The European Observatory is a three-way partnership building bridges both across borders and between policy makers and researchers.

International Agencies
- WHO Europe (host)
- European Commission
- World Bank

National and Regional Authorities
- Austria
- Belgium
- Finland
- Ireland
- Norway
- Slovenia
- Sweden
- Switzerland
- United Kingdom
- Veneto Region of Italy
- French Union of Health Insurance Funds

Academia
- London School of Economics and Political Science (LSE)
- London School of Hygiene & Tropical Medicine (LSHTM)
- (Technical University Berlin - TUB)

(* ) Hub
Functions

Engaging with policy-makers
Knowledge Brokering

Country monitoring
- Health Systems in Transition (HiT) series
- Health systems Policy Monitor (HSPM)

Policy analysis
- Studies (OSS, OUP, CUP)
- Policy briefs
- Eurohealth
- Health Policy
- BMJ etc.

Performance assessment
- Methodology
- Health Systems Performance Assessment (HSPA)

Dissemination
- Publishing
- Web
- Twitter
- e-newsletter
- Policy dialogues
- Summer School
What is the best health system?

Depends who is measuring & how?
• HSPA objectives and framework
  – For what? The holy grail? Reaching consensus?
• HSPA in practice
  – Key questions
  – Policy Uses (and abuses)
• The Norwegian health system: a comparative view
• Some key lessons for comparative HSPA
• HSPA objectives and framework
• HSPA in practice
  – Key questions
  – Policy Uses (and abuses)
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• Some key lessons for comparative HSPA
HSPA: In search of the holy grail

The WHO Health System Framework

System Building Blocks
- Service Delivery
- Health Workforce
- Information
- Medical Products, Vaccines & Technologies
- Financing
- Leadership / Governance

Overall Goals / Outcomes
- Improved Health (level and equity)
- Responsiveness
- Social & Financial Risk Protection
- Improved Efficiency

Accessibility
- Access Coverage
- Quality Safety
## WHO 2000 Efficiency Rankings

### Overall Performance

<table>
<thead>
<tr>
<th>Rank</th>
<th>Uncertainty interval</th>
<th>Member State</th>
<th>Index</th>
<th>Uncertainty interval</th>
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<tbody>
<tr>
<td>1</td>
<td>1 – 5</td>
<td>France</td>
<td>0.994</td>
<td>0.982 – 1.000</td>
</tr>
<tr>
<td>2</td>
<td>1 – 5</td>
<td>Italy</td>
<td>0.991</td>
<td>0.978 – 1.000</td>
</tr>
<tr>
<td>3</td>
<td>1 – 6</td>
<td>San Marino</td>
<td>0.988</td>
<td>0.973 – 1.000</td>
</tr>
<tr>
<td>4</td>
<td>2 – 7</td>
<td>Andorra</td>
<td>0.982</td>
<td>0.966 – 0.997</td>
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<tr>
<td>5</td>
<td>3 – 7</td>
<td>Malta</td>
<td>0.978</td>
<td>0.965 – 0.993</td>
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<tr>
<td>6</td>
<td>2 – 11</td>
<td>Singapore</td>
<td>0.973</td>
<td>0.947 – 0.998</td>
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<tr>
<td>7</td>
<td>4 – 8</td>
<td>Spain</td>
<td>0.972</td>
<td>0.959 – 0.985</td>
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<tr>
<td>8</td>
<td>4 – 14</td>
<td>Oman</td>
<td>0.961</td>
<td>0.938 – 0.985</td>
</tr>
<tr>
<td>9</td>
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<td>Austria</td>
<td>0.959</td>
<td>0.946 – 0.972</td>
</tr>
<tr>
<td>10</td>
<td>8 – 11</td>
<td>Japan</td>
<td>0.957</td>
<td>0.948 – 0.965</td>
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<tr>
<td>11</td>
<td>8 – 12</td>
<td>Norway</td>
<td>0.955</td>
<td>0.947 – 0.964</td>
</tr>
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<td>Portugal</td>
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<td>0.931 – 0.958</td>
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<tr>
<td>13</td>
<td>10 – 16</td>
<td>Monaco</td>
<td>0.943</td>
<td>0.929 – 0.957</td>
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<tr>
<td>14</td>
<td>13 – 19</td>
<td>Greece</td>
<td>0.933</td>
<td>0.921 – 0.945</td>
</tr>
<tr>
<td>15</td>
<td>12 – 20</td>
<td>Iceland</td>
<td>0.932</td>
<td>0.917 – 0.948</td>
</tr>
<tr>
<td>16</td>
<td>14 – 21</td>
<td>Luxembourg</td>
<td>0.928</td>
<td>0.914 – 0.942</td>
</tr>
<tr>
<td>17</td>
<td>14 – 21</td>
<td>Netherlands</td>
<td>0.928</td>
<td>0.914 – 0.942</td>
</tr>
<tr>
<td>18</td>
<td>16 – 21</td>
<td>United Kingdom</td>
<td>0.925</td>
<td>0.913 – 0.937</td>
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<tr>
<td>19</td>
<td>14 – 22</td>
<td>Ireland</td>
<td>0.924</td>
<td>0.909 – 0.939</td>
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<tr>
<td>20</td>
<td>17 – 24</td>
<td>Switzerland</td>
<td>0.916</td>
<td>0.903 – 0.930</td>
</tr>
</tbody>
</table>
Health

