A Conceptual Framework of Mapping Access to Health Care across EU Countries: The Patient Access Initiative

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Key Words
Access to health care · Stakeholders · Measurement · Health policy

Abstract
Research evidence suggests that access to health care is the key influential factor for improved population health outcomes and health care system sustainability. Although the importance of addressing barriers in access to health care across European countries is well documented, little has been done to improve the situation. This is due to different definitions, approaches and policies, and partly due to persisting disparities in access within and between European countries. To bridge this gap, the Patient Access Partnership (PACT) developed (a) the ‘5As’ definition of access, which details the five critical elements (adequacy, accessibility, affordability, appropriateness, and availability) of access to health care, (b) a multi-stakeholders’ approach for mapping access, and (c) a 13-item questionnaire based on the 5As definition in an effort to address these obstacles and to identify best practices. These tools are expected to contribute effectively to addressing access barriers in practice, by suggesting a common framework and facilitating the exchange of knowledge and expertise, in order to improve access to health care between and within European countries.

Introduction
Access to health care is a complex notion used to describe several aspects of utilization and delivery of health care services. Although the terms access, utilization, availability and universal coverage are used interchangeably in the literature in an effort to illustrate whether the health need of a patient is covered in an effective and timely manner, they refer to different elements of access to health care. Utilization appertains to ‘the outcome of the interaction between health professionals and patients’ [1], while availability to the actual presence of health services delivery in terms of infrastructure, health personnel and utilization [2]. The WHO [3] defined universal coverage as ‘ensuring that all people can use the promotive, preventive, curative, rehabilitative and palliative health services they need, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship’. Goddard and Smith [4] delineate access as ‘the ability to secure a specified set of healthcare services, at a specified level of quality, subject to a specified maximum level of personal inconvenience and cost, while in possession of a specified amount of information’. Despite the efforts of the research community, especially in the last decades, access remains a complicated and vague concept susceptible to various interpretations [5].
There is overwhelming evidence emphasizing that access is strongly linked to health system quality and performance, as well as health outcomes in the population. Specifically, access to health services affects the physical, mental and social status of the individuals, the prevention of diseases by impacting the early detection and treatment of health problems, as well as the quality of life and life expectancy [6–12].

Access to health care is a well-recognized need among EU member states and institutions and is usually referred to as a key policy goal in terms of ‘equal’, ‘universal’ and affordable access to high-quality health care [13–15]. This recognition stretches beyond Europe, such as reflected in a recent United Nations resolution which urges governments to move towards providing all people with access to quality health care services and emphasizes the important role of health in economic development [16, 17]. In spite of the fact that ensuring access to health care constitutes a high priority among EU countries, little has been done to achieve this goal. This is due to different definitions, approaches and policies and partly due to persisting disparities in access within and between European countries [4].

A consensus definition of what constitutes access to health care would help translate this policy goal into a measurable outcome for the EU member states [18]. However, access is a complex and multi-dimensional concept which lacks a broadly accepted definition in the literature, especially in combination with the notion of ‘equal access’ [5, 19]. In general, access is measured in terms of the availability or utilization of health services [20]. As described above, many researchers also use the term ‘access’ as synonymous with ‘utilization’, implying that an individual’s use of health services is proof that he/she can access these services. However, methodological issues may arise. For example, the measurement of utilization alone to define access leaves out other important factors such as quality of care, and cultural and financial barriers, which are necessary in understanding inequalities and defining access [21–23]. To date, there is no single method to measure access to health care. While at the EU level and in most countries surveys and/or administrative sources are used to measure access and need, most of these methods face certain limitations [24, 25]. Surveys collecting data on utilization or self-assessed health are subject to bias based on questionnaire design, question wording and psychosocial and cultural factors [23, 26, 27]. Specific indicators do exist to measure the different dimensions of access individually and these are used widely by various EU member states; there is, however, not an all-encompassing indicator [28].

The persisting differences in definitions, measurements and approaches prevent research to be translated into policies for all EU member states. To address this gap, the Patient Access Partnership (PACT) elaborated a conceptual framework for mapping access to health care aimed to allow comparisons across EU countries and assist the development of common policies for access to health care at the EU level. The PACT is a patient-led multi-stakeholder network (of patients, public health community, academia, industry, policy makers and institutions) that enables innovative solutions to reduce inequalities in access to quality health care in the EU.

The PACT Conceptual Framework for Mapping Access to Health Care: the 5As Definition of Access

To conceptualize the ‘access to health care’, a multidisciplinary team carried out an extensive literature review to ascertain the main features of the notion and detect commonalities and differences among various suggested definitions. Systematic team meetings were carried out in order to discuss thoroughly the definitions that already existed, as well as to decide about the main constructs for access to health care and gain consensus on the main aspects that apply. In the next step, team members developed (via consensus) a brief definition for access to health care and clearly described what was meant (and not meant) for each construct included in it. All members agreed that the definition was highly related to its constructs.

