

# PERFORMANCE OF THE BELGIAN HEALTH SYSTEMS. REPORT 2012

## SUPPLEMENT S2 THE PLACE OF EQUITY IN ASSESSMENTS OF THE PERFORMANCE OF HEALTH SYSTEMS





## Belgian Health Care Knowledge Centre

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## INTRODUCTION

On 27 June 2008, the ministers for health from the 53 countries of the World Health Organization (WHO) European Region signed the Tallinn Charter, thereby committing themselves to “promoting transparency and being accountability for the performance of their health system by publishing measurable results”<sup>a</sup>. This initiative to assess the performance of health systems, which dates back to the start of the current century, essentially aims to achieve three goals: evaluating to what extent resources are allocated to health promotion and restoration, checking the progress of any given country over time and establishing how a given country performs in comparison to countries that have a health system which is more or less similar. In other words, it is about ensuring the efficiency of a health system and about facilitating internal comparability (within a country over the course of time) and external comparability (between countries) of the performance of that system. A shortage of reports on the performance of health systems there is not. In fact, several States have already put a procedure in place to assess the performance of their health systems: Australia (AU) (1996), Canada (CA) (1999), the USA (US) (1999), the United Kingdom (UK) (1999), New Zealand (NZ) (2001), the Netherlands (NL) (2006), Sweden (SE) (2008) and Belgium (BE) (2010). International institutions, the Organisation for Economic Co-operation and Development (OECD)<sup>b</sup>, the Commonwealth Fund<sup>c</sup> (CF), the

World Health Organization (WHO) and the European Commission<sup>d</sup> (EC) have all performed their own assessment, not only with the idea of contributing their own elements of comparability but also with a view to encouraging States to subscribe to this process by inviting them to furnish data on dimensions and areas such as accessibility, effectiveness, efficiency, safety or simply to produce cost-related data<sup>e</sup>.

<sup>a</sup> [http://www.euro.who.int/\\_data/assets/pdf\\_file/0008/88604/E91439.pdf](http://www.euro.who.int/_data/assets/pdf_file/0008/88604/E91439.pdf) .

The charter’s authors point out that this charter features within a tradition of conferences, declarations, constitutions and charters which all affirm the importance of health for all citizens and the need to implement measures that can promote or restore health (Alma-Ata 1978, Ottawa 1986, Ljubljana 1996, Jakarta 1997, Mexico 2004, Bangkok 2005). The right to health has moreover been expressly enshrined in the WHO Constitution, the Universal Declaration of Human Rights, the Convention on the Rights of the Child and in the Millennium Development Goals, upheld by the UNO.

<sup>b</sup> Notably the Health Care Quality Indicators (HCQI) but also the ‘Health at a glance’ reports

<sup>c</sup> The Commonwealth Fund is a private foundation that aims to promote a high performing health care system that achieves better access, improved

quality, and greater efficiency, particularly for society’s most vulnerable, including low-income people, the uninsured, minority Americans, young children, and elderly adults. The Fund carries out this mandate by supporting independent research on health care issues and making grants to improve health care practice and policy. An international program in health policy is designed to stimulate innovative policies and practices in the United States and other industrialized countries. <http://www.commonwealthfund.org/About-Us.aspx>

<sup>d</sup> The ECHI – European Community Health Indicators

<sup>e</sup> Cf. the report on the performance of the Belgian health system for a detailed overview of these various initiatives and a description of the methodology Belgium uses to select performance indicators (Vlayen, Vanthomme, 2010)



# 1. HEALTH SYSTEM PERFORMANCE INDICATORS

An analysis of the reports on the performance of the health systems allows us to compile a list of the main relevant dimensions and to set measurable indicators, i.e. for which data are recorded or in respect of which data recording might be envisaged and advisable. Following an exhaustive recension of the reports on the performance of the health systems, 12 sets of dimensions were identified which the countries or the international institutions retained in order to characterise the performance of a health system. Table 1 features the dimensions found in at least 8 of the 12 reports consulted and a definition that could be deemed to ‘cover’ the respective dimensions in these reports.

**Table 1 – Definitions of the dimensions of the performance of health systems retained in at least 8 of the reports consulted**

Aspects	Definitions
<b>Accessibility</b>	The ease with which health services are reached. Access can be physical, financial, or psychological and requires that health services are a priori available
<b>Effectiveness</b>	The degree of achieving desirable outcomes, given the correct provision of evidence-based health care services to all who could benefit but not to those who would not benefit
<b>Efficiency</b>	Finding the right level of resources for the system and ensuring that these resources are used to yield maximum benefits or results
<b>Equity</b>	The extent to which a system deals fairly with all concerned. Equity deals both with the distribution of the burden of paying for health care and with the distribution of health care and its benefits among a people

<b>Patient centeredness</b>	The degree to which a system actually functions by placing the patient/user at the centre of its delivery of health care
<b>Safety</b>	The degree to which the system has the right structures, renders services, and attains results in ways that prevent harm to the user, provider, or environment

*Source: (Vlayen, Vanthomme, 2010), pp. 15-18*

This overview of the reports on the performance of the health systems facilitates a quadruple characterization of an ‘effective’ health system: quality<sup>f</sup>, accessibility, efficiency and equity. Quality essentially relates to the medical, clinical and technical results the patients derive from the health system irrespective of the means employed. Efficiency, i.e. the relationship between cost and effectiveness, is what brings the economic dimension into the equation and is often also the most commonly used criterion to decide whether quality care will be covered by the community. Thus, in a way, efficiency is the link between the availability of quality care and that care being covered by mandatory insurance, i.e. people’s access to care, at least from a financial point of view. Quality is therefore a prerequisite for the financial accessibility to care and even though that care must be efficient from a financial sustainability perspective, it must also be deemed to be a priority within the framework of a relatively modest budget. Efficiency, for its part, is a necessary condition to ensure that this health care good or service is covered by the community as choices may have to be made between all these efficient health care goods and services due to budgetary constraints. Equity, the fourth dimension, one that is often deemed to cut across the other dimensions, is rarely defined accurately enough to differentiate it from inequality or ‘mere’ disparities and only seems to gather controversy as one attempts to define its contours.

<sup>f</sup> A quality health system can be described as one that provides effective, appropriate, guaranteed, patient-centred and continuous care (Vlayen, Vanthomme, 2010)



Other dimensions, specific to up to 5 reports or even to one country only (cf. Table 2<sup>9</sup>) also feature in the reports. Some of these, i.e., appropriateness and continuity of care, are seen as sub-dimensions of quality in the Belgian report (Vlayen, Vanthomme, 2010).

In our proposal, we shall focus on this dimension of equity. We shall begin by defining equity in a very general manner and then go on to check whether certain approaches of distributive justice may result in one or several definitions that could be applicable to the health systems. Next, we shall check their 'practicability', i.e. how they can be used to measure the performance of health systems. Then, we shall describe how the current reports took equity into account before suggesting indicators that can measure equity within the framework of the assessment of the performance of a Belgian health system.

