Indicators for structured monitoring of health system performance in Europe

iHEA conference, Boston July, 9th 2017
Maria M. Hofmarcher-Holzhacker
Aims and objectives

- Derive a minimum basic set of broadly agreed robust indicators of HSPA for Europe
- Develop criteria for headline indicators
- Create blueprint to feature a set of headline indicators and relevant meta-information
- Provide recommendation for updating and expanding the Health Data Navigator. www.healthdatanavigator.eu.
Key Messages and Overview

- Comparative assessment of health system performance has gained momentum in recent years.
- Insurance coverage is one of the most important indicators.
- It ranks first in the areas access, health determinants and equity.
- Indicators combining outcomes / output with inputs are rarely used and mapped to assess efficiency.
- More multidisciplinary work is needed to agree on top efficiency indicators to prepare comprehensive health system performance assessment.
Important Health System Information Initiatives in Europe at a glance

This project is funded by the Health Programme of the European Union.

Source: Perić et al. (2017)

Colour key of outputs
- Analytical
- Conceptual
- Guiding and/or advisory
This project is funded by the Health Programme of the European Union.

The euHS_I survey at a glance

- **43** relevant national and international health information initiatives identified from sources:
  - EU (n=18)
  - OECD (n=4)
  - WHO (n=2)
  - Other international (n=6)
  - MSs (n=13)

- **2168** used or proposed health and health system indicators extracted

- **2032** Indicators screened

- **361** indicators after consolidation for overlaps to be included in the 1st stage of euHS_I survey expert assessment

- **95** indicators ready for validation in the 2nd stage of euHS_I survey expert assessment

Indicators per source category:
- EU (n=576)
- OECD (n=189)
- WHO (n=69)
- Other international (n=394)
- MSs (n=940)

Excluded:
- Not relevant (n=64)
- Country/Member State specific (n=72)

Indicators consolidated for overlaps and grouped based on similarities (n=1671)

- Indicators excluded through backward elimination (n=266):
  - Never assessed as headline (n=148)
  - Once assessed as headline (n=55)
  - Twice assessed as headline (n=55)
  - Summarized based on survey comments (n=7)

- Indicators added based on survey comments (n=4)
Oh yes, another mapping exercise
Construction of the euHS_I survey indicator repository

![Diagram showing the construction of the euHS_I survey indicator repository.](chart.png)

**Source:** own calculation
euHS_I survey invited experts to categorize selected indicators into performance domains, and to assess the importance of their information content.

**European Health System Indicators survey**

- If you want to interrupt your data entry and continue at a later point in time, please bookmark this page.

### Quick Navigation

- Access to Care
- Health Care Resources: Labour
- Health Care Resources: Capital
- Health Care Activities
- Health Expenditure and Financing
- Quality of Care: Effectiveness, Safety, Patient-centeredness, Others

### Healthcare System Performance Domains

<table>
<thead>
<tr>
<th>Level of Indicator</th>
<th>Healthcare System Performance</th>
<th>Health Status</th>
<th>Determinants</th>
<th>Physical Environment</th>
<th>Socio-economic Conditions</th>
<th>Health Behaviour/Life Course</th>
<th>Genetics, Mortality, Morbidity, Well-being</th>
<th>Equi</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Access</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Efficiency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Quality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Level of indicator coded from A-E
- Room for expert comments where pertinent

- Used and proposed in important health information initiatives
- Grouped in chapters and adjusted for overlaps
- Explained in tooltip
### RESULTS of the 2nd stage of euHS_I survey