For instance, the literature review revealed that access was referred to opportunities, whereas utilization to the manifestation of these opportunities [1]. Moreover, differences in utilization could be either due to acceptable (e.g. personal preferences) or unacceptable reasons, such as information about service availability, direct costs (e.g. user charges) or indirect costs (e.g. transport, lost wages) [7, 8]. The different interpretations of access across member states may be attributed to the economic diversity, which implies different views on what each country can and should afford for their publicly funded health care systems [10]. Therefore, a description of the multi-dimensional aspects inherent in access can help to convey the meaning of ‘access to health care’.

The 5As definition of access to health care suggests that at least five aspects impacting on access should be taken into consideration: (a) availability: whether services are available in the first place; (b) adequacy: whether there is an adequate and continued supply of available services;
(c) accessibility: whether the services are effectively available for utilization; access measured in terms of utilization is dependent on the physical accessibility and acceptability of services and not merely adequacy of supply; this can also refer to the time to get necessary health care, for example; (d) affordability: a system for financing health services so people do not suffer financial hardship when using them; and (e) appropriateness: services available must be relevant to the different parts of a population in terms of their health needs and material and cultural settings so as to ensure that the population would have access to positive health outcomes. In other words, available health care resources should meet the needs of different population groups.

The Development of the 5As Questionnaire to Assess Access

The research team members reviewed scales and indicators identified in previous studies pertaining to the access to health care assessment. The aim of the authors was to develop a questionnaire that could be used by different stakeholders to measure access to health care in a broad and more integrated way and not to construct a specific scale for access (e.g. assessing access to primary care). The literature review revealed six main domains pertaining to the access to health care; i.e. access to health care professionals, diagnostic tests, medical devices, medicines, out-patient services and empowerment practices. For each domain, a number of items were developed and then evaluated for relevance and clarity. Distinct items, but with differences in importance, were included as well. This process resulted in an initial pool of 15 items. Each question was revised accordingly in order to ensure that it would be easily comprehensible by respondents of different educational backgrounds.

Each item has a 5-point Likert-type response ranging from 1 (strongly disagree) to 5 (strongly agree). There is also a ‘neutral’ option (= 3). For each question, there is a 5-point Likert-type response for each of the ‘5As’. For example, in the first question (‘is access to general practitioners in your country?’), the individual has to answer (from strongly disagree to strongly agree) for adequacy, accessibility, affordability, appropriateness and availability.

To evaluate the content validity of the tool, two different groups of experts consisting of 16 members (4 health care professionals, 4 policy makers, 4 patients/members of patients’ organizations and 4 researchers) with sufficient background on access issues were asked to assess the items included in the preliminary version of the questionnaire. To be eligible for the expert group, a person should have qualified training and certified experience (2 years minimum) in access to health care and not having a conflict of interest. The experts appraised the relevance of items in each category/domain and provided feedback on clarity, accuracy and brevity for all items. The questionnaire was revised according to the experts’ feedback and comments. Two items were excluded, because they were deemed too specific and would not apply to all EU countries (since there are certain differences in the structure and delivery of the health systems across the EU). The final version of the questionnaire consisted of 13 items (Appendix 1).

Mapping Health Care Access Exercise

To pilot test the 5As questionnaire, an exploratory study was conducted in the EU-28 countries assessing access to health care. For the purpose of the study, a multi-stakeholders’ approach was used. Previous surveys in the field are based on unidimensional frameworks to assess access such as by inquiring patients’ views or evaluating the performance of the health system in specific areas (e.g. health personnel, infrastructure, etc.). The PACT framework for mapping access is focused on the views and perceptions of different key stakeholders within a country. It was assumed that access to health care is a multidimensional process related to the role and function of different key players in the health care system and hence it should be explored in this context. The multi-stakeholders’ approach may facilitate the exchange of views and opinions within and between EU member states and the transfer of best practices.

The main objectives of the study was to ascertain if the 5As concept is sufficient to explain all aspects of access to health care, if there are any differences among stakeholders for the same health care access element, as well as if there are any best practices to be transferred from one country to another. The study was carried out between November 2015 and February 2016. A total of 116 organizations of different sectors participated (e.g. doctors’ associations, patients’ organizations, pharmaceutical associations, organizations of medical technology). The different views of each key stakeholder were registered in order to compare and contrast the different perceptions on the same aspect of health care access. In each country, a list of potential participants was developed. The list was...
based on information emanating from the following sources: (a) literature review, (b) online search, and (c) key decision makers in each country. To be eligible to participate in the study a person should: (a) be a board member of an organization relevant to access to health care (e.g. patients’ associations, pharmaceutical associations, physicians’ organizations) and (b) have good reading and writing skills in English.

**Recruitment of Participants and Data Collection**

An initial e-mail invitation was sent to all potential respondents containing the aims of the study, a cover letter (with instructions for completion) and the questionnaire. Follow-up e-mails were sent as reminders after 1, 2 and 3 weeks. After the completion of the questionnaire, the respondents were asked to provide feedback for the process and the tool.