Non-medical determinants of health

Health care system performance
How does the health system perform?
What is the level of quality of care and access to services?
What does this performance cost?

Quality
Access
Cost/expenditure

Health care resources and activities

Demographic, economic and social context
➢ Stated objectives
➢ Financial protection and equity
➢ User experience and access
➢ Health and health service outcomes and quality
➢ Efficiency
➢ Transparency & accountability

➢ Access
➢ Effectiveness
➢ Resilience
An international network of prestigious national institutions

- Monitoring online health reforms and policy developments at national level

- Comparing key aspects of health systems
Outline

• HSPA objectives and framework
  – For what? The holy grail? Reaching consensus?
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  – Key questions
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HSPA in practice: key questions

1. What do we want to measure?
   - Phenomenon / domain under assessment

2. Are these the right indicators?

   Are we measuring them well?
   - Does the indicator measure the domain under assessment?
   - Conceptual clarity? Role of values & ‘trade offs’?
   - Data quality (validity, reliability) and availability?
   - Methodological approach (e.g.)?
     - Risk adjustment, composite indicators (weighting?)
     - Absolute vs relative levels of performance (against resources)?
3. What do the differences mean?
   - Policy interpretation / causal attribution (e.g.)?
     - Role of health determinants?
     - Accountability relationship?

4. What can we do about it?
   - Policy intervention (e.g.)?
     - PHC, Hospitals, Governance. Access,…
   - Policy levers (e.g.)
     - Public reporting / benchmarking
     - Incentives e.g. financial, payment
     - Regulatory tools e.g. targets
     - Consumer choice
Assessing Performance
Beware of Bias & Vested Interests

America's Best Hospitals
Browse Rankings by Specialty
- Cancer
- Diabetes & Endocrine Disorders
- Digestive Disorders
- Ear, Nose & Throat
- Geriatric Care
- Gynecology
- Heart & Heart Surgery
- Kidney Disorders

A-Z Best Hospitals Index
Honor Roll: The Best
21 hospitals that scored big in six or more specialties.
1. Johns Hopkins Hospital
   Baltimore, MD
2. Mayo Clinic
   Rochester, MN
3. Ronald Reagan UCLA Medical Center
   Los Angeles, CA

Who owns your Medical Records?
Dr Foster at the Conservative Party conference
The public can and must learn that the government will have to manage their medical records. Shadow Health Secretary Stephen O'Brien at the Conservative Conference fringe event entitled Information; who owns your medical records?
Read more »

Our products
Better information can help you improve on service delivery whilst leading to better patient care. We have the tools that can help you deliver on your targets more efficiently.
- Information for commissioners
- Information for providers
- Measuring patient experience

