

Essay on Development Policy

Setting Priorities in Health Interventions

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1. Context and Introduction

During the second half of the 20th century, health conditions improved markedly throughout the world. However, some parts of the world have not kept up with the progress in other parts. Also the fast declines in mortality and fertility had led to an increasing importance of noncommunicable diseases especially in the developing world. A further problem is the challenge HIV/AIDS, which became prominent in many countries (Jamison, Jha, & Bloom, 2008).

Major economic arguments why governments should invest in health include market failures and positive externalities of better health. If health care provision was left to the market, only the rich would receive adequate care. Not only increases in income should be considered when analyzing development performance, but also improvements in health. If done so there is no divergence between developed and developing countries, but convergence, in contrast to when only levels of income are considered (Jamison, et al., 2008). The most important return from investments in the health sector is an increase in personal income that results from the decline in morbidity and mortality. This increase is mainly due to the fact that healthier workers are more productive. There are however other factors that influence the increase in personal income due to investments in health. Altering decisions about expenditures and savings over the life cycle as, for example, the reduction of child mortality, can lead to higher individual income. The same is true for increased life expectancy, which creates an incentive to invest in physical capital and in education what results in a better-educated population as healthy children attend school more often and learn more when they are there. Demographic channels like the high proportion of the productive population during baby boom generations are an era of opportunity not least from an economic point of view. Evidence from cross-country studies suggests that initial health¹ of a population is one of the most robust drivers of economic growth among such well-established factors as the initial level of income per capita, geographic location, and institutional and economic policy environment.²

¹ With initial health the status quo health level is meant, which summarizes aspects like life expectancy, child mortality and so forth.

² See for instance (Bloom, Canning, & Jamison, 2004), (Arora, 2001), (Bloom, Canning, & Sevilla, 2001) and (Barro, 1996). Others argue that the direct effect of health on economic development is overrated. They stress an indirect influence of health on economic development, where the positive effects of health on institutions, which in turn have a positive

Since many years now, the existence of infinite demand and finite resources in the health sector has become part of the conventional wisdom among health policy analysts. This is not a problem linked to developing countries, as priority setting in health care is a universal problem, independent of the level of expenditure or the methods of financing or delivery. However, it may be especially important for developing countries, because they face an epidemiological transition³ and have generally tighter budget constraints than developed countries (Ham, 1996). Not only do rich countries spend more for health care in absolute terms than developing countries, they also spend more in percentage of their GDP.⁴ In developing countries, a fast decline in fertility and therefore an aging population, in combination with a changing lifestyle such as adoption of the western diet, result in an increase in circulatory system diseases, cancers, respiratory tract diseases and psychiatric disorders. These are adding to the traditional health problems like infectious diseases and undernutrition in children. The developing countries face therefore the double-challenge of tackling non-communicable diseases simultaneously with infectious diseases while facing very tight resource constraints (Bobadilla, 1996; Ham, 1996).

Governments try in different ways to react to the increased pressure. They make use of budgetary incentives as a way of increasing efficiency, introduce measures aimed at strengthening the management of health services and use markets as well as management as an instrument of reform. Alongside the budgetary incentives, the strengthening of management and the use of competitive mechanisms, there has been increasing interest in attempts to define, through a process of priority setting, the range of services that should be funded. The result is a basic benefits package with high priority (Ham, 1996).

In this context it will require difficult choices to address these multiple problems within highly constrained budgets, even in the current era of expanding domestic health spending and overseas development assistance on health (Jamison, et al., 2008).

effect on economic development, are more important (Acemoglu, Johnson, & Robinson, 2006; Ashraf, Lester, & Weil, 2008).

³ *Epidemiological transition*: In developing countries, the decline in mortality and fertility, and therefore an aging population, in combination with a changing lifestyle, result in an increasing importance of noncommunicable diseases. These are adding to the traditional health problems like infectious diseases and undernutrition in children. This results in a double-challenge of tackling non-communicable diseases simultaneously with infectious diseases (Bobadilla, 1996; Ham, 1996).

⁴ See www.gapminder.org for a visualization of this relationship.

