

Using international datasets for health system reviews and performance comparisons

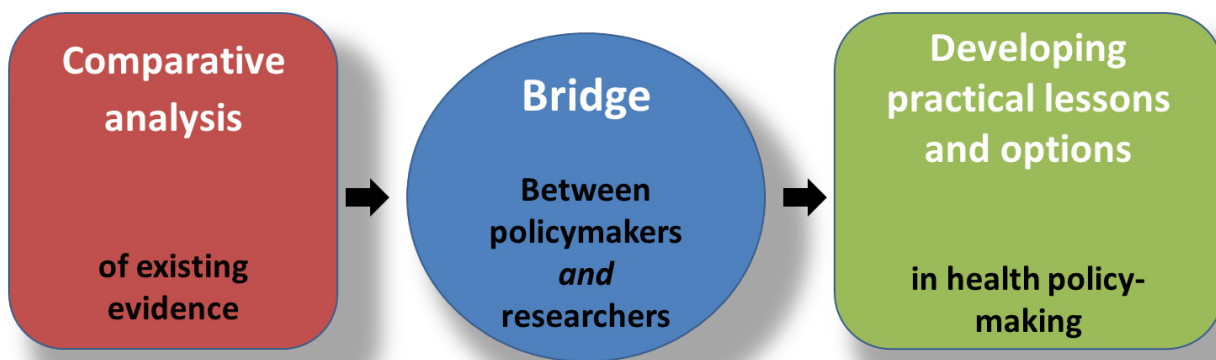
Marina Karanikolos
European Public Health Conference, Ljubljana
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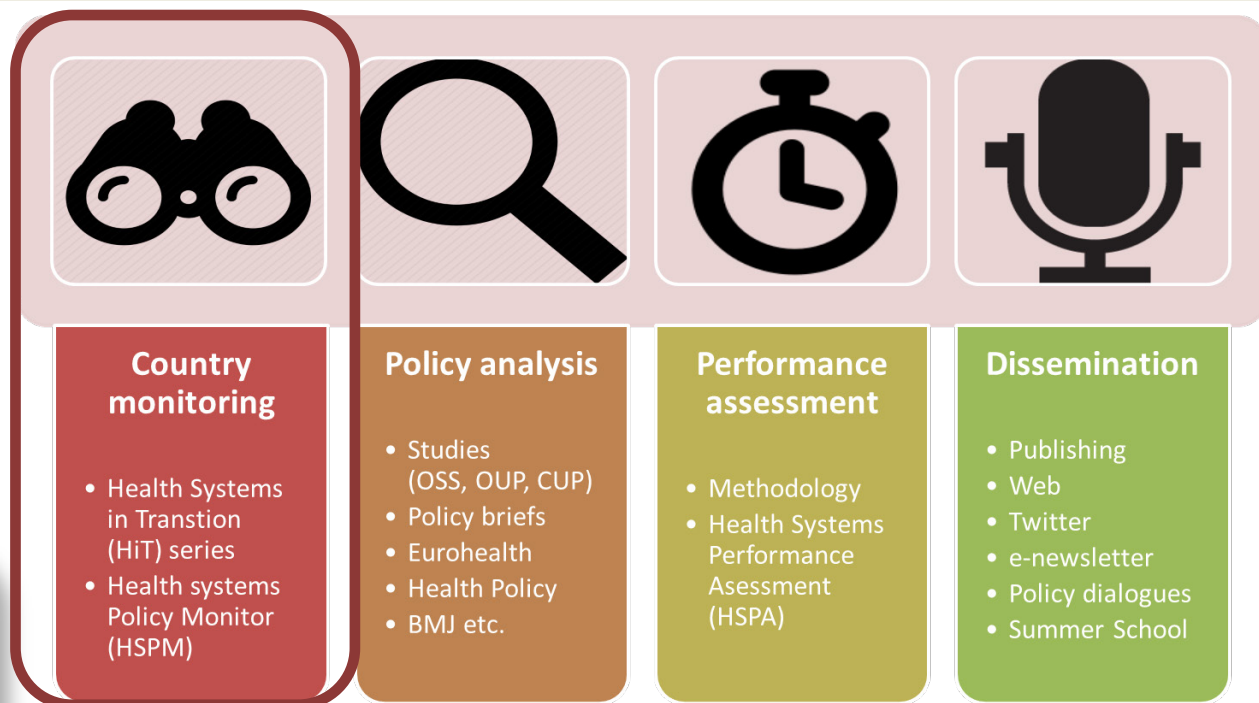


