27 November 2018

Abstract

Access to quality healthcare is central to citizens' wellbeing, life expectancy and social protection. It is, however, a rather complex concept with no a single definition or standard approach to its measurement across the EU. This project undertook a systematic review of literature and policy, together with consultations with experts, to establishing a conceptual framework covering key dimensions of access to healthcare: Availability, Affordability, Adequacy, Timeliness, Accessibility and Appropriateness. The conceptual framework was first populated with existing indicators, with work undertaken to develop amendments to existing indicators and formulation of new indicators to cover all dimensions of the framework. The project tested and refined the proposed indicators and subsequently developed a strategy and roadmap. These will enable DG SANTE and key stakeholders to further develop the framework of indicators in line with future data and new methodological advancements. This study was delivered by ICF and its expert partners, Quantos and UCL.

Executive summary

Introduction and research aims

In 2018, ICF and Quantos were commissioned to develop and pilot a new set of healthcare access measurements and to improve existing measurements. This was achieved through the following specific research aims:

- Reviewing existing measures and indicators, as well as the different aspects of access across the EU.
- Developing and testing possible new indicators and / or improvements to existing indicators, ensuring that groups vulnerable to exclusion are reached and a 'total picture' is acquired of access to healthcare in countries and regions.
- Developing a framework for measuring access to healthcare in the EU, together with a strategy and roadmap to scale-up and implement that framework in its different versions.

This work contributes to actions to deliver the European Pillar of Social Rights. Principle 16 which relates to health care, states, 'Everyone has the right to timely access to affordable, preventive and curative health care of good quality'. The framework developed during this study builds on this definition, proposing new indicators and improvements to existing indicators across all the segments of healthcare: preventative, primary, secondary and long-term care.

Research process

This research process was undertaken by researchers and statisticians at ICF and Quantos. It involved a systematic literature and policy review, critical challenge through review, workshops involving academic experts and policy practitioners. It was overseen by a steering group convened by DG SANTE.

Conceptual framework

These aims were achieved by developing a conceptual framework which accurately defined the key aspects determining fair and effective access to healthcare. Six determinants of access to healthcare were thereby identified, as outlined in Table 1.1 on the next page.

Table ES1.1 Definitions of determinants of access to healthcare

Determinant	Definition
Availability	Whether a healthcare service or product is available continuously in the healthcare system
Accessibility	Whether a quality healthcare service or product is easily accessible in terms of distance or transportation means to reach it or design of the healthcare system facilities
Timeliness	Whether a healthcare service or product is available or reachable with the promptness appropriate to the patient's needs
Adequacy	Whether a healthcare service or product is relevant and meets stakeholder (patient, doctor and others) expectations
Affordability	Whether seeking healthcare services depends on a patient's financial resources
Appropriateness	Whether a healthcare service or product does not disregard the cultural, social or other individual characteristics of a patient

Source: ICF

These determinants are expanded further in the conceptual framework below (pages 4 to 7) (Figure ES1.1).

In line with the definition of access to healthcare included in the European Pillar of Social Rights, identified determinants tend to go beyond the very strict understanding of access, involving for example also issues related to quality or effectiveness of healthcare. This approach is necessary, because low quality or low effectiveness of healthcare have a negative impact on access. Indeed, while measuring access to healthcare, it is necessary to consider traditional access indicators in the broader context, taking into account interrelated aspects.

It should be noted that, whilst the framework presented is applicable to all Member States, it is necessary to define conditions to contextualise the framework, taking into account the fact that Member States are not epidemiologically meaningful units for the purpose of comparison. Furthermore, the characteristics of disadvantaged groups vary a lot across Europe, so it might be not relevant to apply the same metrics across in all cases.

The mechanistic interpretation may lead to inappropriate conclusions and policy development. For example, frequent screening may point at overuse of procedures rather than at unproblematic accessibility. Also input indicators are only meaningful if interpreted in the context of specific characteristics and organisation of the healthcare systems, for example distribution of doctors may be optimal in one setting and not in the other due to characteristics of organisation of healthcare provision.

