, with 72% living in urban areas and 28% in rural parts (Statistical Centre of Iran 2010). The country is administratively divided into 30 provinces (Ostans); each province, in turn, is split into a number of districts (Shahrestans or sub-province), and each district includes a number of urban centres (cities/towns) and villages. Up to 95% of the rural population has access to the primary health care (PHC) services (Aghajanian et al. 2007). As far as secondary and tertiary care are concerned, the broad population coverage by various health insurance schemes in Iran has improved access to health services for over 92% of the population (Russell 2005; World Bank 2007).

In the period following the 1979 Islamic revolution, the Iranian government focused on PHC development, especially in rural areas. This has led to success in improving several health indicators such as decreased child and maternal mortality rates, and increased life expectancy at birth (Mehryar 2004). However, according to the World Health Organization (WHO), Iran was ranked 93rd among 191 countries in terms of the population’s health status, and 112th with respect to the fair financial contribution index (FFCI) (WHO 2000). The poor performance of the Iranian health system measured by the FFCI index is due to many households lacking any type of health insurance or financial protection against the costs of illness. Accordingly, there is a high rate of out-of-pocket (OOP) payment among Iranian households as revealed by the World Bank report (2007). Almost 50% of health expenditures in Iran are OOP (Ibrahimipour et al. 2011). Another challenge facing the Iranian health system is the change in the burden of disease pattern towards non-communicable diseases and accidents, which is similar to many other health systems worldwide. A recent study of the BOD in Iran revealed a high percentage of cardiovascular disorders, cancers, mental health disorders, traffic accidents and injuries (Naghavi 2006). All of these challenges suggest that the issue of how priorities are set and implemented in the Iranian health system is an important and timely issue to study.

**The organization and structure of the Iranian health system**

Planning and policy making are decided at the central level in Iran, and are then devolved via the meso level to the micro levels for implementation. The implementation of centrally developed plans is supervised by the macro level. For many years and until recently there was no official centre for policy making. The only body for planning and decision making was the Management and Planning Organization (MPO) based at the macro level under direct supervision of the president. However, in 2007, a centre called the ‘Health Policy Unit’ was launched within the MOHME to devise policies and provide the evidence underpinning these policies, supported by the establishment of a dedicated research centre (Khayatzadeh-Mahani 2010).

There are many providers and purchasers, including the public sector, the private sector, non-government organizations (NGOs) and various health insurance organizations, which play a role in the provision and financing of health care, but the health system is managed primarily by the government. The structure of the public health system of Iran spans through three levels, as presented in Figure 1: macro (national), meso (provincial or regional) and micro (local or district).

**Macro level**

The MOHME and the MOWSS\(^1\) are the main organizations at the national level responsible for providing and financing health services in Iran. The respective ministers are accountable to both the parliament and the government (that is the cabinet or president, see Figure 1), but are also members of the cabinet and are proposed and appointed by the president, subject to approval by the parliament (Schieber and Klingen 1999; WHO 2004). The MOHME is the ultimate decision maker on matters concerning the Iranian health system. It is responsible for the provision of health care services, medical education, supervision and regulation, as well as policy making, production and distribution of pharmaceuticals, and research and development. It also regulates the provision of private health services and the health services provided by the NGOs. The PHC benefit package is developed and financed by the MOHME at the macro level.

The MOWSS, on the other hand, develops and finances the Medical Services benefit package via health insurance organizations. The MOWSS comprises four major health insurance organizations, all of which are controlled by the government: (1) the Social Security Organization (SSO) for formal sector employees and the self-employed and their dependants; (2) the Medical Services Insurance Organization (MSIO) for government employees, rural households, the self-employed and others, such as students; (3) the Armed Forces Medical Services Organization, for members of the military and their dependants; and (4) the Imam Khomeini Relief Committee, which covers the poor. These four organizations come under the jurisdiction of the High Council for Health Insurance (HCHI), made up of ministers from seven ministries and headed by the Minister of Health. HCHI is responsible for inclusion or exclusion of services, and sets the fee schedule for providers’ payments. All health insurance schemes use the same fee schedule. Some major banks (e.g. Melli Bank) and companies (e.g. Oil Company) also have specific benefit packages for their own employees. Private insurance is supplementary to these public programmes.

The Medical Services benefit package provides a comprehensive set of curative services, including hospitalization, diagnostic tests and pharmaceuticals, for which the public has to co-pay. People who have health insurance coverage can visit any specialist directly and use the secondary and tertiary level of health services without going through the referral system. All curative services are potentially included in this package. A few services are excluded, which are cosmetic surgeries, transplants (e.g. heart, liver, and fingers), infertility services, joint replacements, non-accidental injuries (e.g. knife stabbing or problems
related to drug abuse) and cochlear implants. All dental care procedures, except for tooth fillings, are included in the package. Preventive services such as immunization and screening tests are provided by the PHC package which is offered for free, but the public has to co-pay for services included in the Medical Services benefit package (Khayatzadeh-Mahani 2010).