As I was engaged in the execution of a cost-effectiveness analysis of tuberculosis in Mauritania, with the goal to support the priority setting process, I got interested in the theoretical and practical issues that arise when conducting cost-effectiveness analysis, and generally when setting priorities. I therefore decided to analyze those questions in this essay.

2. Priority setting in the health sector

Priority setting is a process by which the alternatives, in this case different health care programmes and services, are ranked in accordance with normative and technical rules, leading to the definition of a minimum or basic package of health care services to patients or groups of patients who are to receive care (Tragakes & Vienonen, 1998). The health care sector is probably the one where explicit priority setting is most prominent. Priority setting is however not a health specific issue. A good example of general priority setting is the Copenhagen Consensus Center, a think-tank based in Denmark that tells governments and philanthropists about the best ways to spend aid and development money. The institution commissions and conducts new research and analysis into competing spending priorities, with the result of a list of cost-efficient solutions to mitigate the negative consequences of the worlds biggest problems.⁵

Following R. Klein (1992), priority setting exists at several levels: at the macro- or system-level, decision has to be taken on the level of funding to be allocated to health services in contrast to other usages like education or defence. On the same level, choices about the distribution of the budget between geographical areas and between diseases have to be made. At the next level, there are options about the allocation of resources to particular forms of treatment. Then, there is the question which patients should receive access to treatment, and finally there have to be taken decisions on how much to spend on individual patients (Ham, 1996). As a result of the way health care is provided, the responsibility for priority setting is shared by politicians, purchasers or insurers, providers, and patients. In relation to Klein's (1992) analysis of different levels of decision-making, decisions at the macro level are usually made by politicians, whereas choices at the micro level are primarily the responsibility of doctors and other health care professionals (Ham, 1996).

⁵ See www.copenhagenconsensus.com for more details.

Decisions on levels of health care spending are usually made through a political bargaining process involving major stakeholders in government and in the health sector. These decisions in turn are shaped by the economic context in which they are taken. This is why finance ministries have an important influence on health care spending. The decision making process on the distribution of the health care budget between geographical areas and between services is more open to technical influences. For geographical allocation, often a resource allocation formula based on the population need is used. For service allocation, governments frequently draw on results of economic analysis, including cost-effectiveness analysis. Yet, technical arguments are strongly modified by the influence of politicians and health care professionals (Ham, 1997). When conducting my research on tuberculosis in Mauritania, several researchers at the National Centre for Public Health Research admitted that the likelihood to get funds for research and eventually medical interventions differs strongly from one disease to another. As a matter of fact, HIV/AIDS, malaria and tuberculosis are the diseases where it is probably most straightforward to get funds, not least because big international institutions exist that tackle specifically those diseases, whereas those interventions do not necessarily have to be the ones with the highest priority from a technical point of view.

The mainstream in scientific literature suggests a technocratic approach to priority setting (Bobadilla, 1996). This approach rests on three pillars. (i) a quantitative analysis of the burden of disease, (ii) the analysis of the cost-effectiveness of the alternative interventions to control the diseases, which cause the largest health losses and finally (iii) the selection of a package or list of interventions that can be delivered with the available budget and through the current health system. J.L. Bobadilla (1996) suggests that interventions should meet those three criteria and lie in line with general population preferences to be selected. In order to be feasible, the interventions should meet the following requirements. Priority interventions should be delivered with reasonable quality by the current health system, they should be accessible to the whole population or almost all within the projected budget and there should be political acceptance of the selected priorities. Otherwise the interventions would be too expensive to implement with the status quo health care system, not be implementable within the budget constraints, or not be supported by the political decision makers (Bobadilla, 1996).