Figure ES1.1: Conceptual framework developed to measure access to healthcare

Preventative

Level 1

Availability

Healthcare system resources

Personnel
Facilities
Programmes: NIP, Health promotion, screening, Integrated care

Affordability

Health expenditure for prevention
Out of pocket
Health insurance eligibility / coverage

Level 2

Adequacy

Health behaviours

BMI
Blood pressure
Tobacco consumption
Consumption vegetables
Alcohol consumption
Physical activity
Blood cholesterol
Blood sugar

Population wide outcomes

Infant mortality
NCD mortality
Self-reported health

Timeliness

Level 3

Accessibility

Health awareness

Existence of health promotion activities (primary prevention)

Revealed accessibility

Immunisation coverage rates

Appropriateness

Cultural appropriateness of the system
Discrimination / stigma

Primary

Level 1

Availability

Healthcare system resources

Personnel
Facilities
Equipment and Med. Prod.

Affordability

Health expenditure for primary care
Out of pocket
Health insurance eligibility / coverage

Level 2

Adequacy

Continuity / integration of care
Medical staff skills

Timeliness

Waiting times
Response time

Level 3

Accessibility

Potential accessibility

Physician to population urban vs rural
Transport availability
Facilities access – ramps, opening hours
Tele-medicine

Revealed accessibility

Consultations
Diagnostic procedures

Appropriateness

Patient empowerment
Cultural appropriateness of the system
Discrimination / stigma

Secondary / Acute

Level 1

Availability

Healthcare system resources

Personnel
Facilities
Equipment and Med. Prod.

Affordability

Health expenditure for specialist care
Out of pocket
Health insurance eligibility / coverage

Level 2

Adequacy

Readmission rates
Average length of stay
Amenable mortality
Medical staff skills
Existence patients pathways
Patient Reported Outcome Measures (PROMs)

Timeliness

Waiting times
Response time

Level 3

Accessibility

Potential accessibility

Regional distribution hospitals
Transport availability
Facilities access – ramps, opening hours

Revealed accessibility

Medical treatments
Emergency department use

Appropriateness

Patient empowerment
Cultural appropriateness of the system
Discrimination / stigma

Long term

Level 1

Availability

Healthcare system resources

Personnel

Facilities: Residential care, day-care centres

Services: Home care, cash-benefits

Affordability

Public healthcare expenditure for LTC

Out of pocket

Health insurance eligibility / coverage

Level 2

Adequacy

Relevance of treatments

Patient Reported Outcome Measures (PROMs)

Timeliness

Level 3

Accessibility

Revealed accessibility

Utilisation

Appropriateness

Patient empowerment

Cultural appropriateness of the system

Discrimination / stigma

Indicator development

Using the conceptual framework, the study team compiled a list of existing indicators from Eurostat, Organisation for Economic Co-operation and Development (OECD), World Health Organization (WHO), United Nations International Children's Emergency Fund (UNICEF), Eurofound / European Quality of Life Survey (EQoL), European Patients' Forum (EPF), European Collaboration for Healthcare Optimization (ECHO), European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), Medecins du Monde (MdM), Michigan Patient Experience of Care Initiative (MiPEC), data from several other relevant projects and data from national statistical offices.

The initial search for existing indicators relevant to access to healthcare identified 1,462 indicators, broken down across the dimensions of the framework as follows: Availability: 185 indicators; Affordability: 166 indicators; Adequacy: 367 indicators; Timeliness: 62 indicators; Accessibility: 614 indicators; Appropriateness: 68 indicators.

An examination of the indicators collected was then undertaken for each of the six dimensions of the analytical framework. The team focused on areas that were not sufficiently covered by indicators, using the results of academic and policy review, together with expert workshops, to propose new indicators and refine existing indicators. The primary aim was to propose indicators to close the gaps in the framework. However, other improvements to existing indicators were also investigated and solutions proposed.

Profiling information for each indicator was collected [Note 1], alongside specific information that could be used in subsequent indicator testing, such as: indicator name; relevant access dimensions; specific source; breakdowns in which the indicator is available(e.g. sex, age); availability of data coverage (countries, years, sub-national level); reference population; periodicity; link to online metadata; link to the data source; data source path: navigation instructions to locate the particular dataset in the data source's dissemination environment; strengths and weaknesses. Statistical testing and data analysis was carried out in four pilot countries (Greece, Germany, Slovenia and Portugal) to compare indicator results with contextual information.

[Note 1: All indicators included in testing are contained in an Indicator repository which includes the following information (where available) for each indicator: data availability; methodological soundness; access dimensions; relevance; accuracy; timelines and punctuality; accessibility and clarity; coherence and comparability; and cost and burden.]