**Meso level (provincial medical universities)**

At the meso (provincial/regional) level, medical universities are responsible for medical education, including all medical fields (e.g., medicine, pharmacy, dentistry, midwifery, nursing, community and occupational health and others), and the provision of health services in their respective provinces. The provincial medical universities are representatives of the MOHME at the meso level and are the highest level of authority in the province. They are linked to the lower, micro, levels and supervise them.

**Micro level (district level)**

Health service delivery in Iran is based on a waterfall system that builds on a well-established Primary Health Care Network at a micro level (especially in rural areas), with the provincial medical university overseeing the provision of health care in the entire province. This network is administered at the micro level by the District Health Network (DHN), one per district, which is accountable to the provincial medical university. The DHN is responsible for the planning, programming and monitoring of health services at the micro level. It is also the sole body tasked with the implementation of various centrally-determined

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**Figure 1** Structure and organization of the Iranian health system (Khayatzadeh-Mahani 2010).

*Notes: HH = Health Houses; HP = Health Posts; RHC = Rural Health Centres; UHC = Urban Health Centres.*
packages of health services, mainly the PHC package and the Medical Services benefit package.

Each DHN is composed of three main parts: the district health centre (DHC), the district hospital and a Behvarz training centre. Each DHC, in turn, comprises different health facilities identified as (1) Health Houses whose responsibility is to implement the PHC programmes (with a Behvarz, who is a community health worker, delivering the PHC benefit package for rural residents), (2) Health Posts (similar to Health Houses, providing the PHC benefit package for urban residents), and (3) Urban and Rural Health Centres (UHC and RHC). All these facilities work under the supervision of a DHN Director who is the representative of the provincial medical university chancellor at the micro level (Shadpour 2000).

**Methods**

**Data collection**

This study adopted a qualitative research stance and a case study methodology in order to gain a depth of understanding about the priority setting programme in the context of the Iranian centralized health system (Ritchie and Lewis 2005). Two main approaches to data collection were employed: (1) face-to-face in-depth interviews conducted at three levels of the health system: macro, meso and micro; and (2) documentary analysis of key policy texts. The interviews constituted the main data source, supported by a review of relevant documentation. Thematic analysis of the data was carried out to identify emerging categories and sub-categories, as described in more detail below.

**Sampling methods**

Qualitative inquiries typically focus on small samples chosen purposefully to get an in-depth understanding of the phenomenon under study (Patton 2002). Kerman province was selected as the most accessible case for the principal researcher to conduct the fieldwork (Hartley 2004), in order to explore the implementation of nationally set health priorities. In conducting the case study, we were guided by a constructivist approach to data collection and analysis (Ritchie et al. 2003; Bryman 2003), to analyse the interview data and excerpts from documents (Patton 2002). The data analysis took an a priori thematic approach (Bryman 2008) in line with the analytical framework method (Ritchie and Spencer 1994). An initial thematic conceptual framework (see Figure 2), based on the research questions, was developed at a very early stage of the analysis (Ritchie et al. 2003).

### Table 1 Comparing selected demographic and health indicators between Kerman province and Iran as a whole in the year 2000

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Kerman*</th>
<th>Iran**</th>
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<tbody>
<tr>
<td>Population under 5 years (%)</td>
<td>8.9</td>
<td>8.0³</td>
</tr>
<tr>
<td>Population under 15 years (%)</td>
<td>35.3</td>
<td>28.7³</td>
</tr>
<tr>
<td>Population above 65 years (%)</td>
<td>5.3</td>
<td>5.3³</td>
</tr>
<tr>
<td>Access to improved drinking-water sources (%)</td>
<td>89</td>
<td>93³</td>
</tr>
<tr>
<td>Birth rate (births per 1000 population)</td>
<td>18.3</td>
<td>14.3³</td>
</tr>
<tr>
<td>Total fertility rate (average number of children per woman)</td>
<td>2.4</td>
<td>2³</td>
</tr>
<tr>
<td>Adult literacy rate (%)</td>
<td>79.9</td>
<td>82.4³</td>
</tr>
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</table>

We followed an adapted version of Ritchie and Spencer's (1994) thematic framework approach which entailed six steps to analyse the data, including: (1) familiarization, (2) developing a thematic framework, (3) indexing and charting, (4) summarizing and synthesizing, (5) mapping and interpretation, and finally (6) conceptualization. The analysis of data started at the macro level, followed by the meso level and finally the micro level. In keeping with the qualitative methodology, the research was judged against trustworthiness criteria (see Table 3), namely, credibility, transferability, dependability and confirmability (Lincoln and Guba 1985).