Priority setting should rest on normative valuations that have at least some degree of popular legitimacy. Priority setting makes a relative ranking of the goods in order to allocate scarce

resources among competing uses when there is no market to perform this task. The technical approaches to priority setting can broadly be categorized into three groups. In the epidemiological contribution, studies are used to determine and rank relative health care needs. The economic contribution consists of the principle that an activity is worth undertaking if the benefits exceed the costs. Finally in the evidence-based-medicine, the relative effectiveness or ineffectiveness of interventions is revealed. Priority setting has always been practised, however mostly in an implicit form. The major ethical principles of priority setting are the distribution according to need, the distribution by merit or desert and the utilitarian principle of distribution (Tragakes & Vienonen, 1998).⁶

Many techniques of implicit priority setting exist. The goal should be to move from implicit to explicit priority setting. One possible form to achieve this is the use of cost-effectiveness analysis to make the process more transparent. Implicit priority setting usually takes place at the clinical or micro level. The introduction of explicit priority setting would involve shifting the priority setting responsibility away from clinicians to macro level decision makers like politicians (Tragakes & Vienonen, 1998).

As stated above, for developing countries it is often recommended to concentrate on the provision of essential clinical services to the whole population rather than on the provision of specialised hospital care. The result is a basic benefits package with high priority (Ham, 1997). The biggest exercise so far to define an essential services package globally was conducted by the World Bank in 1993 and resulted in a basic services package that included pregnancy related care, family planning services, tuberculosis control, control for sexually transmitted diseases and the integrated management of the sick child (World Bank, 1993). It is obvious that such essential packages have to be defined for each country, as needs differ a lot from one setting to another. In a 2007 review of 69 low- and middle-income countries, 55 had gone through exercises to define the package of benefits they feel should be available to all their citizens in

⁶ *Distribution according to need*: People with equal needs should be treated equally, and those with greater or lesser needs should receive treatment that is in proportion to the magnitude of their needs.

Distribution by merit / desert: Based on recognizing particular characteristics of individuals that earn them special consideration and hence increased health services (eg. children, elderly people).

Utilitarian principle: The rightness of any action is determined by whether it contributes to the greatest happiness of the greatest number. This involves allocating resources so that the marginal cost-effectiveness ratios obtainable for every possible activity are equal (Tragakes & Vienonen, 1998).

recent years (WHO, 2008). The Copenhagen Consensus challenge paper with focus on disease control concluded that tuberculosis case finding and treatment is the most important investment because it has a high benefit to cost ratio, a high level of financial risk protection, moderate systemic requirements and a huge size of disease burden that could be potentially averted. Other priority interventions are acute management of heart attacks with low-cost drugs, prevention and treatment of malaria, expanded immunization coverage for childhood diseases, tobacco taxation in relation to cancer and hearth disease, combination of preventive interventions against HIV and expansion of surgical capacity at district hospitals (Jamison, et al., 2008).

3. Issues with regard to priority setting

There are many issues related to the above-mentioned priority setting. This paper tries to group the issues in three sections, namely into issues concerning economics, into epidemiological issues, and into issues concerning policy considerations.

3.1. Technological issues

The development of single indicators to measure health status (quality adjusted life years (QUALY), disability adjusted life years (DALY), etc.) has been a major step forward for the setting of health priorities. There are however unsolved problems with age weightings and the discount rate of future health gains. There is no consensus how those issues should be handled (Bobadilla, 1996).

Generally, as with the issues concerning economics outlined above, gaps in data availability make it difficult to undertake systematic comparisons between interventions (Ham, 1997).

A further issue is that priority setting has to take into account the effects of epidemiological transitions. When infectious diseases have been tackled to some extent, the attention has to be given gradually to non-communicable diseases, which are more expensive per DALY, without neglecting infectious disease control.

When disease or risk factors change rapidly, the anticipated burden of disease would be a better reference for priority setting than the generally used present burden of disease (Paalman, Bekedam, Hawken, & Nyheim, 1998). Furthermore, M. Paalman et al. (1998) suggest that rather than prioritising by disease, it might be better to prioritise by population groups or by risk factor. It is argued that most mortality and morbidity is experienced by a relatively small

minority of people, whose identification in combination with a determination of risk factors and outcomes might lead to a different set of priorities.

The use of cost-effectiveness analysis to prioritize interventions results in a focus on efficiency rather than equity. The fact that the most efficient interventions identified often benefit the poor, is more a result of coincidence than of principle. Generally, with use of cost-effectiveness studies, there is a tension between efficiency and equity goals. There is also often a lack of clarity concerning the costs of an intervention (Paalman, et al., 1998).