**Table 2 – Definitions of the dimensions of the performance of the health systems found in up to 5 of the reports consulted**

Dimensions	Definitions
<b>Acceptability (CA, CF)</b>	Conformity to the wishes, desires, and expectations of health care users and their families
<b>Care environment (UK)</b>	The degree to which care is provided in environments that promote patient and staff well-being and respect for patients' needs and preferences in that they are designed for the effective and safe delivery of treatment, care or a specific function, provide as much privacy as possible, are well maintained and are cleaned to optimise health outcomes for patients
<b>Appropriateness (BE, UK, CA, AU, CF)</b>	The degree to which provided health care is relevant to the clinical needs, given the current best evidence
<b>Competence/capa</b>	The extent to which health care for specified users,

<b>bility (CA, AU, NZ, CF)</b>	over time, is smoothly organized within providers and institutions
<b>Continuity (BE, CA, AU, NZ, CF)</b>	The extent to which health care for specified users, over time, is smoothly organized within providers and institutions
<b>Expenditure/Cost (WHO, OECD, EC)</b>	The degree of health spending (as part of efficiency)
<b>Governance (UK)</b>	A framework through which NHS organisations are accountable for continuously improving the quality of their services and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish
<b>Sustainability (BE, AU, NL, EC)</b>	System or organisation's capacity to provide infrastructure such as workforce, facilities and equipment, and be innovative and respond to emerging needs (research, monitoring)
<b>Timeliness (US, NL)</b>	The degree to which health care is provided within the most beneficial or the necessary time window

Source: (Vlayen, Vanthomme, 2010), pp. 15-18

<sup>9</sup> The countries in question feature between brackets



## 2. EQUITY: A GENERALLY 'RECOGNIZED' CONCEPT BUT ONE NOTED FOR ITS 'CONTROVERSIAL' SPECIFIC DEFINITIONS

Regardless of the field, there is no discord about the general definition of equity which aims to offer 'equal care to those who are the same in a relevant respect' (horizontal equity) and, hence, 'different care to those who are different in relevant respects' (vertical equity), yet the 'focal variable', i.e. the object of this equalization has fuelled numerous debates as it stems from an essentially philosophical and therefore normative and subjective choice. In essence, this choice is a political one. In other words, even though there is no argument about the principle of equality itself, consensus still needs to be reached on what needs to be equalized. If we want to approach social issues in an ethical fashion, we must regard all people as equals on *one level or other*, the one we deem to be the most relevant (Sen, 2000), pp. 37-38, which means that an approach like this is always egalitarian in *some respect*. This is also the issue A. Sen broached in 1979 when he was looking for the most relevant focal variable<sup>h</sup> to base his theory of justice on. He notably emphasized that even a utilitarian approach was egalitarian because the maximization of the sum of the utilities requires the equalization of everyone's marginal utilities (Sen, 1979), p 198. Yet, on account of the tremendous diversity among people, it would be illusory to strive for equality between people at every level. In other words, demanding that a certain variable (resources, opportunities, income, wellbeing...) is equalized, will inevitably create disparities in other variables as the approach by libertarian R. Nozick illustrates since equality of libertarian rights unavoidably goes hand in hand with inequalities in other areas such as income or wellbeing (Sen, 2000), p 42.

Choosing a focal variable therefore comes down to choosing a 'type' of equity and consequently also a 'type' of society or at least, with regard to the issue at hand, a 'type' of health care system because, in terms of a given quality of care, in terms of a given level of efficiency, the adherence

to a certain definition of equity is necessarily going to require a redistribution of public means, a funding system, a system that compensates for specific unforeseen health risks. In the table below, we present the main approaches of distributive justice based on the focal variable whose spectrum ranges from the equality of resources to the equality of results. It will be a matter of equalizing the *basic liberties*, the *opportunities* and the *wealth* in Rawls (Rawls, 1987, 2008), the *resources* and the *opportunities to protect oneself against unforeseen events* in life in Dworkin (Dworkin, 1981a, b, 1996, 2000, 2002a, b, 2003), the *access to benefits* in Cohen (Cohen GA, 1989, 1990, 1991, 2006, Cohen J, 1994), the *wellbeing* in Arneson (Arneson R, 2002, Arneson RJ, 1989, 1990, 1999, 2000, 2001, 2007), the *results* (in terms of health for instance) in Roemer (Roemer J, 1985, 1986, 1987, 1993, 1995a, b, 1996, Roemer JE, 1998, Roemer MI, 1961), *life's opportunities* in Daniels (Daniels, 1991, Daniels and Sabin, 1997, Daniels, 2001, 2008, 2009, 2012), the *access to health care* in Schmidt (Schmidt, 2007, Schmidt, 2008a, b, 2009a, b, Schmidt, Gerber, 2009, Schmidt, Voigt, 2009), a *basic income guarantee* in Van Parijs (Van Parijs, 1990, 1991a, b, 1994, 1996a, b), the *capabilities* in Sen and Nussbaum (Nussbaum, 1992, 2000a, b, 2007, Sen, 2000, Sen, 2002a, b, Sen, 2004a, b, Sen, 2010) and *dignity* in Anderson (Anderson, 1999).

As we shall see in the next section, which deals with equity in performance reports, the term equity can be linked to the notion of personal responsibility and to the nature and the range of choices individuals have. This link can be deemed to ensue from the desire to reconcile solidarity and responsibility on the part of certain thinkers who aim to address the criticism voiced against the welfare state (Léonard, 2010, 2012).

<sup>h</sup> This term has been borrowed from A. Sen (Sen, 2000), p 42



Table 3 depicts the range of possible focal variables and the diversity among the concepts of personal responsibility their authors have adopted and the ways in which individuals are compensated when faced with an unexpected event in life. Even though these theories do not apply to health care specifically, their general nature allows us to picture their application to the health system. For illustration purposes only, John Roemer suggests dividing the population into a reasonable number of homogenous 'types', notably based on a similar socioeconomic status. In this scenario everyone would, in the event of ill health, receive treatment in function of the effort they made to remain in good health, which, Roemer believes, could be measured by means of certain appropriate proxy data. Thus, all the individuals of a certain type, who would for instance have made a median effort within their type, would receive the same level of intervention from the health insurance. Intellectually stimulating as these approaches may be, from a technical point of view, their feasibility is quite another matter. At that, Roemer deems that there is no need to resolve this conundrum of delineating between circumstances and choice (Roemer J, 2002). His approach would also require a certain amount of knowledge about a person's circumstances which is very much at odds with the principle of

privacy. Even though this certainly provides food for thought in relation to the concept of justice, it also raises awareness about the difficulties of successfully implementing this idea while respecting the basic principles on which consensus has been reached.

Within the framework of compiling a performance report on a health system, it would simply not be possible to choose a focal variable without adopting a normative position which, in turn, would not be reconcilable with the neutrality a task such as this requires. A definition of equity the overall majority can subscribe to, some sort of smallest common denominator, must therefore be used, one that can also be concretized by measurable indicators. Thus, there is a broad consensus to focus on health inequalities, care consumption or the determinants of health between 'social' groups of people, a choice which implicitly implies that the level attained by the most privileged group mirrors what can be achieved for the other groups (Braveman, 2003, Braveman and Gruskin, 2003). As a matter of fact, this is also the path the authors of most of the performance reports chose to travel. As we shall see, this minimal constraint does not exclude discrepancies between the ways in which the various reports interpret equity.