Limitations
The study is not without limitations, particularly in relation to: (1) issues of generalizability, (2) social desirability bias, and (3) constant turnover of policy makers. The choice of a single case study raises a question of generalizability of the findings (Gerring 2004). However, the theoretical paradigm (constructionism) justifies the selection of a single case to elucidate and provide a rich and detailed description, through which the aim is to enhance the transferability of the findings to other settings (Guba and Lincoln 1989; Bryman 2008).

Another possible limitation of this research is that participants might have been influenced by a social desirability bias, meaning that they may have described what they thought the researcher wanted to hear, rather than the actual events. There is also a possibility that at least some of the respondents provided politically correct responses, regarding their roles, responsibilities and the actual performance of the system. To address these problems we applied a triangulation of the data collection methods (to include interviews and the analysis of the documents). A final concern is that the policy and decision makers were constantly changing and there was a constant state of flux at all levels of the health system during this project. In order to minimize this limitation, we have also conducted some interviews with former policy makers who had previously been in charge of national policy making.

Results
The results of the research are organized into two main sections based on the research questions, namely, (1) the process of macro-level health care priority setting and (2) factors affecting the process and its implementation at meso and micro levels.

Macro-level health care priority setting process
Priority setting is enforced in Iranian law, including the Five-Year Development Plans and the Budget Law, as illustrated in the Fourth Five-Year Development Plan (see Box 1).
to a discontinuity of care in the public sector, which is worsened by various packages of health services. This was believed to have led between the different bodies in charge of setting and providing levels (macro, meso and micro) was a lack of co-ordination at the population, which are financed by various bodies (see Table 4).

One of the emerging findings of this research was the distinction, made by the macro-level participants, between the different bodies and financing them, although the services may be still delivered and the various bodies responsible for setting priorities in isolation from the Ministry of Welfare and Social Security and vice versa. So, it is no surprise to see that many poor rural people, seeking medical treatments, are left unattended in towns since policy making for preventive care is separated from curative care.

Another interesting set of findings concerned the structure of current benefit packages. Almost all participants believed that the two main benefit packages available to the Iranian population, which are financed by various bodies (see Table 4).

The main point made by almost all participants at the three levels (macro, meso and micro) was a lack of co-ordination between the different bodies in charge of setting and providing various packages of health services. This was believed to have led to a discontinuity of care in the public sector, which is worsened by the lack of an effective referral system and gate keeping. The recommendation offered was to integrate the separate packages into a single, all-embracing package covering all sorts of services including primary, secondary and tertiary care.

**Different packages of health services**

One of the emerging findings of this research was the lack of an effective referral system and gate keeping. The recommendation offered was to integrate the separate packages into a single, all-embracing package covering all sorts of services including primary, secondary and tertiary care.

Ma11: “There are various decision making bodies which are not linked together and each makes decisions in isolation. For instance, the Ministry of Health and Medical Education sets policies in isolation from the Ministry of Welfare and Social Security and vice versa. So, it is no surprise to see that many poor rural people, seeking medical treatments, are left unattended in towns since policy making for preventive care is separated from curative care.”

Ma4: “…I remember that we at the Ministry of Health and Medical Education were in long discussions with the health insurance organizations in order to convince them to cover breast cancer screening service. Our efforts, however, were unsuccessful. Their argument was that this is a preventive service and should be included into the PHC benefit package. This clearly shows that the approach of health insurance organizations in this country is treatment-oriented.”

**Box 1 Excerpts from Iran’s Fourth Five-Year Development Plan (Government of Iran 2004)**

**Article 91**
The following measures shall be taken in order to increase effectiveness of the health service delivery system in the country and to enhance and develop the universal health insurance system: A) All the commercial and non-commercial insurance companies are permitted to render the basic and supplementary health services solely by observing the laws and regulations of the High Council for Health Insurance; B) The High Council for Health Insurance shall initiate the required means of establishing the family-physician-based health insurance and referral system; C) In order to expand equity in utilization of health services, the basic rural health insurance services shall be defined and executed equal to their urban counterparts.

**Article 96**
Government is bound to increase gradually the population health insurance coverage and financial supports which are the concerns of the Article twenty nine (29) of the Constitution of the Islamic Republic of Iran. The resources for this purpose are the general revenues and the income derived from public participation, through insurance, protective and supportive activities. In doing so, the following measures should be taken into account: A) To increase the social insurance coverage, with due consideration of the rural inhabitants, tribal population and urban employees who have not been covered so far; B) Complete population coverage (one hundred percent) by the public insurance for the basic medical services; C) To provide special insurance for women who are head of households and for unprotected individuals, given priority to orphans.