A comparison of different cost-effectiveness studies is difficult, because the context and methods of individual studies differ, even within one disease (Paalman, et al., 1998). This is a big issue, as the main purpose of cost-effectiveness studies is to compare different interventions. Cost-effectiveness analysis in terms of monetary units has been discredited by unacceptable value judgements on which it rests. Many decisionmakers are sceptical about the monetary valuation of nonmarket goods. Many find that provision of natural unit information (e.g. the numbers of lives saved) gives better intuitive understanding of a program's effects (Hauck, Smith, & Goddard, 2004). More sophisticated versions of cost-effectiveness analysis work with (i) programme budgeting in conjunction with marginal analysis (PBMA), (ii) QALY or (iii) DALY which aim to identify the costs per unit to achieve a certain health outcome (Tragakes & Vienonen, 1998). Economic evaluation is a powerful tool for priority setting, but many methodological and practical barriers limit the extent to which the results of economic evaluations can be used in practical priority-setting decisions (Hauck, et al., 2004).

Research efforts often have a narrow focus on the measurement of cost effectiveness analysis, and to some extent on the burden of disease. Issues associated with the political process of priority setting, the ethical implications of various methods, the institutional and management implications of proposed priorities and the role of social values in the allocation of health resources have been largely neglected (Bobadilla, 1996).

It is not clear why a micro-economic technique (cost-effectiveness analysis), should influence priorities at a system level. Other decision-making processes, for instance political factors such as choosing an expensive, but politically desirable intervention, or the wish to include the opinion of the general population could also influence macro level priorities. Moreover, the status quo and the vested interests of all the participants should be taken into account (Paalman, et al., 1998).

There are limits to the use of techniques in priority setting. This is partly because of weaknesses in the techniques, and partly because of the need to generate political, professional and public

support for choices in health care. This suggests that the process of arriving at decisions may be as important as the decisions themselves (Ham, 1997).

Cost-effectiveness analysis is only a tool for making decisions between alternatives. Broader normative choices on the distribution of benefits in the society must be made on ethical grounds. It is important not to use technical approaches such as cost-effectiveness to make normative judgements about what is good for society (Tragakes & Vienonen, 1998).

3.2. Policy Issues

Health priorities always exist in a context of social values and principles with regard to health, life, reproduction, welfare and equality of opportunities among others, which can have a huge impact on the outcome of a priority setting exercise (Bobadilla, 1996). Health policy making inevitably involves making trade offs between different objectives. These include balancing equity and freedom of choice, and comprehensiveness and cost containment (Ham, 1997).

The focus on a few cost-effective interventions could imply that less cost-effective interventions should not be provided, which would be politically unacceptable. Also, governments could use cost-effectiveness analysis as an excuse to limit public expenditures. Policy issues influencing priority setting are related to: (i) whose priorities should shape decisions, (ii) who profits from DALYs gained or averted, (iii) political barriers to reallocation of money and (iv) the costs of the priority setting exercise per se (Paalman, et al., 1998). Often decision-making processes are unsatisfactory due to distortions found in resource allocations and a lack of transparency on how and by whom decisions are taken (Bobadilla, 1996).

The results of cost-effectiveness analysis might not be consistent with professional or user preferences (Ham, 1997). One could argue that people should have a say in decision-making about priorities, which might well turn out to be different from those of epidemiologists and economists. If preferences of the population are not considered in the methodology, an intervention chosen by specialists may not be as cost-effective anymore (Paalman, et al., 1998). This problem exists for instance in Mauritania, where tuberculosis is a big epidemiological issue, people however do not participate as desired in the tuberculosis detection and treatment process. Reasons for this can be that they do not understand the danger of the illness, that they do not want others to know that they are ill as a result of the stigmatization of the illness, that the treatment is too expensive for them, etc. One has therefore generally the option to concentrate on interventions that are already in line with population priorities, or try to alter the priorities towards desired interventions by informing and educating people.