Table 3 – Overview of the main post-welfarist approaches to distributive justice

Authors	Focal variables (to 'balance out' or 'distribute')	Concept of responsibility, freedom, and merit	Compensation (or equalization) mechanism
<b>J. Rawls</b>	<ul style="list-style-type: none"> <li>• Basic freedoms</li> <li>• Genuine opportunities</li> <li>• Level of income and wealth</li> </ul>	<ul style="list-style-type: none"> <li>• Procedural responsibility</li> <li>• A posteriori responsibility</li> <li>• No moral merit but merit in the sense of 'legitimate expectations' and merit at an institutional level</li> </ul>	<ul style="list-style-type: none"> <li>• Equalization of basic freedoms</li> <li>• A fair equalization of opportunities</li> <li>• Difference principle</li> </ul>
<b>R. Dworkin</b>	<ul style="list-style-type: none"> <li>• Resources (the envy test)</li> <li>• Opportunities to cover oneself against various risks</li> </ul>	<ul style="list-style-type: none"> <li>• Person-specific responsibility (preferences, ambitions, aversion to risks, likings)</li> <li>• No responsibility with regard to context (physical and mental capabilities, talents, very strong desires)</li> <li>• Responsibility is expressed by means of the auction and insurance mechanisms</li> </ul>	<ul style="list-style-type: none"> <li>• Community intervention to compensate individuals who are 'covered' by two types of insurance:</li> <li>• Disability insurance</li> <li>• Income protection insurance</li> </ul>
<b>G.A. Cohen</b>	<ul style="list-style-type: none"> <li>• Access to benefits</li> </ul>	<ul style="list-style-type: none"> <li>• Disadvantages as a result of choices, consciously or voluntarily developed likings</li> </ul>	<ul style="list-style-type: none"> <li>• Compensation for non-voluntary disadvantages</li> </ul>
<b>R. Arneson</b>	<ul style="list-style-type: none"> <li>• Wellbeing (prioritizing the less well-off)</li> </ul>	<ul style="list-style-type: none"> <li>• Persons who do not take any or little responsibility for their situation</li> </ul>	<ul style="list-style-type: none"> <li>• Positive (negative) compensation for persons who do not take any or little responsibility for their situation</li> <li>• Compensation for events caused by natural or social 'problems'</li> <li>• Compensation if the cost is reasonable</li> </ul>
<b>J. Roemer</b>	<ul style="list-style-type: none"> <li>• Opportunity to live a good life (attain a certain level of health, training...)</li> <li>• Results (e.g. in terms of health or education, i.e. life's 'opportunities')</li> </ul>	<ul style="list-style-type: none"> <li>• Responsibility for the level of effort made</li> <li>• Not responsible for the circumstances that typify the type the individual belongs to</li> </ul>	<ul style="list-style-type: none"> <li>• Compensation or an identical result for all individuals who make the same level of effort</li> </ul>
<b>N. Daniels</b>	<ul style="list-style-type: none"> <li>• Normal functioning (life's opportunities)</li> </ul>	<ul style="list-style-type: none"> <li>• No reference to the concept of personal responsibility</li> </ul>	<ul style="list-style-type: none"> <li>• Procedural approach</li> </ul>
<b>H. Schmidt</b>	<ul style="list-style-type: none"> <li>• Fair access to health care on the basis of 'procedural' tests</li> </ul>	<ul style="list-style-type: none"> <li>• Joint responsibility on the part of the individual - community</li> </ul>	<ul style="list-style-type: none"> <li>• Procedural approach</li> </ul>
<b>Ph. Van Parijs</b>	<ul style="list-style-type: none"> <li>• Basic income guarantee (transfer of funds)</li> </ul>	<ul style="list-style-type: none"> <li>• 'Full' responsibility beyond the payment of a basic income</li> </ul>	<ul style="list-style-type: none"> <li>• Identical benefits for everyone, no real concept of compensation</li> </ul>





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<b>M. Nussbaum</b>	<ul style="list-style-type: none"><li>• Ability to live with dignity</li><li>• Ability to adopt a healthy lifestyle (to be insured by society)</li><li>• List of capabilities</li></ul>	<ul style="list-style-type: none"><li>• Everyone is free to choose his own lifestyle and should not be penalized for the consequences of that choice</li></ul>	<ul style="list-style-type: none"><li>• Compensation by means of an 'equalization' of capabilities</li></ul>
<b>A. Sen</b>	<ul style="list-style-type: none"><li>• Capability (vector of functionings)</li><li>• No list of capabilities</li></ul>	<ul style="list-style-type: none"><li>• Responsibility in terms of the chosen vector of functionings and the corresponding result</li></ul>	<ul style="list-style-type: none"><li>• Compensation by means of an 'equalization' of capabilities</li></ul>
<b>E. Anderson</b>	<ul style="list-style-type: none"><li>• Democracy, respect and dignity</li></ul>	<ul style="list-style-type: none"><li>• No responsibility for certain 'capabilities' (health) and full responsibility for other capabilities that do not feature within the community's area of action</li></ul>	<ul style="list-style-type: none"><li>• Full compensation for 'capabilities' inherent to respect and human dignity.</li></ul>

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### 3. EQUITY IN THE 'PERFORMANCE' REPORTS

The first official documents the WHO published contain a definition which tries to differentiate between 'variations', 'disparities' or 'differences' and 'inequalities' that is not purely semantic in nature. According to Margaret Whitehead the term 'inequality' has a moral and ethical connotation as it refers to differences that are 'unnecessary' and 'avoidable' but which are also deemed to be 'unfair' (Whitehead, 1990), p 5. By means of examples given in the WHO document, the assessment of the 'unjust' nature of a difference does not merely depend on the time and place but also on an 'individual's degree of choice'. According to the definition it puts forward, the WHO therefore deems that the finality of a policy that fosters fairness (from a health point of view) does not consist of eliminating every single health difference so that everyone can enjoy the same level and the same quality of health but rather of eliminating differences deemed to be avoidable and unjust (op. cit., p 7). This definition is not always very workable on account of its circular nature in the sense that equity is defined by the unjustness of a situation even though this unjustness seems to ensue from people's degree of choice for which there is no universal and indisputable criterion. So as to enhance the workability of the definition, the WHO document suggests emphasizing the concepts 'accessibility' and 'quality'. Thus, equity in health care is defined as equal access and equal use in respect of an identical need but also as equal quality of care for everyone (op. cit., p 8).

By referring to accessibility and quality, some of the pitfalls the definitions inspired by theories of justice, whether global in nature or specific to health, gave rise to can be dispensed with, notably the problems linked to the quantification of people's personal responsibility for their own health given the true scope of their freedom, of their ability to choose. This obviously does not mean that this responsibility should not be appealed to within the framework of health promotion, disease prevention or care consumption even but that one, on the one hand, does not try to measure it accurately and, on the other hand, that one does not try to link it to some sort of notably financial incentive that would encourage individuals to adopt the desired behaviour. However, a deliberate decision to use the concept 'need' creates other complications which are both ethical and technical in

nature. How do we distinguish need from desire, an objective need from a subjective need? How do we go about measuring these needs?

As Table 1 illustrates, several reports on the performance of health systems view equity as a specific dimension or as an all-encompassing, transversal dimension. The 'focal variables' used are health outcomes, access to or the use of care, the progressive nature of the funding, the manner in which the system responds to user preferences (responsiveness), the system's ability to avoid 'catastrophic' expenses or the impoverishment of patients, the medical expenses payable by patients (Smith and Papanicolas, 2012), pp. 20-29. A review of a number of the reports allows us to illustrate this diversity which all the same reflects a certain level of homogeneousness. The choice of the focal variables is in fact generally linked to the data available while the manner in which these inequalities are stratified depends in most cases on socioeconomic status, region, age and gender.