The analysis of interview data from all levels confirmed that the Iranian health system practises a centralized process in terms of health care priority setting. In exploring the current process of health care priority setting in practice, macro-level respondents were able to describe these processes, including the methods and procedures used to set priorities. Although decisions on health priorities are taken at the macro level, the meso- and micro-level participants delineated their important roles in this process, as is explained in more detail below.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Strategy</th>
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<tbody>
<tr>
<td>Credibility</td>
<td>Six main strategies were adopted to increase the credibility of this research including: (1) prolonged engagement, (2) fact-finding visits, (3) peer debriefing, (4) triangulation, (5) member checks and (6) referential adequacy.</td>
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<tr>
<td>Transferability</td>
<td>(1) Thick descriptions and (2) purposive sampling were the principal methods employed to enhance the transferability of the study findings.</td>
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<tr>
<td>Dependability</td>
<td>Three tactics, namely (1) detailed documentation, (2) data checks and (3) an external auditor, were adopted to increase the dependability of the research.</td>
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<tr>
<td>Confirmability</td>
<td>An external auditor, a final year PhD student, whose research was on the health system of a developing country, was used in order to enhance the confirmability of the research. He reviewed the whole project and looked for relationships between the research questions and the findings, and consistency throughout the entire work.</td>
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population (the PHC benefit package and the Medical Services benefit package) are very wide, with a plethora of services and interventions included. This was deemed to be the result of a ‘no exclusion’ policy. According to this policy, no formal and explicit exclusion is allowed, although as the data illustrate, exclusion happens informally, mostly in the form of rationing of services. There was also a widely held belief that policy makers were trying to avoid the possibility of public unrest caused by the exclusion of services from the benefit packages, and they reacted typically by rationing the excluded services (for example, by offering it only in certain health facilities or by certain health professionals) or even by lifting the ban completely.

Macro-level participants made a distinction between priority setting and rationing. It was acknowledged that rationing is necessary alongside priority setting. However, rationing also appears to occur instead of exclusion, apparently to avoid problems caused by the explicit elimination of services, as the following comments illustrate.

Ma23: “In the year 2002, the high council for health insurance decided to include 13 items of drugs into the Medical Services benefit package. In the meantime, it was decided to exclude vitamins with the rationale that vitamins are not essential drugs and are not usually included in the benefit packages of other countries. The decision on exclusion led to an unrest in the country. Thereafter, it was decided to place a limit by which vitamins could only be offered in some specific hospitals.”

Ma7: “I remember that the Beta HCG test was one of the services covered by the health insurance organizations which could be prescribed by all medical doctors including GPs. Recently, however, only specialist physicians can prescribe it in order to reduce the amount of prescriptions.”

Another finding with respect to the exclusion of services was that although there is no formal process of exclusion in developing the current benefit packages, exclusion does happen informally. For example, if a medical procedure or a drug is not used or prescribed for a certain period of time, it can become informally excluded.

Ma16: “Nowadays nobody uses Amoxicillin as physicians prescribe Sephexin instead. So Amoxicillin will be gradually taken out of the benefit package.”

A further issue of concern, expressed mostly by micro-level interviewees, was the vagueness of services and interventions covered by the benefit packages, which was believed to lead to personal interpretation and a degree of discretion at the micro level as well as manipulation of priorities at the macro level.

Mi17: “…A few years ago the Ministry of Health allocated us little funds to implement some interventions towards elderly care. Unfortunately, they did not tell us what exactly to do. We were confused at first what to do with this little money, but finally decided to develop some brochures and flyers about elderly healthy eating and distribute them across the city.”

Mi4: “…The benefit package, for instance, indicates that it covers X-surgery. But it does not specify in detail which procedures are exactly covered. This leaves room for insurance organizations to avoid reimbursing hospitals for some procedures used during a surgery and this is a very common phenomenon in this country.”

The centralized process was also criticized by micro-level participants for setting priorities which were not feasible. Participants at meso and micro levels revealed a further concern about the centralized priority setting process at the macro level, which does not provide them with a rationale behind the inclusion of health services and interventions. Another issue of concern expressed by micro-level participants was a lack of transparency in the process of centralized priority setting.

Mi19: “A couple of years ago the family medicine policy was enforced and we had to implement it across the rural parts. Some GPs were assigned for our rural health facilities as gate keepers. At the same time, the health ministry sent us several circulars and booklets containing the clinical guidelines that the GP has to follow as well as the duties of the family medicine team, including the GP, and the list of medicines that the GP was allowed to prescribe. We faced resistance from the GPs in, accepting the nationally developed clinical guidelines and the list of medicines. I believe they had a valid point to ask why we should perform the guidelines and prescribe certain medicines that we don’t know who has decided them and how and why.”

Priority setting methods
The analysis of the data highlighted several technical and non-technical methods, which are currently applied in setting priorities in the Iranian health system. The two main non-technical methods described were bargaining and the historically-based approach. Bargaining was referred to by the majority of respondents as the most common informal procedure. The historically-based approach, on the other hand, was considered the dominant perspective in allocating resources.