European Observatory

Who we are



Core Mission: to support and promote evidence-based health policy-making
informed



What we do



Health system reviews (HiTs)



- Systematic description of health systems, reforms and policy initiatives
- Cover WHO European region + selection of OECD countries
- Based on a common template
- Written by country experts and supported by OBS editorial team
- Evaluative components + performance assessment section



Information sources for HiTs

Descriptive and analytical content

- National legislation and regulation
- National audits
- Government and independent national reports
- International reports
- Academic literature
- etc

Data to support the narrative

- International databases
 - WHO (GHED, HFA, GHO, MDB, etc)
 - Eurostat
 - OECD Statistics
 - World Bank
 - IHME Global Burden of Disease
- National statistics and other data on health sector



When comparable data are needed

Context e.g.

Population health profile

Health care financing

Health care resources

Service utilization

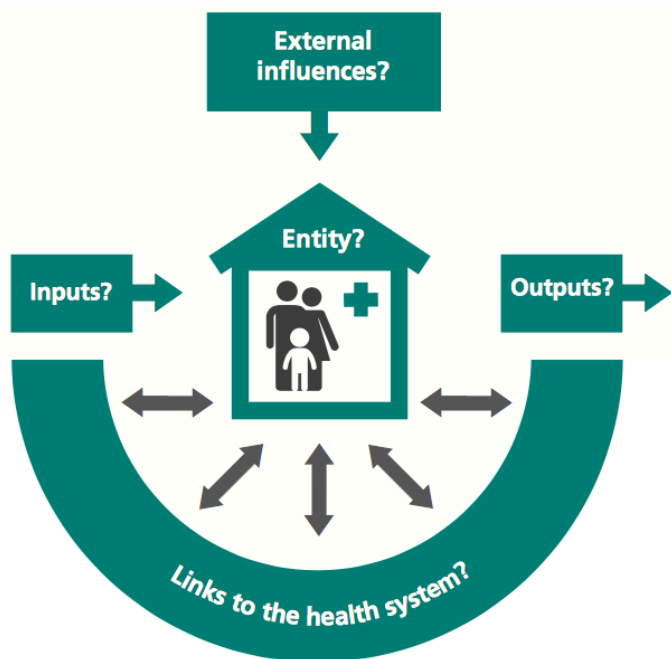
Assessment

Health system performance
evaluation



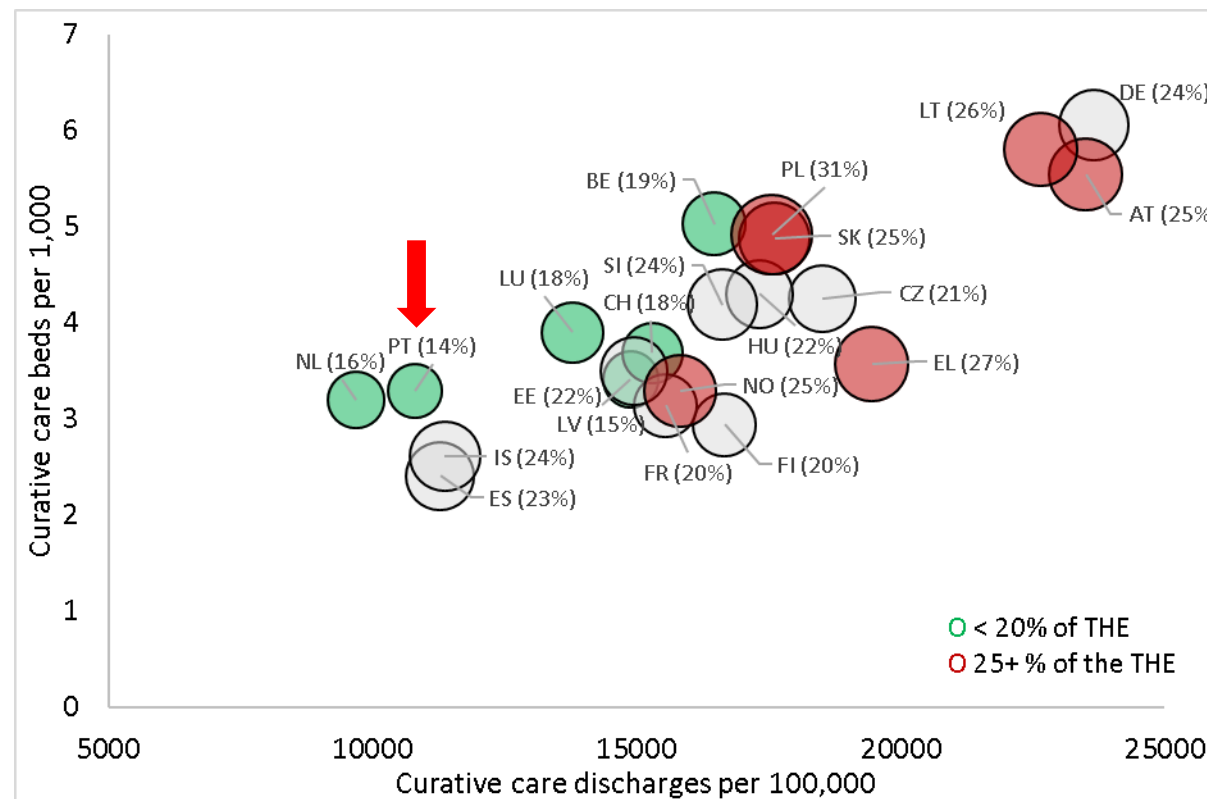


Assessing health system efficiency



Understanding variations in health care efficiency

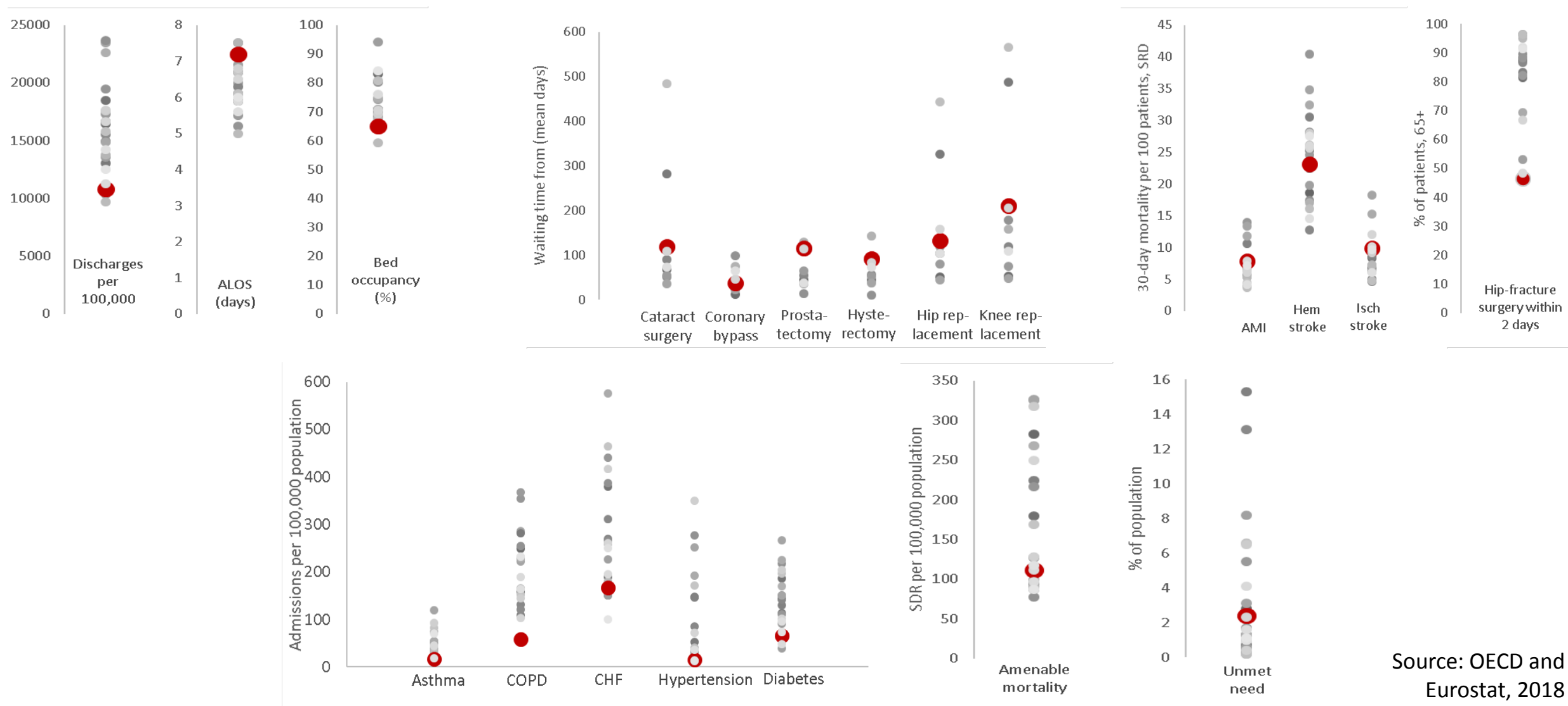
Cylus et al (2017)