**Top 3: Headline indicators**

<table>
<thead>
<tr>
<th>Domain</th>
<th>Name of indicator</th>
<th>Rank stage 2</th>
<th>Rank stage 1</th>
<th>n</th>
<th>Domain freq (n, %)</th>
<th>Headline freq (n, %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access</td>
<td>Share of population covered by health insurance</td>
<td>1</td>
<td>1</td>
<td>69</td>
<td>66 (92%)</td>
<td>43 (65%)</td>
</tr>
<tr>
<td></td>
<td>Self-reported unmet need for medical care (total by reason: cost, waiting time, distance)</td>
<td>2</td>
<td>1</td>
<td>68</td>
<td>62 (86%)</td>
<td>25 (40%)</td>
</tr>
<tr>
<td></td>
<td>Access to acute care</td>
<td>3</td>
<td>4</td>
<td>66</td>
<td>61 (85%)</td>
<td>26 (43%)</td>
</tr>
<tr>
<td>Efficiency</td>
<td>Public (current) health expenditure as share of total government expenditure</td>
<td>1</td>
<td>3</td>
<td>52</td>
<td>32 (44%)</td>
<td>16 (50%)</td>
</tr>
<tr>
<td></td>
<td>Total health care expenditure by all financing agents (total, public and private sectors)</td>
<td>2</td>
<td>1</td>
<td>54</td>
<td>41 (56%)</td>
<td>20 (49%)</td>
</tr>
<tr>
<td></td>
<td>Current health care expenditure (CHE) by all financing agents (total, public and private sectors)</td>
<td>3</td>
<td>2</td>
<td>54</td>
<td>36 (50%)</td>
<td>17 (47%)</td>
</tr>
<tr>
<td>Quality of Care</td>
<td>Vaccination coverage in children</td>
<td>1</td>
<td>1</td>
<td>52</td>
<td>44 (61%)</td>
<td>29 (66%)</td>
</tr>
<tr>
<td></td>
<td>Maternal mortality rate</td>
<td>2</td>
<td>2</td>
<td>48</td>
<td>42 (58%)</td>
<td>25 (60%)</td>
</tr>
<tr>
<td></td>
<td>Avoidable mortality rate: amenable and preventable deaths</td>
<td>3</td>
<td>3</td>
<td>48</td>
<td>38 (53%)</td>
<td>20 (53%)</td>
</tr>
<tr>
<td>Equity</td>
<td>Share of population covered by health insurance</td>
<td>1</td>
<td>8</td>
<td>69</td>
<td>39 (54%)</td>
<td>27 (69%)</td>
</tr>
<tr>
<td></td>
<td>Self-reported unmet need for medical care (total by reason: cost, waiting time, distance)</td>
<td>2</td>
<td>1</td>
<td>68</td>
<td>42 (58%)</td>
<td>20 (48%)</td>
</tr>
<tr>
<td></td>
<td>Out-of-pocket medical spending as a share of final household consumption</td>
<td>3</td>
<td>6</td>
<td>67</td>
<td>36 (50%)</td>
<td>15 (47%)</td>
</tr>
<tr>
<td>Health Status</td>
<td>Infant mortality rate</td>
<td>1</td>
<td>1</td>
<td>50</td>
<td>39 (54%)</td>
<td>30 (77%)</td>
</tr>
<tr>
<td></td>
<td>Life expectancy</td>
<td>2</td>
<td>2</td>
<td>52</td>
<td>47 (65%)</td>
<td>35 (74%)</td>
</tr>
<tr>
<td></td>
<td>Healthy Life Years (HLY)</td>
<td>3</td>
<td>4</td>
<td>51</td>
<td>42 (58%)</td>
<td>26 (61%)</td>
</tr>
<tr>
<td>Health</td>
<td>Share of population covered by health insurance</td>
<td>1</td>
<td>10 (?)</td>
<td>69</td>
<td>32 (44%)</td>
<td>18 (56%)</td>
</tr>
</tbody>
</table>
Metrics for measuring efficiency and resilience of health systems are rare...

### Headline

<table>
<thead>
<tr>
<th>Name of indicator</th>
<th>n</th>
<th>Domain freq (n, %)</th>
<th>Level freq (n, %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total health care expenditure by all financing agents (total, public and private sectors)</td>
<td>54</td>
<td>41 (56%)</td>
<td>20 (49%)</td>
</tr>
</tbody>
</table>

### Operational

<table>
<thead>
<tr>
<th>Name of indicator</th>
<th>n</th>
<th>Domain freq (n, %)</th>
<th>Level freq (n, %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average length of stay (ALOS), total and selected diagnoses</td>
<td>58</td>
<td>49 (68%)</td>
<td>29 (59%)</td>
</tr>
<tr>
<td>Hospital day-cases, total and selected diagnoses</td>
<td>60</td>
<td>47 (65%)</td>
<td>21 (45%)</td>
</tr>
</tbody>
</table>

### Explanatory

<table>
<thead>
<tr>
<th>Name of indicator</th>
<th>n</th>
<th>Domain freq (n, %)</th>
<th>Level freq (n, %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of GPs in all physicians</td>
<td>58</td>
<td>43 (60%)</td>
<td>12 (28%)</td>
</tr>
<tr>
<td>Practising qualified nurses and midwives</td>
<td>56</td>
<td>37 (51%)</td>
<td>9 (24%)</td>
</tr>
<tr>
<td>Number of surgical operations and procedures</td>
<td>56</td>
<td>35 (49%)</td>
<td>9 (26%)</td>
</tr>
<tr>
<td>Caesarean section rates</td>
<td>57</td>
<td>34 (47%)</td>
<td>10 (29%)</td>
</tr>
<tr>
<td>General practitioner (GP) utilisation: self-reported visits / Number of doctor consultations</td>
<td>57</td>
<td>33 (46%)</td>
<td>10 (30%)</td>
</tr>
<tr>
<td>Reported waiting times for access to specialist (care)</td>
<td>65</td>
<td>33 (46%)</td>
<td>7 (21%)</td>
</tr>
<tr>
<td>Waiting times for elective surgeries</td>
<td>66</td>
<td>31 (45%)</td>
<td>7 (23%)</td>
</tr>
</tbody>
</table>

Source: own calculation
Expected output - headline indicators: an illustration based on 2nd euHS_I stage results

Derive recommendations for a minimum basic set of broadly agreed robust indicators of health system performance assessment for policy and decision makers.

Source: adapted from The Inclusive Growth and Development Report 2017, WEF.
Next steps

- Utilize BRIDGE Health, e.g. ECHI, knowledge to define indicator standards, in particular for headline indicators
- Validate the results in face-to-face interviews with policy makers from Member States
- Propose ways how to highlight and feature the selected indicators and
- Definition of yardstick
Thank you for your attention!

Selected references

This project is funded by the Health Programme of the European Union