More recently there was a shift to implementing economic evaluation methods. Two commonly applied technical methods

<table>
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<tr>
<th>Type of package</th>
<th>Responsibility for priority setting and funding</th>
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<tbody>
<tr>
<td>Primary Health Care (PHC) benefit package</td>
<td>Ministry of Health &amp; Medical Education (MOHME)</td>
</tr>
<tr>
<td>Medical Services benefit package (secondary/hospital care)</td>
<td>Ministry of Welfare &amp; Social Security</td>
</tr>
<tr>
<td>The Supplementary Package (mostly providing health technologies, new medical procedures and drugs)</td>
<td>MOHME and the private health sector</td>
</tr>
<tr>
<td>Special Diseases Package (expensive medical treatments subsidized by the government)</td>
<td>MOHME</td>
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were BOD methodology and expert panels. The former is employed to set priorities among different diseases, while the latter is the most commonly used approach in setting priorities among health services and interventions to be included into the benefit packages. The results of the BOD study are not reportedly employed in setting priorities for the Medical Services benefit package; there does, however, seem to be some (non-systematic) application of BOD data in the PHC benefit package. However, there was a view expressed that burden of risk factors should be measured instead of burden of disease, with the directing of scarce resources towards high burdened risk factors. This means that many diseases and health problems that share the same risk factors could be tackled simultaneously.

The data also revealed that expert panels, which decide on priorities of the benefit packages based on a host of technical and non-technical criteria such as systematic review (if any), cost, international priorities (such as pandemics) and bargaining, comprise, predominantly, of medical professionals acting as policy makers in this instance. It also emerged that although the principle of equity is an implicit influential criterion in setting priorities in the main benefit packages, in practice (i.e. during the implementation of priorities) the principle of personal choice plays a greater role. In the Medical Services benefit package, the most influential criterion on the determination of priorities was deemed to be cost (i.e. budget impact). The analysis of documents and interview data revealed that urban residents exercise a great deal of choice in Iran compared with their rural counterparts whose choice has been limited by state policies. Family Medicine and the BEHBAR (rural health insurance for all rural residents) are the two state policies, which have limited rural households access to secondary and tertiary care through a referral system, although they aimed to improve rural access to basic health services.

Role of meso and micro levels in the macro-level priority setting process

The data analysis revealed that the meso level (the provincial medical universities) report regularly on health indicators of their provinces to the MOHME, which is supposed to set priorities at the national level based on that evidence. Nevertheless, there is also a degree of discretion allowed at the meso level. The establishment of the Board of Trustees at each provincial medical university, for example, has granted the meso levels some managerial and financial responsibilities as the following excerpt from the Fourth Five-Year Development Plan (Article 49) shows:

‘Each provincial medical university should establish a Board of Trustees and there should be a direct transfer of global budgets from the government (MPO) to medical universities, which the Board of Trustees could then use their discretion to allocate resources as needed’.

However, analysis of the interviews suggests a degree of dissatisfaction with the level of discretion afforded to the meso level, as policy implementers in the region are still required to obtain authorization from the MOHME for many decisions. For instance, in relation to the issue of resources, especially human resources, it was highlighted that the meso level is not allowed to hire personnel without the permission of the macro level.

Moving to the micro level, participants believed that the health information produced at this level forms the basis for macro-level priority setting. There was a general feeling among respondents that they played a vital role in priority setting, with a prevailing view that macro-level priorities are based on the local data.

Mi10: ‘The Ministry of Health and Kerman Medical University ask for health information and health indicators frequently and I am sure they use those data in policy making. For instance, we send them health information on all types of mortalities such as maternal and child mortality as well as disease prevalence and incidence rates. Definitely in the BOD study, our information is used.’

Factors affecting the setting and implementation of national health priorities

A host of factors influencing the process of setting and implementing priorities were identified. Overall, three main factors related to priority setting were: (1) the nature of decision making, (2) political pressure and (3) policy makers’ behaviour, as is discussed below. Regarding the implementation of priorities, the most influential factors were: (1) the status and the clout of health professionals implementing priorities, (2) the private sector and (3) rural–urban disparities.

Factors influencing the process of setting priorities

The reactive nature of the decision making process was seen to be the main factor impacting on the way health priorities were set. It was suggested that reactive decision making (in response to emergencies and not planned in advance), along with the non-sustainability in decision making, lack of transparency and non-systematic decision making have all contributed to weak outcomes of the health priority setting process.

Ma8: ‘...Decision making for priority setting in Iran looks like a crisis management. It responds to the daily problems which occur and makes temporary decisions to sort them out.’

Mi18: ‘...We don't really know why they [policy makers] have changed the procedures for child growth monitoring. They keep adding paperwork for which we can’t see the point to fill them up.’

Political pressure emerged as another key factor influencing the process of setting health priorities. It was deemed to be induced by different means, such as changes in the cabinet and parliament, as can be seen in the following statement.