Following the assessment, the proposals for new indicators and existing indicator amendments were revised. The '*Indicator Framework with existing data'* consists of 98 indicators, while the '*Indicator Framework with additional data'* consists of 105 indicators.

Ultimately the proposals increase the number of indicators in the framework. Care has been taken to group indicators into specific dimensions and nodes, however, there may be scope in future to develop composite indicators to try and understand overall tendencies arising from the indicators included in the framework. This could be undertaken using clustering or factor analysis which would enable composite indicators to be developed for fewer dimensions of interest. However, the issue with such approaches is that they involve explicit or implicit weighting of indicators. This is

problematic as different stakeholders may not agree with weightings applied, and indeed, different weightings may be more appropriate in different geographical contexts.

Strategy and roadmap for the population of the framework

The strategy and roadmap comprise separate but closely linked tools that support the population of the framework with data to measure access to healthcare across the EU. Taken together these tools translate the theoretical and technical outcomes of the work and identify specific changes to existing indicators and work to develop new indicators.

The strategy is intended to deliver the actions required to implement a conceptual framework, with associated indicators that enable more effective measurement of access to healthcare across the EU.

The roadmap identifies the key actions (and their pathways) which should be taken to implement the desired changes to existing indicators and develop new indicators to improve access to healthcare.

Delivery mechanisms and key stakeholders

Ultimately, the actions identified in the strategy would improve the overall framework established to understand features of access to healthcare in the EU. More specifically, the proposed actions would allow the framework to be used to address the different needs of various healthcare stakeholders in measuring access to healthcare in the EU.

The strategy and roadmap require DG SANTE to take ownership of the developed framework and to be the strategic lead in delivering the specific actions outlined.

This does not mean that DG SANTE is responsible for delivery of each of the actions outlined below; indeed, many of these actions must be delivered by other stakeholders.

Convening a working group comprised of relevant stakeholders (many of whom are identified in the strategy and roadmap below) is thus likely to be the most appropriate approach to deliver the strategy and roadmap.

The following stakeholders have been identified as important to the delivery of the actions required to amend existing indicators and to establish new indicators. Some of these stakeholders would also be involved in overseeing the delivery of those actions:

- European Commission;
- Eurostat;
- OECD;
- European Observatory on Health Systems and Policies;
- European and national organisations representing the interest of patients, healthcare professionals;
- Member State authorities involved in healthcare;
- Eurofound;
- Health Literacy Europe;
- Academic experts and specialist researchers.

An overview of the detailed roadmap is provided below (on pages 11 to 22), summarising the work needed to implement the study's recommended actions for improving existing indicators and devising new ones.

Figure ES1.2: Roadmap for implementation of recommended actions

Key: ODM Organisational development milestone
MDM Methodological development milestone
CDM Content development milestone

START

All actions

NEXT

ODM: Dissemination of study findings

NEXT

ODM: Achieve internal buy-in for actions

NEXT

ODM: Resource allocated to implement activity

IF [AD2, AD4, AD5, AD6] **GO TO** MDM: Liaison / Collaborative work with MS

IF [AD2, AD4, AD5, AD6] **GO TO** MDM: Liaison with Eurostat / other DGs

IF [AD2, AD4, AD5, AD6] **GO TO** MDM: Liaison with External Partners

IF [AD2, AD4, AD5, AD6] **GO TO** MDM: Feasibility and Development work

IF [AD2, AD4, AD5, AD6] **GO TO** CDM: Consider / carry out activity

NEXT

CDM: Implement in framework

NEXT

CDM: Monitor / test effective functioning of framework

END

START

All actions

NEXT

ODM: Dissemination of study findings

NEXT

ODM: Achieve internal buy-in for actions

NEXT

ODM: Resource allocated to implement activity

IF [AF1, AD8] **GO TO** MDM: Liaison / Collaborative work with MS

IF [AF1, AD8] **GO TO** MDM: Liaison with Eurostat / other DGs

IF [AF1, AD8] **GO TO** CDM: Consider / carry out activity

NEXT

CDM: Implement in framework

NEXT

CDM: Monitor / test effective functioning of framework

END

START

All actions

NEXT

ODM: Dissemination of study findings

NEXT

ODM: Achieve internal buy-in for actions

NEXT

ODM: Resource allocated to implement activity

IF [AC1, AC3] **GO TO** MDM: Liaison / Collaborative work with MS

IF [AC1, AC3] **GO TO** CDM: Consider / carry out activity

NEXT

CDM: Implement in framework

NEXT

CDM: Monitor / test effective functioning of framework

END

START

All actions

NEXT

ODM: Dissemination of study findings

NEXT

ODM: Achieve internal buy-in for actions

NEXT

ODM: Resource allocated to implement activity

IF [AF3, AF5, AF6, AF7, AD1, AD11] **GO TO** MDM: Liaison with Eurostat / other DGs