In the **Dutch** report (Westert, van den Berg, 2010), the term equity crops up in the health disparities between socioeconomic groups (p 177), in the differences in access to health care in function of people's level of education (pp. 130-135). In the recent publication by the **Commonwealth Fund** on the performance of the American health system, which dedicates a sizeable section to the accessibility of care, neither the term 'inequalities' nor the term 'equity' but the terms 'disparities' and 'differences' are used to describe this dimension of performance. Thus, accessibility is assessed on the basis of 5 criteria: the extent to which it caters for adults between the ages of 18 and 64 years, the extent to which it caters for children from 0 to 17 years of age, the percentage of adults who can afford to visit a physician, the percentage of adults who had a check-up in the past 2 years and the percentage of adults who visited their dentist in the past year (Radley, How, 2012). The most recently published **OECD** report (OECD, 2011), dedicates an entire section to the international differences in access to health care, notably in terms of needs that are not met, the medical expenses borne by patients, dental care consumption and cancer screening per level of income in the individual countries. **Slovenia** dedicated an entire report to health inequalities in which it describes the disparities in health conditions which translate into a prevalence of certain pathologies such as cancers, diabetes, cardiovascular disease, mental health problems, oral diseases (Buzeti, Djomba, 2011). In its report on the



performance of its health system (World Health Organization, 2012b), **Turkey** systematically shows disparities with regard to gender, age, socioeconomic status and geographical regions, with the result that this report is very much tinted by a desire to check how the country performs in terms of the equity dimension. For every given item, it mentions the extent and the evolution of these disparities. The report in questions also contains two specific equity indicators: the percentage of households faced with a 'catastrophic' health expense and the percentage that medical expenses payable by patients take up in the overall cost of running a household. A report by the **European Commission**, on the one hand, essentially focuses on the mortality rates across the different countries and regions and, on the other hand, on the perceived level of health and the various forms of disability in function of the different socioeconomic groups people belong to (Spinakis, Anastasiou, 2011). According to the **Euro Health Consumer Index**, the equity perspective is viewed from a 'macro' perspective of the share of the overall health expenses the public sector covers. A percentage of 80% or more is viewed as 'good', anything between 70 and 80 % is qualified as 'average' and anything below 70% is labelled as 'not so good'. However, the source of funding is not taken into account (Björnberg, 2012). Finally, the WHO organised a meeting in June 2012 to develop indicators to assess the attainment of the Health 2020 targets. Target 3 relates to 'Reducing inequities in health in Europe'. It aims to measure the difference in health status between the groups of socially marginalized and poor people, on the one hand, and the rest of the population on the other hand. The experts who attended that meeting notably recommended that data disaggregated by age, gender and socioeconomic status should be compiled. They also advocated using the Gini index and stratifying the differences instead of making a comparison between the least and the best well-off (World Health Organization, 2012a).

### 3.1. Equity: a transversal concept

Like Canada or the Netherlands, Belgium chose to give equity a 'transversal' place in its performance report (Vlayen, Vanthomme, 2010), which means that all the individual performance dimension indicators can be analysed in terms of equity. However, this first report on the performance of the Belgian health system has highlighted the need to develop an equity-specific dimension and equity-specific indicators. Even though the three angles on equity, in terms of functioning, financing and patients' financial contribution mentioned to illustrate the possible diversity of approaches, did in fact not really produce a concrete implementation track, they did encourage anyone interested in a fair health system to ask themselves a number of crucial questions. Here, we shall recap the angles the first report proffered by way of example.

From the **functioning** of the health system point of view, we can non-exhaustively and purely for illustration purposes devise five definitions of equity, each one based on a different focal variable: opportunities, care consumption, outcome, personal responsibility of patients in the face of illness, and needs. We could for instance state that a health system is fair when:

All citizens (without distinction between age, gender, activity, income, education, geographical area, level of urbanization or rurality, lifestyle or health status) have the same **opportunities** in terms of receiving the necessary health care. This definition would imply that notably financial and cultural disparities would be offset to ensure that everyone enjoys the same level of access;

All citizens (without distinction between age, gender, activity, income, education, geographical area, level of urbanization or rurality, lifestyle or health status) avail of the same **amount** of care;

All citizens (without distinction between age, gender, activity, income, education, geographical area, level of urbanization or rurality, lifestyle or health status) enjoy the same results in terms of health, given the pathology or pathologies they are suffering from. This definition would imply an uneven provision of care with a view to producing equal **results** – i.e. health inequalities are compensated for in full;



The effects of bad luck (events beyond a person's control such as natural disasters and genetic disabilities) are compensated for while the effects of option luck (events within a person's control such as alcohol abuse, smoking, high-risk behaviour...) are **covered by the individual in question**. This definition would imply that people would be charged the full, or at least the partial, cost of resolving any health problems they have full or at least partial control over, though with, insofar and as precisely as possible, due regard for the 'determinants' people have no or little control over (cf. for instance Roemer's proposal above). This type of definition of justice on the functioning of the health system would obviously require an accurate knowledge of people's lives, which, would, at least in part, be at odds with the right to privacy. By way of illustration, it is worth noting that a person's level of education has no bearing on their association between smoking and mortality (Charafeddine R VOH, Demarest S, 2012b), even though this does not put a question mark over the socioeconomic gradient that characterizes tobacco use (Charafeddine R D, S, Van der Heyden J, Tafforeau J, Van Oyen H, 2012a). At that, the socioeconomic gradient which characterizes high-risk behaviour 'questions' the concepts of choice, freedom and responsibility and therefore calls for a careful approach. In fact, notably in Belgium, men and the less well-educated tend to engage in cumulative forms of 'unhealthy' behaviour (Drieskens S VOH, Demarest S, Van der Heyden J, Gisle L, Tafforeau J, 2009) whereas obesity seems to be more prevalent amongst the least well-educated (Charafeddine R VOH, Demarest S, 2009). There are of course exceptions to this gradient, such as, for one, the consumption of vegetables associated with a higher socioeconomic status in the Nordic countries but not in the Mediterranean countries (Prättälä R, 2009). It is also striking that while the self-reported health of certain populations of immigrants (from Turkey and Morocco) is not as good as that of native Belgians when contextual factors are taken into account, it does improve when personal characteristics such as age, gender and socioeconomic status are factored in (Lorant V, 2008). The ethnic dimension can therefore, at least partially, be associated with or determine the health inequalities or the access to care. In fact, certain countries, like the USA, where these disparities also affect vital treatments (Penner, Eggy, 2012, Williams, Kontos, 2012), take very concrete

measures to combat this type of inequalities<sup>i</sup> (Hasnain-Wynia and Beal, 2012). It must also be noted that public health policies are questioned by studies that highlight the role children can play in terms of adopting a healthy lifestyle, notably as far as diet is concerned. Children appreciate that eating a healthy diet can be more expensive, seem to associate a healthy diet with one that is rich in fruit and vegetables and believe that this is not as much a matter of personal responsibility but one of public and corporate responsibility (Fairbrother, Curtis, 2012);

All citizens (without distinction between age, gender, activity, income, education, geographical area, level of urbanization or rurality, lifestyle or health status) are adequately treated for the pathology or pathologies they suffer from and in light of their **personal needs**. These needs are not only pathology specific but are also specific to every individual. Illness is very much a personal experience in fact and everyone tries to deal with ill health in their own way. This means that, over and above evidence-based responsibility, there is a continuum of possibilities to meet everyone's personal needs given a particular pathology. This involves looking at the secondary effects, the pain, the physical and/or psychological limitations, aesthetic effects...

From the **funding** of the health system point of view, two methods of financing the system could be contemplated which in turn would lead to two types of equity:

- A definition that advocates proportional funding:  
The health system is funded fairly when all citizens proportionally contribute in function of their overall capacity to contribute.
- A definition that advocates progressive funding:  
The health system is funded fairly when all citizens progressively contribute in function of their overall capacity to contribute.

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<sup>i</sup> For instance the Affordable Care Act 2010, which facilitates the objective documenting of health disparities, the National Healthcare Disparities Report 2002 which shows a marginal improvement in the quality of health care and no reduction in disparities with regard to this quality.