Our services
Our integrated approach to service marketing and research provides commissioners with a range of tools to help you understand your patient journey reach patients and the public, evaluate results.
Find out more about how we can help your organisation to tackle health inequalities.
Cylus et al., BMJ (2016) on EHCI 2015:

- Arbitrary scores are given to indicators
- The point system does not reflect what matters to citizens
- There is no apparent basis for selecting the indicators

“We should just ignore the findings of the EuroHealth Consumer Index”
Assessing Performance Beware of Methodological Complexities

Medics' NHS league table mortality figures mired in confusion

Death data for 472 vascular surgeons revised after crude estimates for initial NHS table branded 'virtually worthless'

Patients in life-threatening surgery were at risk of death because too few death rates were published.

Surgeon death rates may have reflected 'false complacency', researchers warn.

In June, the NHS in England published data, including death rates for surgeons with nine more specialties.

But the paper says the data was shown per procedure and not per surgeon.

NHS England said it had 'promised to improve transparency – not the quality of care'.

Randeep Ramesh, social affairs editor
The Guardian, Saturday 29 June 2013 05.43 AEST
Observatory HSPA
Comparison and assessment

- Comparing performance
- Better understanding of uses and abuses
- Improving measurement & analysis
- Providing comparisons and drawing policy lessons
Performance measurement for health system improvement (2009)

Health systems performance comparison – an agenda for policy, information and research (2012)

Successes and Failures of Health Policy in Europe. Four decades of divergent trends and converging challenges (2013)

Methodological papers in Health Policy (2013)

Health systems comparative trends NIS (2014)

Health Systems Efficiency – How to make measurement matter for policy and management (2017)

Health system comparative trends in EU/EFTA

Comparing Population health outcomes
## Dimensions of performance (1)

<table>
<thead>
<tr>
<th>Measurement area</th>
<th>Description</th>
<th>Motivation for inclusion</th>
<th>Examples of measures</th>
</tr>
</thead>
</table>
| **Population health**  | Measures of aggregated data on the health of the population                | • Facilitates population health comparisons within and across countries from broad aggregated perspective  
• May allow for comparative assessment of the contribution of health systems to population health | • Life expectancy  
• Age- and cause specific mortality  
• Morbidity  
• Avoidable mortality  
• Health risk factors as predictors of future population health |
| **Health service outcomes** | Measures of the services and care patients receive to achieve desired outcomes | • Facilitates comparative assessment of how health services assist individuals in realising their health potential | • Health service outcomes  
• Health service processes |
| **Responsiveness**     | Measures of the way individuals are treated and the environment in which they are treated during interactions with the health system | • Facilitates comparative assessment of how satisfied health systems leave the patients with whom they come into contact | • Patient satisfaction  
• Patient choice  
• Respect of patients’ dignity  
• Prompt attention to medical needs |
## Dimensions of performance (2)

<table>
<thead>
<tr>
<th>Measurement area</th>
<th>Description</th>
<th>Motivation for inclusion</th>
<th>Examples of measures</th>
</tr>
</thead>
</table>
| **Equity**       | Measures of the extent to which there is equity in health, access to health care, responsiveness and financing. | • Allows assessment of inequalities in health among different population/demographic/social groups within and between countries  
• Allows of inequalities in access and/or utilisation of services among different population/demographic/social groups within and between countries  
• Allows assessment of inequalities in responsiveness of health services among different population/demographic/social groups within and between countries | • Distribution of health status by population/demographic/social groups  
• Distribution of access/utilisation of health services by population/demographic/social groups  
• Progressivity of financing system  
• Distribution of responsiveness of health services by population/demographic/social groups |
| **Financial protection** | Measures of the extent to which citizens are financially protected from the consequences of ill health | • Enables comparative assessment of how the health system protects citizens from the financial consequences of ill health | • Out-of-pocket spending  
• Catastrophic expenditures on health care  
• Impoverishing expenditures on health care  
• Fairness of financing |
| **Efficiency**   | Measures of the extent to which health services are delivered efficiently | • Facilitates comparative assessment that allows policymakers to pinpoint which parts of the health system are not performing as well as they should, based on the experience of other health systems | • Value for money of services  
• Waste of resources  
• Effective coverage  
• Disease costs |