IF [AF3, AF5, AF6, AF7, AD1, AD11] **GO TO** MDM: Liaison with External Partners

IF [AF3, AF5, AF6, AF7, AD1, AD11] **GO TO** CDM: Consider / carry out activity

NEXT

CDM: Implement in framework

NEXT

CDM: Monitor / test effective functioning of framework

END

START

All actions

NEXT

ODM: Dissemination of study findings

NEXT

ODM: Achieve internal buy-in for actions

NEXT

ODM: Resource allocated to implement activity

IF [AC2] **GO TO** MDM: Liaison with Eurostat / other DGs

IF [AC2] **GO TO** CDM: Consider / carry out activity

NEXT

CDM: Implement in framework

NEXT

CDM: Monitor / test effective functioning of framework

END

START

All actions

NEXT

ODM: Dissemination of study findings

NEXT

ODM: Achieve internal buy-in for actions

NEXT

ODM: Resource allocated to implement activity

IF [AD3] **GO TO** MDM: Liaison with Eurostat / other DGs

IF [AD3] **GO TO** CDM: Consider / carry out activity

NEXT

CDM: Implement in framework

NEXT

CDM: Monitor / test effective functioning of framework

END

START

All actions

NEXT

ODM: Dissemination of study findings

NEXT

ODM: Achieve internal buy-in for actions

NEXT

ODM: Resource allocated to implement activity

IF [AD10] **GO TO** MDM: Liaison with External Partners

IF [AD10] **GO TO** CDM: Consider / carry out activity

NEXT

CDM: Implement in framework

NEXT

CDM: Monitor / test effective functioning of framework

END

START

All actions

NEXT

ODM: Dissemination of study findings

NEXT

ODM: Achieve internal buy-in for actions

NEXT

ODM: Resource allocated to implement activity

IF [AD7] **GO TO** MDM: Liaison with External Partners

IF [AD7] **GO TO** MDM: Feasibility and Development work

IF [AD7] **GO TO** CDM: Consider / carry out activity

NEXT

CDM: Implement in framework

NEXT

CDM: Monitor / test effective functioning of framework

END

START

All actions

NEXT

ODM: Dissemination of study findings

NEXT

ODM: Achieve internal buy-in for actions

NEXT

ODM: Resource allocated to implement activity

IF [AC1, AC3] **GO TO** MDM: Feasibility and Development work

IF [AC1, AC3] **GO TO** CDM: Consider / carry out activity

NEXT

CDM: Implement in framework

NEXT

CDM: Monitor / test effective functioning of framework

END

START

All actions

NEXT

ODM: Dissemination of study findings

NEXT

ODM: Achieve internal buy-in for actions

NEXT

ODM: Resource allocated to implement activity

IF [AV5] **GO TO** MDM: Commission study External or Internal

IF [AV5] **GO TO** CDM: Consider / carry out activity

NEXT

CDM: Implement in framework

NEXT

CDM: Monitor / test effective functioning of framework

END

START

All actions

NEXT

ODM: Dissemination of study findings

NEXT

ODM: Achieve internal buy-in for actions

NEXT

ODM: Resource allocated to implement activity

IF [AF9] **GO TO** MDM: Commission study External or Internal

IF [AF9] **GO TO** CDM: Consider / carry out activity

NEXT

CDM: Implement in framework

NEXT

CDM: Monitor / test effective functioning of framework

END

START

All actions

NEXT

ODM: Dissemination of study findings

NEXT

ODM: Achieve internal buy-in for actions

NEXT

ODM: Resource allocated to implement activity

IF [AV1, AV2, AF2, AF4, AP1, AP2] **GO TO** CDM: Simple amendment to framework indicators

IF [AV1, AV2, AF2, AF4, AP1, AP2] **GO TO** CDM: Consider / carry out activity

NEXT

CDM: Implement in framework

NEXT

CDM: Monitor / test effective functioning of framework

END

End of document.