From a patient's **financial participation** point of view, we could also, in a non-exhaustive fashion, consider two different forms of equity

- A definition that advocates a lump-sum payment:  
A health system is fair when all citizens pay the same when they avail of a particular form of care. This definition means that personal contributions would be used to reduce public expenditure without taking citizens' personal circumstances into account.
- A definition that advocates progressive payments:  
A health system is fair when all citizens pay a financial contribution in function of their social status or financial situation when they avail of a particular form of care. This definition means that personal contributions will enhance the proportional or progressive nature of the system's funding.

## 4. A 'PRAGMATIC' CHARACTERISATION OF EQUITY

So, equity is recognised as a relevant dimension of the performance of any health system and the above definitions convey a treble concern. In fact, it is the manner in which the system is *used*, the way in which it is *funded* (the input services) and finally how patients *settle their share of the cost* (at the *point of care*) notably in the form of 'cost sharing' that merit looking at. The challenge on the one hand lies in adopting one or several definitions of equity that is or are consistent with an acceptable concept of justice in a given society without being overly normative or subjective. On the other hand, for the sake of workability, also measurable indicators, ideally comparable in time and between countries, must be defined. It is possible to distinguish equity-specific indicators or at least indicators that are directly linked to the areas of health and health care from rather more contextual indicators that are indirectly linked to these areas. The indicators conveying a disparity in health status, care consumption, costs covered by patients are all indicators that are specific to the areas in question. It is not only a matter of dividing care consumption according to age, gender, geographical location, socioeconomic or social status but also according to the financial cost borne over and above what the health insurance pays back. Other specific indicators that could be used are the rate of **premature mortality** by socio-economic class<sup>j</sup>, **life expectancy by socio-economic class**, **number of years of excellent health by socioeconomic class**, **the rate of child mortality by socio-economic class**, **care needs by income level which are not met**.

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<sup>j</sup> <http://www.conferenceboard.ca/hcp/Details/Health/premature-mortality-rate.aspx>



The progressivity of the way in which health insurance is funded, the manner in which the national income is distributed across the population, the child poverty risk rate<sup>k</sup>, the different lifestyles by socioeconomic classes (tobacco, alcohol, physical activity, diet, excess weight and obesity – cf. e.g. (Buzeti, Djomba, 2011), pp. 36-41, could all be deemed to be ‘contextual’ indicators or indicators that are indirectly linked to the areas of health and health care.

#### 4.1. Consumption as a ‘proxy’ for the needs and as an indicator of the fair use of medical care

Ensuring that everyone has access to medical care in function of their needs is possibly the best way of ensuring fairness in the health system. Upstream, it is not only a matter of ensuring an egalitarian distribution of the health determinants but also of ensuring a level at which everyone can enjoy the best health possible. The institutions and countries that try to assess levels of fairness in the health systems therefore compare different groups of people (in function of their gender, age, socioeconomic status, place of residence). Any disparity in the consumption of preventative or curative care portrays, at least a potential, fairness issue. Needless to say, differences that can be explained by people’s gender or age must also be factored in. In other words, not all discrepancies are a problem per se but must be interpreted by taking objectifiable factors that can fully or partially explain these discrepancies. ‘By virtue of their nature’, certain services are either reserved for men or for women only (notably the screening and treatment of particular forms of cancer). Then again, other services are more age-specific (admissions to geriatric units, home care, cataract surgery...). At that, the disparities shown say nothing about an absolute that must be attained. The ideal would be to come up with a solution for an objectifiable problem which does necessarily mean ‘treating’ an entire population. Encouraging all women to avail of a breast-screening program is not the same as encouraging all women to go for an invasive surgical procedure that should be reserved for people for whom this course of action is an answer to a health problem that is based on evidence.

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<sup>k</sup> See (Atkinson and Marlier, 2010), p. 108 - Figure 5.2 shows the child poverty risk rate in each country compared with the overall poverty risk rate for Survey Year 2008.

#### 4.2. The sharing of the cost to patients at the point of care as a measure of fairness

It is also possible to calculate measurable indicators of patients’ contribution to public or overall health care expenditure. To that effect, a list of the various categories of financial contributions that make up this ‘burden’ on patients either within public expenditure (covered by compulsory insurance) or within the overall cost of health care (by adding all the categories of expenses that do not form part of the ‘basket of public health goods’) that is as comprehensive as possible should be compiled. As regards patients’ share in public expenditure, the out-of-pocket payments and the products and services that are not refunded (like certain types of medication) are retained. In terms of patients’ share in the overall health costs, additional care and room fees for which there is an official trace of payment and the various over-the-counter items patients buy in pharmacies could be added. For the sake of completeness, both the public and the private reinsurance systems should be taken into account, i.e., in the latter case, the premiums policyholders pay. Their net cost would then in fact be calculated as being the difference between the premiums people paid and the services they received. All these payments by patients constitute the ‘private’ share of the health costs or the share of the health costs that are paid at the point of care (cf. below).

Once all these data are available, it would be possible to divide these ‘private’ expenses by age, gender, refund status or level of income or socioeconomic status even.



### 4.3. The degree of progressivity of the funding as a measure of fairness upstream of the system

Here we distinguish between funding ‘upstream’ of the system, i.e. prior to any care being availed of<sup>l</sup>, and funding at the point of care, which is usually referred to as ‘cost sharing’<sup>m</sup> to which we add the net private insurance premiums paid for with a view to being covered by these insurance policies. This distinction comes down to weighing up ‘public’ funding and ‘private’ funding as Wagstaff notably suggests (Wagstaff and Van Doorslaer, 2000). Prior to looking at care consumption, one might wonder whether the principle of solidarity between the richest and the poorest is reflected in the way care is funded. Within the framework of a compulsory health insurance system, it is this principle that prevails and we have no reason to believe that it should be any different. Quite to the contrary, we could even go one step further and ask ourselves whether the funding is progressive enough even though this question might smack of a certain level of normativeness as it would entail making taxation or indirect taxation fairer by opting for a progressive tax rate (a flat rate that increases as a person’s level of income increases) rather than a proportional tax rate (a flat rate irrespective of a person’s income). One easy way to achieve this would be to fix a ratio between the share of direct taxes, indirect taxes and the social security contributions that fund health insurance respectively. From a purely technical point of view, i.e. disregarding the political considerations linked to a choice like this, the funding would then be all the fairer as the relationships direct taxes / indirect taxes, direct taxes / social security contributions, social security contributions / indirect taxes increase. As these ratios are clear, they can easily be calculated in time per country and would even allow comparisons to be made between countries. The simplicity of these ratios comes with two important limitations however. Firstly, they convey a theoretical or expected and, above all, relative ‘progressivity’. Actual progressivity hinges on several

parameters as a matter of fact: the marginal rates and the income brackets to which they apply, the existence of and the extent to which certain tax brackets are exempt from income tax, the tax credits which are at times specific to the highest income brackets only and the possible non-indexation of the tax scales. The use of the above ratios would allow one to convey the significance of the sources that fund health insurance with due regard for the ‘relatively’ progressive nature of each of these sources. If one could in fact demonstrate that direct taxes are more progressive than social insurance contributions, some social security contributions may very well turn out to be more progressive than the indirect taxes, which is for instance the case with the special social security contributions Belgium introduced in 1993 (Valenduc, 2009) and which currently comprises most of the health insurance ‘earmarked revenue’ (Cour des comptes, 2011). As a result, it is not a matter of quantifying the absolute progressivity of the health care funding but of presenting progressivity in relation to the individual sources and of showing how this relative progressivity changes over time. By way of second limitation, it must also be underlined that the progressivity of a funding system is not sufficient in itself to produce the desired redistributive effect when one seeks to pursue fairness. During the 90s, for instance, tax progressivity in Belgium stabilized but its redistributive effect increased as a result of an increase in the average tax rate (Valenduc, 2005). An evaluation of the redistributive effects of the health insurance funding mechanisms would be a far more ambitious task than merely characterizing the structure of this funding in terms of relative progressivity. van Doorslaer and Wagstaff show that a full analysis of the redistributive effect would by and large depend on two components: a ‘vertical’ component which depends on the progressivity of the contribution system (vertical equity) (Wagstaff, van Doorslaer, 1999), (Wagstaff and Van Doorslaer, 2000) and on the proportion of household incomes that is on average earmarked for that funding and another component which reflects the extent to which the contribution system treats people who are the same in a relevant respect unequally (horizontal inequality) (van Doorslaer, Wagstaff, 1999).