Source: adapted from Smith et al. 2009; Smith & Papanicolas 2012
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Health outcomes (LE, HLYs)
Among the best in Europe

3.2. Life expectancy (LE) and healthy life years (HLY) at birth, by gender, 2014

Women
Men

Source: OECD Health at a Glance, 2015
Burden of disease

Both sexes, All ages, 2016

IHME, Global Burden of Disease study 2016
Change in selected causes

Change in DALYs, 1990-2016, Norway (Source: GBD 2016)

- Alzheimer and other dementias
- IHD
- Stroke
- Lung cancer

IHME, Global Burden of Disease study 2016
Burden of behavioural risk factors

Both sexes, All ages, 2016

DALYs per 100,000

Tobacco
Alcohol & drug use
Dietary risks
Low physical activity

Greece, Germany, Denmark, Portugal, Austria, Finland, Belgium, UK, Italy, France, Netherlands, Luxembourg, Andorra, Ireland, Sweden, Spain, Malta, Cyprus, Norway, Switzerland, Ireland, Israel
Act on Health Determinants
Global Burden of Disease by Risk Factors

- Alcohol & drug use
- Dietary risks
- Tobacco
- High body-mass index
Health outcomes (AM, PM) Among the best in Europe

Amenable mortality, DSR per 100,000, 2000 and 2015 (or latest)

Preventable mortality, DSR per 100,000, 2000 and 2015 (or latest)

Calculations by European Observatory, 2017
Unmet need for health services is low with negligible inequalities

Source: Eurostat (2014), EU-SILC
Private out-of-pocket is relatively low
But... spending levels among the highest in Europe

Current Health Expenditure (CHE) per Capita in PPP

Source: WHO Euro (2014) HFA
But ... *How to interpret AM in HSPA?*

**Strengths**
- Captures quality and effectiveness of health care
- Captures progress over the years
- Relatively comparable between countries and over time
- Accessible and reliable indicator

**Limitations**
- Focussed on mortality
- Age restrictions (under 75s)
- Not a precise measure, but an indicator of potential problems
- Limited scope for comparisons in high income countries with low AM
While Unmet need is low... Waiting times are fairly high for elective surgeries.

7.33. Cataract surgery, waiting times from specialist assessment to treatment, 2006 to 2014/15

7.34. Hip replacement, waiting times from specialist assessment to treatment, 2006 to 2014/15


StatLink: http://dx.doi.org/10.1787/88893430022
And waiting time for doctors or nurses when sick or needing care is fairly high. 

Source: 2010 Commonwealth Fund International Health Policy Survey in Eleven Countries.
There are some challenges with Patient Experience

Doctor spending enough time with patient (%), 2016 or latest

Source: OECD Health Statistics 2017
Are we getting value for money?
Amenable Mortality vs Expenditure

Health expenditure (CHE) vs Amenable mortality (2015), EU + EEA

Norway spends a lot more on health than other countries with similar amenable mortality rates

Calculations by OBS, source: Eurostat 2018
Are we getting value for money?
HAQ Index 2015

<table>
<thead>
<tr>
<th>Country</th>
<th>HAQ Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norway</td>
<td>90</td>
</tr>
<tr>
<td>UK</td>
<td>85</td>
</tr>
<tr>
<td>USA</td>
<td>81</td>
</tr>
<tr>
<td>Andorra</td>
<td>95</td>
</tr>
<tr>
<td>Iceland</td>
<td>94</td>
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<tr>
<td>Switzerland</td>
<td>92</td>
</tr>
<tr>
<td>Sweden</td>
<td>90</td>
</tr>
<tr>
<td>Greece</td>
<td>87</td>
</tr>
<tr>
<td>Germany</td>
<td>86</td>
</tr>
<tr>
<td>Singapore</td>
<td>86</td>
</tr>
<tr>
<td>New Zealand</td>
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<tr>
<td>South Korea</td>
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<td>Denmark</td>
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<td>Israel</td>
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<tr>
<td>Cyprus</td>
<td>85</td>
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<td>Qatar</td>
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<td>Malta</td>
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<td>Czech Republic</td>
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<tr>
<td>Netherlands</td>
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<tr>
<td>Luxembourg</td>
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<td>Japan</td>
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<td>Italy</td>
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<td>Ireland</td>
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<td>Slovenia</td>
<td>87</td>
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<tr>
<td>Montenegro</td>
<td>81</td>
</tr>
</tbody>
</table>