Ma21: ‘Change of some cabinet members such as president, health minister, finance minister, or environment minister affects the health system greatly. For instance, change of the finance minister might affect GNP allocated to the health sector, which directly affects priority setting because if more resources are allocated to the health system, we can include more services into the publicly funded benefit packages.’

Other influences could also be discerned, such as the impact of national and international trends, the policies of international
organizations, group pressure applied by pharmaceutical companies and companies importing new health technologies and drugs, the medical profession, and the media.

Regarding the policy makers’ behaviour, factors identified were personal interests, ethical viewpoints (e.g. libertarian or egalitarian) and perceptions about priority setting (whether they perceive it to be an important issue and what their specific views are about it), as is reflected in the following statement.

Ma19: “…Many years ago, I was in the office of one of policy makers and I could hear what he speaks on the phone. He was basically saying that it is not important for me whether a medicine is expensive or not, or if it is produced in Iran or abroad. What matters for me is that this medicine should be available for patients who need it. He actually had a very liberal point of view. I can provide you with many examples like this.”

Factors influencing the implementation of priorities
The three most influential factors affecting the implementation of priorities related to the policy implementers’ political ‘clout’, the power of the private sector, and rural–urban disparities. While policy makers appeared to have the most influence on the process of setting national priorities, policy implementers including health personnel (responsible for implementing the PHC benefit package) and physicians (who implement the Medical Services benefit package) at the micro-level were the most influential groups in putting those priorities into practice. The study revealed an asymmetry in the amount of discretion exercised by these two groups of policy implementers when translating priorities into practice. Whilst health personnel responsible for the PHC benefit package appeared to lack any type of freedom, physicians enjoyed a high degree of discretion when implementing the Medical Services benefit package. This lack of autonomy for PHC personnel is typically compounded by workload pressures, poor in-service training, lax supervision, staff and resource shortages. The result is often a relatively low standard of service delivery at the local level.

Me3: “…Every day you ask a Behvarz, with a high school education, to perform a new service or intervention and you do not tell her what to exclude. So, she excludes services on her own decision. Even though she does not exclude any services, she performs the service with a low quality.”

Mi13: “…A few years ago, the ministry people decided to add the blood pressure and diabetes screening intervention into the PHC package. So, our Behvarz had to perform this service for the whole population over 35. Almost at the same time, another service was added namely the national newborn screening programme for congenital hypothyroidism, to be performed by Behvarz for all newborns in 3–5 days of birth. Apart from these, there is a lot of paperwork that a Behvarz has to do. We keep asking the same Behvarz to do all these tasks with the same salary. Many times I feel very uncomfortable to let them know of a newly added service when I can’t add a new staff or can’t spare resources.”

The private sector also appeared to wield considerable influence over the way national health priorities were put into practice. In Iran, the public has a choice to seek all types of health services (primary, secondary and tertiary) from either the public or the private sector, based on, predominantly, their ability and willingness to pay. This, however, is mainly induced by the physicians practising in the private sector who encourage utilization of services, mostly covered by the Supplementary Package, including new medicines, new medical procedures, and expensive diagnostic services such as Magnetic Resonance Imaging (MRI) and Computed Tomography (CT)-scans. Reasons for this behaviour that were put forward included a lack of proper control by the public sector, a lack of support from the government, the low rate of tariffs and easy access to high medical technologies. There is a considerable difference in terms of health service tariffs (service charge) between the private and the public sectors, with the latter much lower than the former. It was argued that, over the last few years, this gap has led to under-staffing in the public sector, affecting the quality of services, because the majority of physicians and health staff prefer to work in the private sector where they can earn more.

The data analysis also revealed significant rural and urban disparities in access to and utilization of health services, which is partly linked to the activities of the private sector. The role of the private health sector appeared to exacerbate the rural–urban disparity as far as the implementation of national health priorities is concerned. The private sector, which predominantly operates in urban areas of Iran, increases the gap between rural and urban regions in terms of access to and utilization of all types of services (i.e. primary, secondary and tertiary) with the state policies (i.e. Family Medicine and BEHBAR) intensifying this divergence. It is interesting to note how perceived rural–urban differences affect the implementation of benefit packages in different regions: the provision of the PHC benefit package services is the centre of attention in rural areas, while the Medical Services benefit package is provided mainly in urban areas.

Me7: “…In the rural areas, a Behvarz performs actively all PHC services for the whole population in her/his geographical area. For instance, if a pregnant woman does not attend the health house to receive the prenatal care, Behvarz visits that lady in her house. In the urban areas, however, the PHC services are offered passively, meaning that if the pregnant women do not refer themselves, nobody will trace them. Apart from that, in towns pregnant women do not usually seek services from health posts and urban health centres. They prefer to receive the same care from the gynaecologist because there is no limitation to visit a specialist in this country. So, even for the very basic services, which a midwife can perform more effectively, people visit a specialist physician.”