<sup>l</sup> This funding is made up of social security contributions, direct taxes and indirect taxes

<sup>m</sup> This ‘funding’ comprises out-of-pocket expenses, various supplements, payments by patients for services that are not covered by the health insurance.



#### 4.4. Income distribution as a 'contextual' indicator of equity in health care

Numerous studies that highlight a socio-economic-cultural health gradient but also the access to and the consumption of care attest to the influence of factors which, on the whole, do not come under the health system but act downstream of a number of determinants that form part of disease prevention and health promotion but also of education, employment, housing, leisure, in sum, of the way in which wealth is distributed. We can for instance see a correlation between reported ill health on the one hand and the non-egalitarian nature of income distribution on the other hand (Daniels, 2008), p 86, but also between the signs of social health problems and the level of discrepancies in the distribution of income (Jackson, 2010), p 157. The most plausible explanation of this link between income and health would be the 'anxiety status' these people find themselves in on the hierarchical ladder which only fuels competition and stress (Rowlingson, 2011). Yet, this link between wage disparities on the one hand and 'health' on the other hand is not unanimously accepted; Angus Deaton, for one, even disputes that there is any such link (Deaton, 2003). Deaton's whole reasoning is nevertheless based on a link between income inequality and mortality even though he recognizes the effect of a person's 'social class' and social environment on that person's health (Deaton, 2003), p 127 & p 152. The relationship between perceived health, subjective health, morbidity and income inequality therefore remains relevant. In the 'old' Europe<sup>n</sup>, we see an association between the difference in disability-free life expectancy at the age of 50 between men and women and the non-egalitarian distribution of income (Van Oyen H CB, Nusselder W, Jagger C, Cambois E, Robine JM, 2010). It would therefore seem useful to take a simple contextual indicator, one that can be compared over time within a country but one that would also allow various systems to be compared over a given period of time into account (Braveman, 2003), p 188. One way of defining income distribution would be to use the Gini index. This index gives a global overview of the level of

<sup>n</sup> On the other hand, studies also show differences in terms of life expectancy and disability-free life expectancy between European countries (cf. for instance (Jagger C, 2011)) which are notably linked to the GDP of the countries.

inequality even though it is not sensitive enough to differentiate between deciles of income for instance<sup>o</sup>. This coefficient should ideally take available income into consideration in light of household composition and the prevailing tax legislation. As a result, it would not only convey the influence of the state of the labour market based on gross incomes, but also the influence of the tax and indirect tax redistributive policy. Even though it is probably impossible to accurately quantify these influences, it may be useful to examine whether the context of the health system in a particular country is committed to health and to examine how this context evolves over time and how it scores on an international scale. The most recent publications show that income inequalities, measured by means of the Gini index are on the increase in the majority of the OECD countries. This holds true for the countries where inequality was already rampant in the first place (USA and Israel) but also for countries that were traditionally less elitist (Germany, Denmark, Sweden). The countries that have become less non-egalitarian are those that were noted for major inequalities in the past (Chile, Mexico, Greece, Turkey, Hungary) (OCDE, 2012). Within the European Union, the countries that booked the best results, going by the Gini coefficient, are Denmark, Austria, Belgium, the Czech Republic, Slovakia, Finland and Sweden (a Gini coefficient of between 0.25 and 0.26) while those whose distribution is most non-egalitarian are the United Kingdom (0.34), Italy (0.34), Portugal (0.35) and Slovenia (0.42) (Fredriksen, 2012), p 11.

Focusing on the funding of health care, the 'cost-sharing' method and the use of health care and choosing to specify the differences in function of

<sup>o</sup> In a graph that features the combined incomes of a population on the ordinate and the combined population in question on the abscissa, the Gini index measures the difference in surface area between, on the one hand, the right section which represents perfect equality, i.e. the bisector (everyone has as an equal share of the overall income) and, on the other hand, the curve which represents the actual income distribution in the population group (the Lorenz curve). The Gini index is equal to zero when there is perfect equality (the income distribution curve merges with the bisector, i.e. the line of perfect equality – a completely hypothetical situation) and is equal to 1 in the case of maximum inequality (one single individual has all the income). This difference in surface area can of course have the same value for very different forms of distribution.





criteria such as age, gender, socioeconomic status and place of residence is an approach that will help paint both a relevant and a concrete picture of equity in health care. Taking income distribution into account allows us to contextualize these equity indicators by means of a macro determinant of health which one can assume not to, in one way or another, be connected to patients' personal responsibility. This does not entail that other contextual indicators might not be relevant in terms of highlighting determinants of people's health that are equally significant (WHO, 2009). Economic growth is one of these factors that are associated with the level of health of a population. However, the meaning of the association forms topic of especially methodological debates. Although it has traditionally been felt that the health of a population deteriorates during periods of economic decline, recent analyses tend to show that the opposite holds true, as periods of growth tend to be associated with pathologies and accidents caused by more intense economic activity which generate more stress, increase the risk of accidents, the incidence of obesity and psychological problems. Children and elderly people who are not or are no longer economically active suffer the inconveniences of extra pollution and traffic congestion (Ruhm, 2006).

## 5. INEQUALITIES IN HEALTH OR CARE CONSUMPTION IN BELGIUM: RESULTS OF EMPIRICAL RESEARCH<sup>P</sup>

Numerous publications have been dedicated to inequalities in terms of objective health (mortality, morbidity) or subjective health (perceived or 'self-rated' health) or the use of health care services, linked to the socioeconomic status measured notably by level of education. Perceived or 'self-rated' health seems to be an increasing function of income, even though this relationship follows a curved line<sup>Q</sup> for the highest incomes in both genders and across several countries. In Belgium, this curved line also applies to the lowest incomes and above all to women, with the result that perceived health improves as incomes drop below a certain level (Mackenbach JP, 2005).

Thus, it has been shown that people in the weakest socioeconomic groups live less long, enjoy what is perceived as 'good' health for fewer years and spend more years of their lives suffering from what is perceived as 'poor' health (Bossuyt N, 2004). It has also been demonstrated that an increase in life expectancy by level of education follows the existing gradient, which translates into more discrepancies by level of education (Deboosere P, 2009). At that, the highest-educated live a longer disability-free life and they do not spend as many years suffering from disabilities (Van Oyen H CR, Deboosere P, Cox B, Lorant V, Nusselder W, Demarest S, 2011). Certain debilitating diseases such as arthritis, cardiovascular or respiratory illnesses contribute significantly to the socioeconomic disparities in terms of disability-free life expectancy (Nusselder W.J, 2005). Yet, not all chronic illnesses are characterized by a socio-economic gradient across all age groups and all countries. Even though there is a gradient for cardiovascular disease, diabetes and arthritis, no gradient can be identified as far as cancers, kidney disease and skin conditions are concerned, at least not one that would apply to all the age groups across the board

<sup>P</sup> Cf. Table 4 – Summary of the results of a number of studies on health inequalities in Belgium

<sup>Q</sup> I.e. an improvement in perceived health becomes less marked as incomes increase beyond a certain level.