Source: Barber et al 2017
Are we getting value for money?
HAQ Index (Observed vs ‘Frontier’)

Healthcare Access and Quality (HAQ) Index, GBD 2015

Graph shows the gap between what countries could have achieved given their development level vs. what they did achieve in 2015

Should Norway have better outcomes given its level of development (and spending)?

Source: Barber et al 2017
Potential gains in life expectancy, years

Why might a country appear (in)efficient?

<table>
<thead>
<tr>
<th>Country</th>
<th>Health Expenditure (in OECD)</th>
<th>AMI and Stroke Mortality (in hospital)</th>
<th>Cervical Screening Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turkey</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Korea</td>
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<td>-1</td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>3</td>
<td>-1</td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>11</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>13</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>10</td>
<td>8</td>
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</tr>
<tr>
<td>Finland</td>
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<td>France</td>
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</tr>
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<td>Switzerland</td>
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<td>13</td>
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</tr>
<tr>
<td>Japan</td>
<td>14</td>
<td>14</td>
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<td>1</td>
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</tr>
<tr>
<td>Denmark</td>
<td>17</td>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>

- Lowest health expenditure of all OECD countries
- Among the highest AMI and stroke mortality in hospital
- Life expectancy in 2010 of 74.3 years... Model predicts around 70 years
- Cervical screening rates are among lowest

Cylus et al, 2017
Primary Health Care
Large variation in Effectiveness

Source: Kringos et al 2013
Avoidable Admissions for Chronic Ambulatory Care Sensitive Conditions 2013

Source: Health at a Glance OECD (2016)
COPD Hospital Admissions in Adults, 2013*

* Or nearest year; data from 2012 in Switzerland, US and New Zealand. Data from 2011 in Netherlands. Data are for individuals aged 15 years and older, reflecting age- and sex-adjusted rates. ‘OECD median’ reflects the median of 33 OECD countries.

Source: OECD Health Data 2017.
Proportion of patients who visited an emergency department because primary care was not available, 2011-13

Source: OECD, QUALICOPC
Nurses vs physicians per 1,000 population (2015 or latest), OECD
## Low number of consultations per doctor (OECD Health statistics 2017)

<table>
<thead>
<tr>
<th>Country</th>
<th>Annual consultations per doctor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korea</td>
<td>7410</td>
</tr>
<tr>
<td>Japan</td>
<td>5835</td>
</tr>
<tr>
<td>Turkey</td>
<td>4951</td>
</tr>
<tr>
<td>Hungary</td>
<td>3810</td>
</tr>
<tr>
<td>South Africa</td>
<td>3414</td>
</tr>
<tr>
<td>Poland</td>
<td>3179</td>
</tr>
<tr>
<td>Canada</td>
<td>3179</td>
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<tr>
<td>Russian Fed.</td>
<td>3010</td>
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<tr>
<td>Germany</td>
<td>2956</td>
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<tr>
<td>Slovenia</td>
<td>2956</td>
</tr>
<tr>
<td>Netherlands</td>
<td>2680</td>
</tr>
<tr>
<td>OECD32</td>
<td>2335</td>
</tr>
<tr>
<td>Belgium</td>
<td>2016</td>
</tr>
<tr>
<td>Australia</td>
<td>1950</td>
</tr>
<tr>
<td>Lithuania</td>
<td>1924</td>
</tr>
<tr>
<td>France</td>
<td>1865</td>
</tr>
<tr>
<td>Spain</td>
<td>1714</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>1714</td>
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<tr>
<td>Ireland</td>
<td>1645</td>
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<td>Estonia</td>
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<td>Latvia</td>
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<td>Italy</td>
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<td>Chile</td>
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<td>United States</td>
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<td>Italy</td>
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<td>Brazil</td>
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<td>Finland</td>
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<td>Austria</td>
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<tr>
<td>Denmark</td>
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</tr>
<tr>
<td>Mexico</td>
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</tr>
<tr>
<td>Colombia</td>
<td>1619</td>
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<tr>
<td>Portugal</td>
<td>1619</td>
</tr>
<tr>
<td>Switzerland</td>
<td>1619</td>
</tr>
<tr>
<td>Norway</td>
<td>1619</td>
</tr>
<tr>
<td>Sweden</td>
<td>1619</td>
</tr>
</tbody>
</table>
Outpatient contacts per person relatively low
(OECD Health statistics 2017)