Discussion
The aim of the study was to investigate how a national priority setting programme works in the centralized health system of Iran and what factors influence its implementation at the meso and micro levels. From the analysis of the findings, five key themes emerge (as shown in Figure 3):

(1) The process of setting priorities is non-systematic, leading to many shortfalls in developing the benefit packages;

(2) Health priorities are set at the macro level, by expert panels, using a host of methods (e.g. cost, bargaining, international priorities), without involving the local level or any representatives of the public;
(3) The process is heavily influenced by political pressure exerted by various interest groups;
(4) The centrally set priorities (i.e. benefit packages) are communicated to the local levels via the meso level, whose role is unclear in the process; and
(5) There is a clear difference between the implementation of benefit packages in rural and urban areas, with the former more focused on the PHC package (providing primary healthcare services), while the Medical Services benefit package (providing secondary and tertiary care services) is central in the latter.

Below we discuss each of these five themes in more detail.

**Lack of systematic priority setting**

The data analysis showed that the process of priority setting is non-systematic, there is little transparency as to how specific priorities are decided, and the decisions made are separated from their implementation. In other words, decisions on priorities are being taken without considering the realities of policy implementation. We argue that this is the most problematic area in terms of health priority setting in Iran, resulting from the highly centralized system, whereby health priorities are set at a macro level without involving the meso or micro levels or any representatives of the public. As a result, the current benefit packages bear the shortfalls of (1) being very wide, (2) lacking clarity, (3) being unrealistic and (4) having no clear rationale underpinning them. Taken together, these weaknesses in the process contradict the logic and the objective of priority setting.

The current benefit packages are very comprehensive, mostly due to the policy of no formal exclusion, which has caused many difficulties with implementation, mostly because of a lack of resources available to cover such a wide range of services. In reality, however, the exclusion of health services in Iran happens informally in two ways: rationing and informal (or natural) exclusion. Explicit exclusion of services is recognized to be unpopular (Ham 1997; Greb et al. 2005) and because of this an often-used alternative is to base service provision on consumer choice and ability to pay at the micro level. This implicit exclusion is claimed to be common in other

![Figure 3](HEALTH POLICY AND PLANNING)
health systems, for example, the US, which has a strong private insurance system, while most European policy makers are against it for equity reasons (Greb et al. 2005). However, this is not to say that exclusion does not occur by other implicit means. For example, in the UK National Health Services (NHS), exclusion is seen to occur at the point of access to health services, with general practitioners (GPs) acting as gatekeepers, for instance, by controlling access to secondary care specialists (Coast 1996; Owen-Smith et al. 2010). Another possible reason for including a plethora of services in the Medical Services benefit package, provided by health insurance organizations (i.e. the MOWSS), could be the payment system by which hospitals are reimbursed (diagnosis-related groups or DRGs). According to the DRG system, a fixed price is paid for each episode of care. It is believed that one way for providers to maintain their income under the DRG payment system is to increase the number and range of services (Allen 2009).

Lack of clarity is another pitfall of the current benefit packages available in Iran, which leads to either manipulation of services at the macro level or individual interpretations of priorities by the implementers at the micro level. Leese et al. (2001), measuring the success of primary care organizations in the British health system, found a similar situation, which they attributed to the central decision making (Leese et al. 2001). The benefit packages are also unrealistic and end up expressing aspirational rather than actual policy, as is the case in many other countries where there is an unwillingness to exclude services explicitly for political reasons (Fotaki 2009). Policy implementers in this research raised a general complaint over the non-feasibility of many of the health interventions (mostly those covered by the PHC package). This suggests that the realities of implementation have not been taken into account when the interventions were developed. It could also be the result of decision making often carried out in a rush without comprehensive advanced planning, which is a common shortfall of decision making in Iran.

Lastly, the health care priority setting process in Iran does not provide any rationale behind the prioritized services. This could be one explanation for the shift of physicians towards the private sector, and away from providing the services covered in the benefit packages: the physicians may not be convinced about why certain services (e.g. medicines) are included in (and rarely excluded from) the benefit packages.

The two main benefit packages (the PHC benefit package and the Medical Services benefit package) are decided by two different bodies (MOHME and MOWSS, respectively) and there is no co-ordination between the two, which has led to discontinuity of care. We hypothesize that this might be due to the autocratic government's lack of willingness to make difficult political decisions concerning the structure and governance of the system and managing public expectations extending beyond the declaration of intent as seen in other comparable cases (Fotaki 2006; Fotaki 2009; O’Donnell 2010).