(Dalstra J, 2005). These inequalities have also been established in two regions, Wallonia and Flanders, but the difference in terms of life expectancy in Wallonia is more marked than in Flanders, for men and women alike (Van Oyen H BN, Deboosere P, Gadeyne S, Abatih E, Demarest S., 2005). Between the two regions, there is also a difference in life expectancy and a difference in life expectancy while enjoying good health, for the population of the Walloon region does not only live less long but also enjoys perceived good health for fewer years (Van Oyen H TJ, Roelands M., 1996). When defining 'communities' in function of income, population density, type of economic activity and level of education, it is hardly surprising that the mortality rate in the well-off communities is lower (Drieskens S TJ, Van Oyen H., 1994).

In terms of care consumption, Belgium does not display any socio-economic gradient as regards the probability of people visiting general practitioners, requiring home care or being admitted to hospital after adjustment for age, gender, level of urbanization, type of household and health status but does display a socioeconomic gradient as regards consultant, dentist and physiotherapist visits (Van der Heyden J, 2003). These results can be generalized in respect of the majority of the developed countries (Hurley and Grignon, 2006, van Doorslaer, Masseria, 2006). In terms of equal access to health care, it must also be checked whether, beyond aspects such as ethnic origin, gender, age or socioeconomic status, certain categories of people suffering from ill health do not happen to be disadvantaged, as seems to be the case for psychiatric patients in Canada (Kisely, Smith, 2007).

## 6. LIMITATIONS

Three types of equity indicators have been suggested: indicators of consumption inequality or of health status between groups of people, an indicator of the progressivity of health insurance funding and a contextual indicator that measures the difference in income distribution within the country. As far as the **first type of indicator** is concerned, we proffer the implicit theory that any discrepancy measured is unfair because all people are deemed to be equal. The same needs should therefore be treated equally and individuals displaying the same objective characteristics (age and gender for instance) should enjoy a similar level of health. The concept 'horizontal equity' (equal health care to those who are the same in a relevant respect) used does therefore not call the *object* of equality into question. It is always possible, for instance, that health inequalities reflect differences in people's choice of lifestyle, i.e. personal preferences. What might seem like a thought-out choice at first glance however may turn out to have, at least partially, been determined by social status, level of education, level of income, ethnic origin or religious conviction. This does not mean that individuals cannot make any real choices but that they do not necessarily have the level of freedom one might like to think they have. For instance, does a young adult on an unhealthy diet consciously eat unhealthily because of the taste he acquired for it and by personal preference or is he still, at least partially, influenced by his education, socioeconomic environment, level of income? The indicators proffered here do not take any of these issues which are sociological, economic, philosophical and epidemiological all at the same time into account. What's more, one and the same category of individuals may use less of a certain type of care yet more of another type. If people lower down on the social ladder tend to call on general practitioners more often does that compensate for the fact that they visit consultants less frequently? Another matter relating to horizontal equity is that of the different ways in which the same individuals on the lowest incomes or in the most disadvantaged social or ethnic groups are treated unequally (Fleurbay and Schokkaert, 2011). How can these different forms of inequality be incorporated and would it not be wise to take the overlap between these various sources of inequality into account? Taking these issues into consideration would require an approach that is both quantitatively and qualitatively exacting and probably far too ambitious within the framework of an assessment of



the performance of a health system that must include several dimensions and sub-dimensions and several indicators for each one of these.

The **second type of indicators** relates to the progressivity of the funding method. To remind you of the constraints mentioned above: progressivity only produces partial information on redistribution (Fleurbaey and Schokkaert, 2011, van Doorslaer, Wagstaff, 1999, Wagstaff and Van Doorslaer, 1992, Wagstaff, van Doorslaer, 1999) whereas redistribution may also increase while the progressivity of levies stagnates (Valenduc, 2005, 2009). An accurate assessment of this progressivity but also of the redistribution generated by the system that funds health care does not only require an in-depth knowledge of the direct and indirect tax legislation which, in turn, needs to be taken into consideration in complex indicators. This requirement exceeds the aspirations of the present work on the performance of the health system. This is particularly true if one wishes to assess the redistributive effects of the service system for, in that case, one would need to have data on the overall contributive capacity, on care consumption levels and on people's personal characteristics.

Finally, the **third type of indicators** features within the context of the health system itself. We have shown that there is a relationship between forms of material inequality and health inequalities. The application of the Gini coefficient to pre-tax and after-tax income allows us to easily compare the situation in a particular country in both time and space. However, the data on hand do not necessarily accurately reflect what one might label as true contributive capacity.

Finally, these indicators do not allow us to measure vertical equity, i.e. the manner in which people who are not equal in a relevant respect are treated unequally. This type of equity for instance expresses itself in people with different needs receiving a different level of services. It would be extremely complicated however to assess whether these differences are justified based on their different needs. For a medical issue that is practically insoluble and is even more complex than an appropriate response we must look beyond the field of health and take the unavoidable arbitrariness between the different components of wellbeing into account. That becomes even more essential when one tries to assess vertical equity not only in terms of health care but also in terms of health (Fleurbaey and Schokkaert, 2011).

Thus, these constraints are linked to the complexity of the concepts used, to the normative choices that have to be made to define the 'content' of equality and, hence, the definition of horizontal equity. These constraints are linked to the ambition of analysing the performance of an entire health system and to the willingness to compare results not only in time but also in space. A detailed empirical analysis should therefore be based on detailed information about every single country one wishes to compare oneself with; this information is not always available however and can be hard to compare at times. Finally, for objective reasons, not only progressivity but also the redistribution of patients' contribution to the funding of the overall health costs should be assessed. Patients' contribution is not a negligible one, for sources state that patients covered between 23.3% and 29.2% of the overall cost for 2003 (Pacolet and Borghgraef, 2008). This share is rising in terms of supplements paid to hospitals (Crommelynck, Franssen, 2011) and has not been quantified as far as supplements in the out-patients sector are concerned. A step like this would be all the more useful as the progressive nature of the expenses could compensate for the regressive nature of the funding (Castano, Arbelaez, 2002). However, one would have to work around the problem of accurately establishing people's full income and the private and public expenses of every person in Belgium and the other countries alike if one would like to give it a dimension of international comparability. One complementary approach would be to check to what extent the individual income groups benefit from the same health goods and services, standardized by age and morbidity for these groups (van Doorslaer and Wagstaff, 1992). One could also consider to what extent the Belgian system protects against catastrophic expenses, at least against those that are known and registered because it has been shown that the level of protection defines its progressive nature (Debrand and Sorasith, 2010).