Outpatient contacts per person per year

DEU
TUR
NLD
ESP
BEL
ITA
AUT
FRA
ISR
ISL
LUX
IRL
GBR
DNK
NOR
FIN
PRT
GRC
CHE
SWE
CYP

European Observatory on Health Systems and Policies
Hospital length of stay is falling but discharge rates are high, 2000-2015*

*2014 data; **2012 data; ***2010 data. Length of inpatient stays reflect all hospitals, except for Canada and the Netherlands, data for which reflect curative care average length of stay (excluding rehabilitative care, long-term care and palliative care). Discharges reflect total number for all causes.

Source: OECD Health Data 2017.
Curative care occupancy rates high

(National Health statistics 2017)
Is Norway’s health system inefficient? The production process in hospital care

(Cylus et al 2017)
Is there evidence of an allocative efficiency problem?

• Data suggest possible poor use (overuse?) of hospital resources, but is it true?

• If so, is it:
  – Due to specialists primarily being in urban areas?
  – Due to GP copayments?
  – Due to geographic dispersion (e.g. fewer visits per physician)?
  – Other reasons?
Breast Cancer Screening Rates, 2015*

Among women 50-69 years

- US: 80%
- NETH: 79%
- NOR: 75%
- UK: 75%
- NZ: 72%
- AUS: 55%
- GER: 54%
- FR: 52%
- CAN: 49%
- SWIZ: 47%

OECD MEDIAN: 55%

* Or nearest year; 2014 data for Netherlands, Germany; 2012 data for Switzerland; 2011 data for Canada.

^ OECD median based on data for 28 OECD countries (26 countries based on program data; 2 based on survey data).

Note: US, Switzerland, based on survey data; all other countries based on program data. No data for Sweden.

Source: OECD Health Data 2017.
Pharmaceutical Spending per Capita, 2015*

Adjusted for Differences in Cost of Living

* Or nearest year; data from 2014 for Canada and Australia. No recent data available for New Zealand (since 2007).

Current expenditures on pharmaceuticals (prescribed and over-the-counter medicines) and other medical non-durables, per capita, adjusted for current US$ PPPs, representing retail spending of pharmaceuticals delivered outside provider settings.

‘OECD median’ reflects the median of 35 OECD countries.