Curative care beds, discharges and expenditure, European OECD countries, 2016 or latest available (OECD, 2018)



Assessing health system efficiency



Source: OECD and Eurostat, 2018





Assessing health system efficiency

Portugal may initially appear to have more efficient acute care: beds, discharges and share of impatient care as THE are low

Digging deeper:

- Fewer avoidable admissions → effective primary care?
- Low bed occupancy but high waiting times and length of stay
- Mixed picture on acute care quality
- Unmet need and amenable mortality just below EU average

Bottom line:

First impression from selected efficiency indicators may be misleading: perhaps a degree of inefficiency in hospital care, but still not clear where.

Following steps:

- Allocative efficiency (distribution of staff and resources)
- Clinical practices, incentives, discharge arrangements;
- Reasons for unmet need, inequalities in access to care



Assessing population health

Advantages: <ul style="list-style-type: none">- Easier to hold relative stakeholders to account- Identifies areas which relative stakeholders have the capacity to make changes	Advantages: <ul style="list-style-type: none">- Provides a more realistic view of all factors that influence health- Identifies interactions between sectors, institutions, people that can influence health
MEDICAL CARE	ALL DETERMINANTS
HEALTH SYSTEM BOUNDARY	
Disadvantages: <ul style="list-style-type: none">- Most factors influencing health are not included in the framework- It may be difficult to disentangle the effect health care has on outcomes from other determinants	Disadvantages: <ul style="list-style-type: none">- Many determinants identifies are difficult, if not impossible to change in the short run- Does not provide clarity on managerial roles- More difficult to assign responsibility and hold stakeholders to account

Papanicolas & Smith, 2010



Avoidable mortality

Amenable mortality

deaths which should not occur in presence of timely and effective health care)

Preventable mortality

deaths avoidable through wider health policies

- where health care is less effective after the onset of condition (e.g. Nolte et al, 2004)
- OR... in broadest sense (ONS, Eurostat)

Some thoughts

- Using the appropriate concept
- High levels indicate potential problems, but this is not a precise measure
- Further disaggregation is needed