**Table 4 – Summary of the results of a number of studies on health inequalities in Belgium**

	Life expectancy – LE or mortality rate	Healthy Life expectancy - HLE	Disability-free LE Disability LE (moderate or severe)	Health care consumption
<b>1. By socioeconomic status (via proxies)</b>				
<b>Level of education (10 levels)</b>	Data: Census & national register (1991-1996) and 1997 IPH survey Men: a difference of 17.8 years Women: a difference of 24.7 years ( <a href="#">Bossuyt N, 2004</a> )	Census & national register (1991-1996) and 1997 IPH survey Men: a difference of 5.5 years Women: a difference of 3.5 years ( <a href="#">Bossuyt N, 2004</a> )		
<b>Level of education (5 levels)</b>	Data: linking of the 1991 & 2001 censuses and the mortality and emigration registers Evolution between 1994 and 2001 An increase in life expectancy by level of education follows the existing gradient, which ensures in greater differences per level of education. 2001 difference: 7.47 years for men and 5.92 years for women ( <a href="#">Deboosere P, 2009</a> )			
<b>Level of education (4 levels)</b>				Data: 1997 health survey A strong association between socioeconomic status, perceived health, the number of chronic illnesses and functional limitations (similar gradients in terms of



Life expectancy – LE or mortality rate	Healthy Life expectancy - HLE or Disability-free LE (moderate or severe)	Health care consumption
		income), these difference persist following age and gender adjustment No socioeconomic gradient in terms of the probability of people having to see general practitioners, requiring home care or being admitted to hospital after adjustment for age, gender, level of urbanization, type of household and health status but there is a socioeconomic gradient as regards consultant, dentist and physiotherapist visits ( <a href="#">Van der Heyden J, 2003</a> )
<b>Level of education (2 levels)</b>	Data: 1997 survey on the health of Belgian citizens and mortality figures from the national register – follow-up from 1991 until 1996 Two levels of education: lower at higher secondary education or higher or equal to higher secondary education. In men a DFLE difference of 8 years explained by cardiovascular disease (1.5 years), asthma (1.2 years), back problems (2.1 years) In women a DFLE difference of 5.9 years explained notably by	



	Life expectancy – LE or mortality rate	Healthy Life expectancy - HLE	Disability-free LE Disability LE (moderate or severe)	Health care consumption
			cardiovascular disease (1.6 years), asthma (1.5 years), arthritis (2.2 years) ( <a href="#">Nusselder W.J, 2005</a> )	
<b>Level of education (5 levels)</b>	Data: Linking of the 1991 & 2001 censuses and the mortality and emigration registers and the 1997 & 2004 IPH surveys Evolution between 1990 and 2000 Increase in LE for the highest-qualified men of 2.44 years and of 0.33 years if no diploma (+ 2.36 years and – 0.5 years respectively for women) ( <a href="#">Van Oyen H CR, Deboosere P, Cox B, Lorant V, Nusselder W, Demarest S, 2011</a> )		Difference between level 5 – level 1 evolution between 1990 and 2000 DFLE: Men: + 1.58 years (increase in inequality) (from + 17 to + 18.58 years) Women: + 6.76 years (from 11.42 to 18.18 years) DLE: Men: + 0.53 years (decrease in inequality) (from -11.63 to – 11.10 years) Women: -3.9 years (from 7.76 to 11.66 years)	
<b>Income</b>				Same conclusion as above with regard to an income gradient ( <a href="#">Van der Heyden J, 2003</a> )
<b>2. By gender</b>	Data: 1997, 2001 & 2004 health surveys Evolution of the life expectancy between 1997 and 2004 Men aged 65: from 15 years and 6 months to 16 years and 10 months Women aged 65: from 19 years		Data: 1997, 2001 & 2004 health surveys Evolution of the life expectancy with disabilities between 1997 and 2004 Men aged 65: from 8 years and 3 months to 8 years and 2 months (5 years and 8 months)	



	Life expectancy – LE or mortality rate	Healthy Life expectancy - HLE	Disability-free LE Disability LE (moderate or severe)	Health care consumption
	and 10 months to 20 years and 8 months ( <a href="#">Van Oyen H DS, 2008</a> )		to 4 years and 9 months moderate and 2 years and 7 months to 3 years and 5 months severe) Women aged 65: from 12 years (7 years and 1 month moderate and 4 years and 11 months severe) to 12 years and 7 months (6 years and 1 month moderate and 6 years and 6 months severe) ( <a href="#">Van Oyen H DS, 2008</a> )	
<b>3. Region</b>	<p>Data: 1991 census and follow-up during 5 years and 1997 health survey</p> <p>Men: inequality in LE in Wallonia versus Flanders between the highly (top) and poorly educated (bottom) of more than 0.53 years</p> <p>Women: same trend (0.42 years) (<a href="#">Van Oyen H BN, Deboosere P, Gadeyne S, Abatih E, Demarest S., 2005</a>)</p> <p>Data: Perceived health via the 1989-1990 Eurobarometer + mortality National Institute of Statistics (NIS) (1988-1990)</p> <p>Men:</p> <p>HLE at the age of 15 years, in Flanders: 58.9 years and in Wallonia: 56.6 years</p>	<p>Data: Perceived health via the 1989-1990 Eurobarometer + mortality National Institute of Statistics (NIS) (1988-1990)</p> <p>Men:</p> <p>HLE at the age of 15 years, in Flanders: 56.5 years and in Wallonia: 50.2 years</p> <p>HLE at the age of 65 years, in Flanders: 13.3 years and in Wallonia: 9.2 years</p> <p>Women:</p> <p>HLE at the age of 15 years, in Flanders: 61.3 years and in Wallonia: 58.1 years</p> <p>HLE at the age of 65 years, in Flanders: 16.0 years and in Wallonia: 14.3 years (<a href="#">Van Oyen H TJ, Roelands M.,</a></p>		



	Life expectancy – LE or mortality rate	Healthy Life expectancy - HLE	Disability-free LE Disability LE (moderate or severe)	Health care consumption
	<p>HLE at the age of 65 years, in Flanders: 14.3 years and in Wallonia: 13.2 years</p> <p>Women:</p> <p>HLE at the age of 15 years, in Flanders: 65.2 years and in Wallonia: 63.9 years</p> <p>HLE at the age of 65 years, in Flanders: 18.5 years and in Wallonia: 17.7 years</p> <p><a href="#">(Van Oyen H TJ, Roelands M., 1996)</a></p>	<p><a href="#">1996)</a></p>		
<p><b>4. Living environment (6 types based on 4 variables: population density, average income, type of economic activity, level of education)</b></p>	<p>Data: NIS and FPS Public Health</p> <p>The standardized mortality rate (age, gender, region) is lowest in the 'well-off' municipalities ('high' level of income and education)</p> <p><a href="#">(Drieskens S TJ, Van Oyen H., 1994)</a></p>			





## 7. CONCLUSIONS

Considering disparities in the access to health care and care consumption, and disparities in terms of health, life expectancy between age groups, genders, geographical regions as forms of inequality translates into an approach that transcends a mere report on 'differences'. Once inequalities have been established, additional efforts aimed at understanding the reasons and the process that lie at the root of them, are required. The jury is still out on whether it would be useful, or opportune, to differentiate between health or health care inequalities and health or health care inequities. Irrespective of the focal variable chosen, equity demands equal health care for those who are the same in a relevant respect in accordance with this variable and it is precisely this equality that may prove to be problematic. If we for instance want to ensure that all people with the same LDL cholesterol levels are treated fairly, then we must either accept that they are all 'equal' and disregard their lifestyle and genetic disposition for instance or we must take an in-depth look at their lives to allow us to differentiate in function of the determinants of HDL cholesterol levels. Then we would be able to differentiate between the determinants beyond a person's control on the one hand and the determinants that ensue from a person's own personal choices on the other hand. A step that is fraught with peril, from a technical, legal and ethical point of view alike. In the end, the reports on the performance of the health systems decided not to take the issue of personal choice into account. All the reported inequalities are therefore also deemed to be inequities and must lead to disease prevention and health promotion measures that can erase these inequalities either by working on people's behaviour or on the determinants that are exogenous to their state of health.

Finally, from a temporal point of view, any reduction in inequalities should be interpreted in a relevant manner. Certain reductions are not necessarily reassuring in fact. This would for instance be the case in the reduction of inequalities in BMI levels or obesity if this were to translate itself into an increase in excess bodyweight amongst people who never had this problem before. Thus, it would be useful to define a type of 'normality' with all the risks that may entail.



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