Source: OECD Health Data 2017.
Many other indicators to explore

<table>
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<tr>
<th>Efficiency measure</th>
<th>Accountable entity</th>
<th>Outputs</th>
<th>Inputs</th>
<th>External influences</th>
<th>Links with the rest of the health system</th>
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<tr>
<td>Expenditure per case</td>
<td>Are cases sufficiently comparable?</td>
<td>Are data available on patient outcomes?</td>
<td>Is cost accounting comparable across entities?</td>
<td>Are there differences in case-mix that are not accounted for?</td>
<td>Does the entity being evaluated have spillover effects on other parts of the health system? Is the entity dependent on coordination across multiple providers (or, alternatively, can it shift some of its costs to other providers)?</td>
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<tr>
<td>Excessive referrals to specialists</td>
<td>Is the entity of interest a provider or an entire system?</td>
<td>Are patient outcomes comparatively improved due to specialist referrals?</td>
<td>Can patients be seen in less intensive settings?</td>
<td>Are there differences in case-mix that are not accounted for?</td>
<td>What incentives exist for primary care providers to refer patients?</td>
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<tr>
<td>Frontier analysis (e.g. DEA)</td>
<td>Are the entities sufficiently comparable (i.e. do they belong to the same production possibilities frontier)?</td>
<td>Are the outputs produced entirely by the inputs? Is there information on health outcomes?</td>
<td>Do the inputs fully account for the outputs?</td>
<td>Are there factors which affect the outputs that are controllable/uncontrollable by the entities? How are these factors accounted for in the analysis?</td>
<td>Does the entity being evaluated have spillover effects on other parts of the health system? Is the entity dependent on coordination across multiple providers (or, alternatively, can it shift some of its costs to other providers)?</td>
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<tr>
<td>Generic prescribing rates</td>
<td>Are the providers/case-mix sufficiently comparable?</td>
<td>Are generic medicines of comparable quality?</td>
<td>Are generic medicines less expensive than branded?</td>
<td>Are there factors (such as economic interests) which affect the production or consumption of medicines?</td>
<td>What provider incentives exist for generic prescribing?</td>
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<tr>
<td>Operations per specialist</td>
<td>Are the providers/case-mix sufficiently comparable?</td>
<td>What other outputs besides operations is the specialist spending time on?</td>
<td>Are there inputs not accounted for (e.g. other health workers participating in an operation)?</td>
<td>Are there differences in case-mix that are not accounted for?</td>
<td>Does the entity being evaluated have spillover effects on other parts of the health system? Is the entity dependent on coordination across multiple providers (or, alternatively, can it shift some of its costs to other providers)?</td>
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<tr>
<td>Prices paid for inputs (e.g. average hourly wage)</td>
<td>Are prices adjusted sufficiently to account for variability in cost-of-living across entities?</td>
<td>Are the inputs (e.g. labour, capital) comparable in terms of quality?</td>
<td>Is cost accounting comparable across entities?</td>
<td>Are there factors which affect the prices of inputs broadly (e.g. factors affecting wages for other sectors)?</td>
<td>Are prices fixed (e.g. public-sector salary scales)?</td>
</tr>
<tr>
<td>Skill-mix of health workers</td>
<td>Is the entity able to alter its mix of health workers?</td>
<td>Does the mix of health workers reflect population needs?</td>
<td>Are wages for health workers appropriate given their skill level?</td>
<td>Are there factors (such as migration, education) which affect the skill-mix of health workers?</td>
<td>If the entity is a system, to what extent are there variations among providers?</td>
</tr>
<tr>
<td>Unnecessary duplication</td>
<td>Is the entity (e.g. provider or a health system) redundant?</td>
<td>Are data available on patient outcomes?</td>
<td>Is a duplicate activity definitely not necessary (e.g. has sufficient time passed</td>
<td>Are there differences in case-mix that are not accounted for?</td>
<td>Are there issues related to sharing of patient information?</td>
</tr>
</tbody>
</table>

(Cylus et al 2017)
In Sum ....

- Health outcomes overall are good
- Unmet need is low, equitable access
- Unclear that Norway gets value for money
  - Is it to do with poor PHC?
  - Is it inevitable given dispersed population?
  - Role for telemedicine?
- Could allocative efficiency be improved?
- Could patient experience be better?
Value of international HSPA comparisons
  • Particularly within wider context of pressures to increase transparency and accountability to payers/citizens

Measurement Challenges
  • Political and ethical
  • Conceptual clarity / consensus: domains & frameworks
  • Common indicators e.g. efficiency & patient experience
  • Methodological comparability: data, quality, validity,..
Policy Interpretation and Applicability

- Ensure health systems contextualization
- HSPA measures as screening tools
- Focus on tracer conditions
- Embed with levers of policy improvement

‘To Benchmark or Not To Benchmark that is the question’

Agreeing on a European Approach to HSPA

- Dream or Reality?
In Sum ....
Objectivity / Neutrality / Facilitation

Key to Sustainability & Impact

Evidence as neutral platform for debate & and Decision making