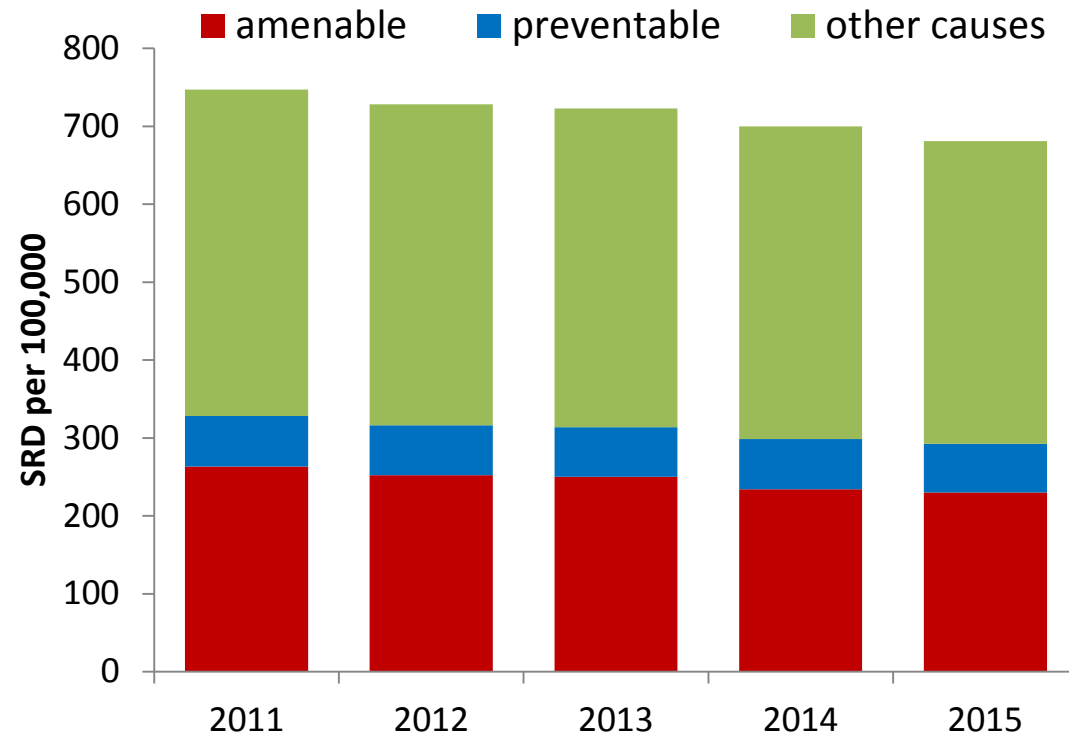
The choice of the source will depend on

- a) Health system boundaries
- b) Purpose of the assessment

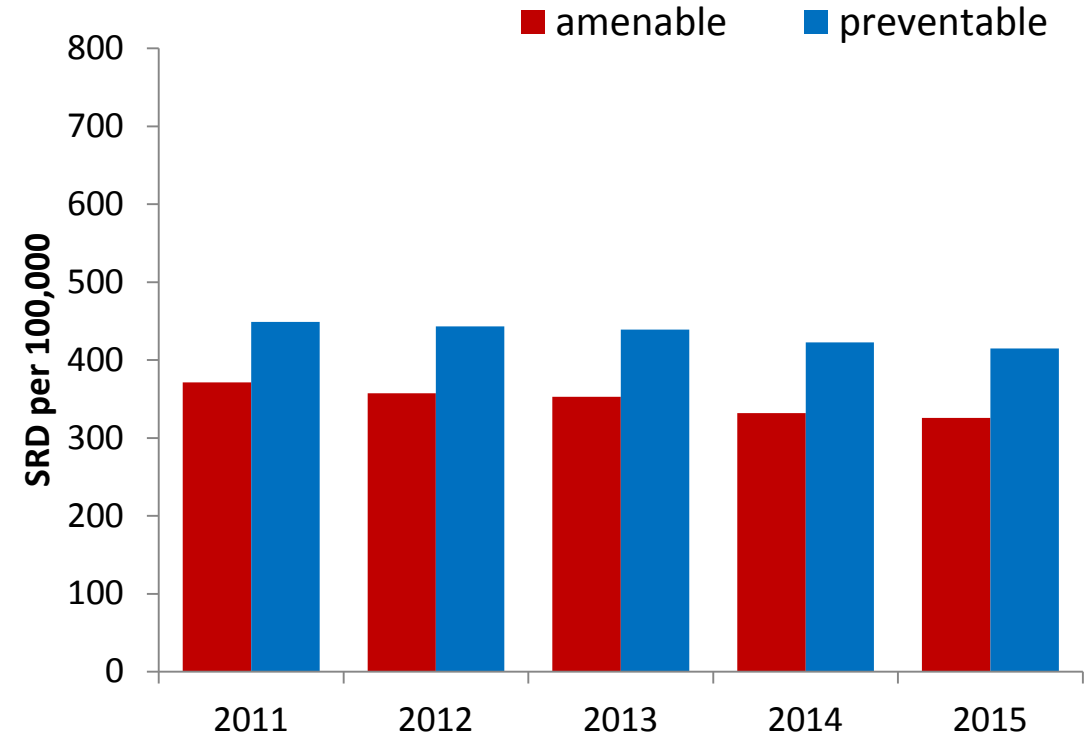


Amenable and preventable mortality (under 75s): example of Latvia

List by Nolte & McKee (2004)



List by Eurostat





Limitations of avoidable mortality

- Relationship to health care inputs
- Interpreting trends over time
- Selection of avoidable causes and their attribution to health outcomes
- Changing concept of avoidability
- Treatment vs prevention
- Focus on morality, does not adjust for incidence or severity of disease



What is **the best** health system?





OVERALL PERFORMANCE				
Rank	Uncertainty interval	Member State	Index	Uncertainty interval
1	1 – 5	France	0.994	0.982 – 1.000
2	1 – 5	Italy	0.991	0.978 – 1.000
3	1 – 6	San Marino		
4	2 – 7	Andorra		
5	3 – 7	Malta		
6	2 – 11	Singapore		
7	4 – 8	Spain		
8	4 – 14	Oman		
9	7 – 12	Austria		
10	8 – 11	Japan		
11	8 – 12	Norway		
12	10 – 15	Portugal		
13	10 – 16	Monaco		
14	13 – 19	Greece		
15	12 – 20	Iceland		
16	14 – 21	Luxembourg		
17	14 – 21	Netherlands		
18	16 – 21	United Kingdom		
19	14 – 22	Ireland		
20	17 – 24	Switzerland		

Healthcare Access and Quality Index

Tuberculosis

Diarrhoeal diseases

Lower respiratory infections

Upper respiratory infections

Diphtheria

Whooping cough

Tetanus

Mosquitoes

Maternal disorders

Neonatal disorders

Non-melanoma skin cancer

Cervical cancer

Uterine cancer