**Example of Results**

Fisher’s exact test for $2 \times 5$ contingency was used to examine the differences between countries due to the non-representative study sample and the type of data. The test was performed on a 5% level of significance, indicating the existence of differences between countries for each the aspects of access to health care. Results suggest that stakeholders hold different views on the same access element. It was also found that some countries perform better in an element (e.g. access to general practitioners in Belgium) while others in another (access to pharmacists in Spain), but no best practices were identified (e.g. a country performs very well for every access element).

The accessibility to general practitioners was identified as one of the elements that significantly varied between countries. Specifically, the majority of respondents in Belgium seem to evaluate access to general practitioners (reported either agreement/strong agreement in every element of general practitioner access) significantly higher compared to those in Bulgaria (Fisher’s test = 6.115, p = 0.029) (table 1).

**Policy Implications**

The PACT initiative has developed a new definition of access to health care comprised of five main elements (adequacy, appropriateness, availability, accessibility and affordability), a 13-item tool to assess health care access and an innovative multi-stakeholders’ approach to achieve it. There are differences within a country for the various aspects of an element. For instance, general practitioners might be accessible but not affordable. Results suggest that although there was no country with high performance in all cases, there are some best practices in specific access elements within a country. Moreover, the multi-stakeholders’ approach came across as a very useful method to explore access within and across countries. The 5As definition seems to adequately elucidate the health care access concept, but further investigation is needed to determine whether the 5As concept does extensively explain the core element of health care access. The tool (5As questionnaire) was identified to be feasible, acceptable and easy to use in diverse countries and various stakeholders in the context of different health care systems. As such, it may be a valuable resource for policy makers to monitor the population’ access to health care at a national level and allow access monitoring at the EU level. In addition, it provides critical information for the social determinants of access in health care so as to assist policy makers in the development of programs and policies to reduce inequities in health.

**Disclosure Statement**

The authors have no conflicts of interest to disclose.
Appendix 1: The PACT Questionnaire for Mapping Access

1. Access to diagnostic tests
   *Is access to diagnostic tests (e.g. blood tests, prenatal test, mammogram, FOBT, and any other laboratory tests) in your country?*
   - Adequate
   - Accessible
   - Affordable
   - Appropriate
   - Available

   □ strongly disagree □ disagree □ neutral □ agree □ strongly agree

2. Access to medical devices
   *Is access to medical devices (any device used for diagnosis, prevention, monitoring, treatment, alleviation of disease or compensation for an injury or handicap) in your country?*
   - Adequate
   - Accessible
   - Affordable
   - Appropriate
   - Available

   □ strongly disagree □ disagree □ neutral □ agree □ strongly agree

3. Access to health care professionals
   *Is access to general practitioners in your country?*
   - Adequate
   - Accessible
   - Affordable
   - Appropriate
   - Available

   □ strongly disagree □ disagree □ neutral □ agree □ strongly agree

   *Is access to specialist physicians in your country?*
   - Adequate
   - Accessible
   - Affordable
   - Appropriate
   - Available

   □ strongly disagree □ disagree □ neutral □ agree □ strongly agree

   *Is access to pharmacists in your country?*
   - Adequate
   - Accessible
   - Affordable
   - Appropriate
   - Available

   □ strongly disagree □ disagree □ neutral □ agree □ strongly agree

4. Access to medicines
   *Is access to patented* medicines in your country?*
   - Adequate
   - Accessible
   - Affordable
   - Appropriate
   - Available

   □ strongly disagree □ disagree □ neutral □ agree □ strongly agree

   *A patented medicine is considered as any new drug used for a disease condition, which is initially sold under a brand name by which the clinicians can prescribe it for use by patients. The drug is covered under patent protection (the drug patent is usually awarded for around 20 years), which means that only the pharmaceutical company that holds the patent is allowed to manufacture, market the drug and eventually make profit from it.*

   *Is access to off-patent medicines** (generics, biosimilars) in your country?*
   - Adequate
   - Accessible
   - Affordable
   - Appropriate
   - Available

   □ strongly disagree □ disagree □ neutral □ agree □ strongly agree

   **After the expiration of patent protection, patented drugs are considered as off-patent. As generic is considered any drug not covered by a patent or a supplementary protection certificate. Generics are drugs with the same active ingredients as the original formulation but without a patent or protection certificate.*
5. Access to out-patient services

Is access to primary health care services (physicians' offices and clinics for common health problems and prevention: e.g. vaccines, regular check-ups, counselling for smoking cessation, physical activity, healthy nutrition) in your country:

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Is access to secondary health care services (e.g. specialists, clinical experts, hospitals, out-patient clinics and other services for management of chronic diseases) in your country:

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Is access to long-term care (e.g. rehabilitation, management of complex disorders, day care) in your country:

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6. Access to patient empowerment practices

Is access to self-management support services (e.g. health literacy support, health education, information sources, counselling and psychological support) for chronic diseases in your country:

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Is access to informational and educational activities for clinical shared decision making (e.g. provision of information and education by physicians and other health care professionals in order to participate in decision making about your health and/or make informed choices about health and treatment) in your country:

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Is access to community resources (e.g. social networks, organizational support, educational resources) for participating in health policy decision making your country:

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