It could be argued that DALYs gained should be valued differently depending on who gains them. One can hardly value a saved life of a child the same way as a saved life of an elderly person. This way, efforts to enhance equity alongside efficiency would be rewarded by benefitting for example the poor, those with the poorest quality of life (Paalman, et al., 1998).

Often the process of priority setting is influenced by political pressures and delegated to managers who have serious conflicts of interest. In many countries for example, most of the money is spent in urban areas, at the expense of the rural populations access to health care (Bobadilla, 1996). This problem is not health-care specific. During the last election campaign in Mauritania, that followed the military putsch of General Abdel Aziz, and lead to his democratic confirmation, substantial government funds were redirected from their original purpose and used for General Aziz's campaign. Visible results were for instance power blackouts in the following months due to a lack of maintenance of the generators and the power supply system. The effects on the health care system however are much more difficult to identify, what does not mean that they do not exist.

Executing sufficient cost-effectiveness analysis for comprehensive decision-making is very expensive and time consuming. This is of particular importance for poor countries, where it is all the more important to prioritise health interventions and get the most value for money (Paalman, et al., 1998).

The major theories of distribution are of limited practical use because it is difficult to translate the theoretical concepts into concrete interventions (Tragakes & Vienonen, 1998). Moreover cost-effectiveness analysis offer little practical advice for decision makers, as they often do not take into account the status quo of the health system, the vested interests, the lack of incentives for providers and the lack of consumer demand for public health services (Paalman, et al., 1998). Finally, current health priorities are always inadequate to deal with emerging health needs since they were chosen to respond to perceived health needs in the past (Bobadilla, 1996).

4. Conclusion

The need for priority setting can never be eliminated. There are however several ways to lessen the intensity of the problem. Clearly, with an allocation of more public resources to health care the problem of priority setting could be dampened. The same would be achieved, if the definition of the responsibilities of health care provision would be narrowed. A further way to cease the need for priority setting because of scarce public finances would be an increase of private financing, whether through out-of-pocket payments or private insurance. Obviously, also a quality reduction in the services provided would lessen the financial pressure, it is however doubtful that such a solution would be political feasible. The use of evidence-based medicine and improvements in the efficiency of provision would equally help to achieve more outcomes per budget in the health care sector. Finally, increased patient education should help, and, *ceteris paribus*, a generally healthier population would need less care (Tragakes & Vienonen, 1998).

The traditional economic approach has been to assert that priority setting implies using the fixed budget to maximize some measure of incremental health output, often expressed in the form of DALYs or equivalent measures. As discussed above, the cost-effectiveness approach itself has many weaknesses. In this paper I grouped the issues that can arise in the process of priority setting in three groups, economic, epidemiological and policy issues. The question how should be dealt with equity considerations raises conceptual and practical issues. Given the political, institutional, and environmental context in which priorities are set, decisionmakers are unlikely to apply simple cost-effectiveness rules when setting priorities. They do consider those analysis, the final decision may however rest on many other considerations, as population preferences, self interest or the status quo, only to name a few. Some of the most important practical constraints that should not be underestimated include the political environment in which priority setting takes place, the transition costs of implementing new priorities from a status quo, and the interaction between priority setting and health care finance (Hauck, et al., 2004).

All this said, the use of an economic approach to priority setting has many advantages too, not least that it forces the decisionmaker to define explicitly the objectives of the priority-setting process, even if they cannot be easily measured. Clearly, in many instances where technical priority setting was used one could criticize that efficiency was valued over equity. However, the

traditional economic approach can be expanded to incorporate both equity concerns and a wealth of practical constraints that will influence decisions (Hauck, et al., 2004).

Cost-effectiveness analysis should therefore become just one of a number of inputs in the priority-setting process. K. Hauck, et al. (2004) argue, that instead of constantly refining the methodology, efforts should be made to make economic evaluations as simple and transparent as possible.

Furthermore, it seems as if there is not much recently published literature discussing priority setting and the issues that may arise in the process. Apparently these issues were discussed intensively in the 1990ies. In recent years quite many cost-effectiveness analysis have been conducted, what should however not lead to the conclusion that the issue is not anymore controversial. We therefore would like to see more research in this area.

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