### Priority setting methods

The historically-based and bargaining methods that are currently applied in setting health priorities in Iran, which are also the most commonly used approaches in all health systems worldwide (Coast and Donovan 1996), are unlikely to maximize health benefits within a given budget (Mitton and Donaldson 2004). In contrast, the BOD study, which is the main technical health priority setting tool in Iran, and which uses local health information (e.g. mortality and morbidity) (Murray and Lopez 1996), is believed to be a good method of setting priorities among diseases. The missing loop in the Iranian health system is the application of this evidence in developing the benefit packages (i.e. setting priorities among health services and interventions). One reason for the lack of uptake of the study results could be that the BOD study conducted in Iran does not prioritize among health interventions or risk factors. Moreover, after establishing this study as a means of prioritizing among the diseases, no follow-up studies were conducted to estimate the cost-effectiveness of health interventions or their affordability (Doherty 2010). In any case, our findings indicate that the results of such studies are not utilized when deciding on benefit packages, in turn suggesting a need to improve the skills of policy makers in interpreting and applying sound evidence.

### Political pressure

Another key finding concerns the issue of political pressure shaping the whole process. No matter how well the process is managed by the application of sound technical methods, political pressure (that is, the pressure imposed by various interest groups) is crucial in determining what type of health services, diseases or groups of people receive priority (Baltussen and Niessen 2006; Dionne et al. 2008). In the Iranian health system, power is predominantly in the hands of medical professionals and pharmaceutical companies (Ibrahimipour et al. 2011). Decisions on the inclusion (and rarely exclusion) of services and interventions in the benefit packages are made by expert panels, which are dominated by clinicians without involving micro levels or any representatives of the public. The current panel composition works against the main purpose of holding expert panels, which is to assemble multidisciplinary groups of experts to decide on priorities based on the evidence available (Schmidt 2009). Mitton and Donaldson (2004) argue that the composition should involve a mix of clinical personnel, managers and lay participants. As such, the current situation is far behind the classical pluralism concept proposed by Held (2003) in which diverse and competing interest groups form the basis for a democratic equilibrium. In such a governance arrangement, the distribution of power tends to be evened out. However, in developing countries, a very small number of groups exercise the majority of the power (Kimenyi and Mbaka 1993). Most policies are decided by small, elite groups within the government or even outside it. This is more evident in a centralized government, such as that of Iran, in which the political power and the decision making process are dominated by selected groups rather than broad representation.

### Implementation at the meso and micro levels

The centrally set priorities (i.e. benefit packages) in the Iranian health system are communicated to the micro levels via the meso level, whose role is somewhat unclear in the process. It could be seen to play a brokerage role between the top and bottom levels of the health system but the key actors at the
Rural–urban disparities

Unsurprisingly, the study revealed many weaknesses in the implementation of priorities. Perhaps the most significant of these is the growing gap between rural and urban areas in terms of implementing benefit packages. One of the reasons for this disparity could be the imperfect operation of the PHC network, which has not been well extended to the urban areas. There is, however, a strong private health sector, operating predominantly in the urban areas, which intensifies this gap. The PHC network, which is poorly established in the urban areas, creates differences between rural and urban areas in terms of health services provision and utilization. The urban segment of the PHC network has remained underdeveloped, mostly because of its poor referral system and gatekeeping, which does not facilitate the interface between various levels of the PHC network (primary, secondary, tertiary; rural, district, centre of province) and different levels of the health system (micro, meso, macro). As a result, there is poor integration and continuity of care and a real challenge in terms of controlling unnecessary access to secondary and tertiary care.

An aspect of the rural–urban disparity in terms of benefit package implementation could also be attributed to the strong private health sector, which is poorly controlled by the government. This leads to a high utilization of services and drugs not covered by the Medical Services benefit package, especially expensive diagnostic services, new health technologies and new medical procedures. This is mainly because the private sector in Iran is not involved in the provision of PHC services, but only secondary and tertiary services. As a result, in urban areas, there is a higher utilization of curative and diagnostic services rather than the PHC services, which are used more in the rural communities (Hosseinpoor et al. 2007).

Conclusions

This research set out to examine how a macro-level priority setting programme works in the centralized health system of Iran, and what factors influence its implementation at the meso and micro levels. The findings provide policy makers with a number of practical recommendations to improve the process of setting and implementing health priorities. Firstly, the process of setting and implementing priorities should be integrated to enhance the feasibility of provision of services. Secondly, the decision making process should be based on transparent criteria, in order to provide a rationale behind the decisions made to providers and the public alike. Fourthly, decision makers should always be aware of the political environment they work in, since decision making on health priorities is as much a political as it is a technical process.

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Conflict of interest

None declared.

Endnotes

1 In June 2011, the Iranian legislators passed a bill to merge the MOWSS with two ministries of Labour and Social Affairs as well as Cooperatives into the new Ministry of Cooperatives, Labour and Social Security. Throughout this paper we use MOWSS as at the time of the study it was the responsible national organization in charge of priority setting.

2 The abbreviations Ma, Me and Mi stand for macro, meso and micro, respectively; this code for the interviewees is used in order to maintain the anonymity of the participants.

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