Testicular cancer

Hodgkin's lymphoma

Lymphoma

Rheumatic heart disease

Ischaemic heart disease

Cerebrovascular disease

Hypertensive heart disease

Chronic respiratory disease

Peptic ulcer disease

Appendicitis

Inguinal, femoral, and abdominal hernia

Gallbladder and biliary diseases

Epilepsy

Diabetes mellitus

Congenital heart anomalies

Crohn's, laryngeal disease

Adverse effects of medical treatment

	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
OVERALL RANKING	2	9	10	8	3	4	4	6	6	1	11
Care Process	2	6	9	8	4	3	10	11	7	1	5
Access	4	10	9	2	1	7	5	6	8	3	11
Administrative Efficiency	1	6	11	6	9	2	4	5	8	3	10
Equity	7	9	10	6	2	8	5	3	4	1	11
Health Care Outcomes	1	9	5	8	6	7	3	2	4	10	11

Mirror, Mirror (2017) – Commonwealth Fund

Healthcare Access and Quality Index (GBD 2015) based on amenable mortality



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”

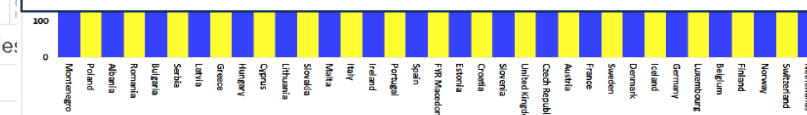


Figure 3.1 EHCI 2015 total scores.



In summary

- Variety of data sources are needed for comprehensive health system assessment
- Selection of sources depends on:
 - specific HSA-related factors (e.g country and comparisons, time period)
 - data source factors (e.g. timeliness, interface, completeness)
- Data easier to use for describing population health or health system elements, but more complex for performance assessment and explaining variations
- Interpretation of international health system rankings needs a lot of caution (at best)