

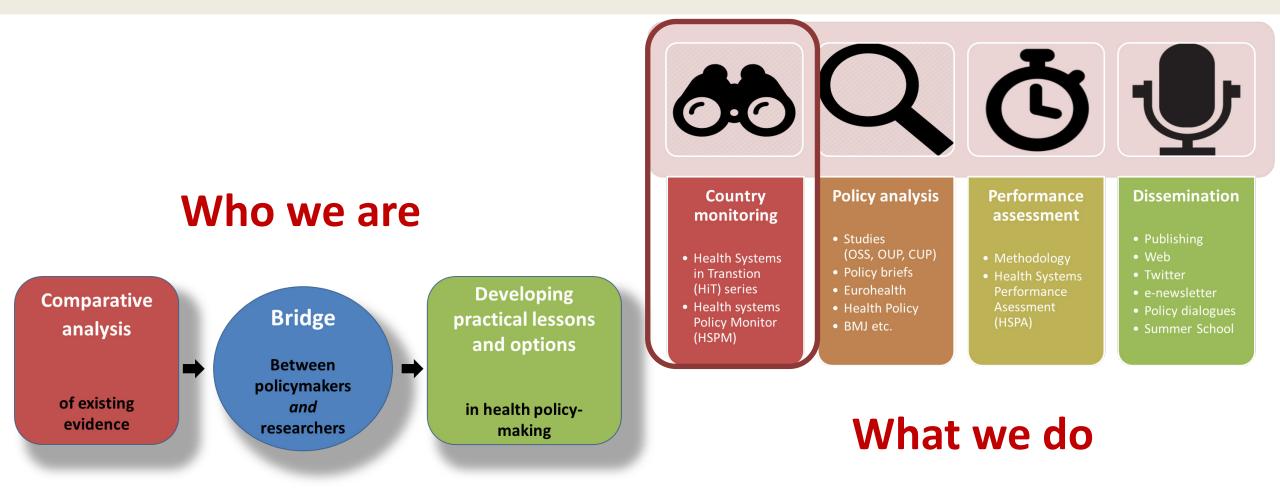
Using international datasets for health system reviews and performance comparisons

Marina Karanikolos European Public Health Conference, Ljubljana 28th November 2018





European Observatory



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





- 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

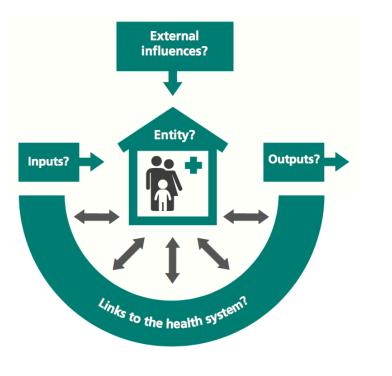
Assessment

Health system performance evaluation

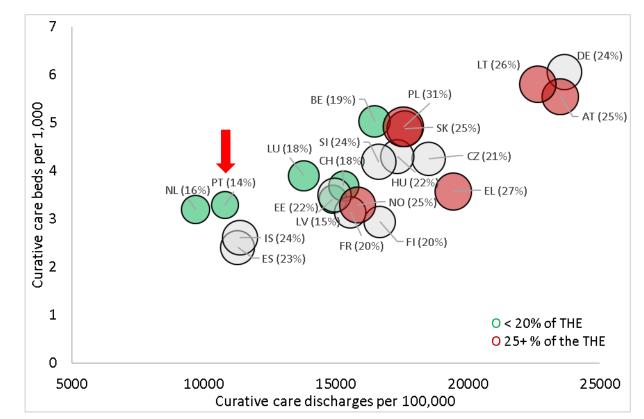




Assessing health system efficiency

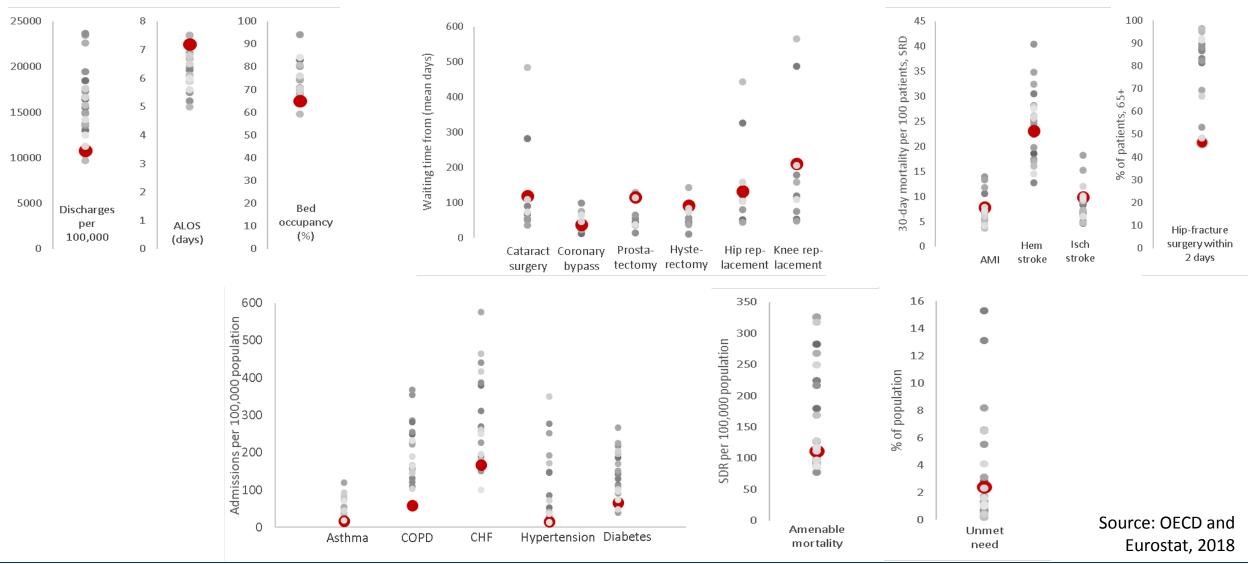


Understanding variations in health care efficiency Cylus et al (2017)



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

Assessing health system efficiency





www.healthobservatory.eu



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:	Advantages:
 Easier to hold relative stakeholders to account Identifies areas which relative stakeholders have the capacity to make changes 	 Provides a more realistic view of all factors that influence health Identifies interactions between sectors institutions, people that can influence health
MEDICAL CARE HEALTH SYSTEM	1 BOUNDARY ALL DETERMINANT

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

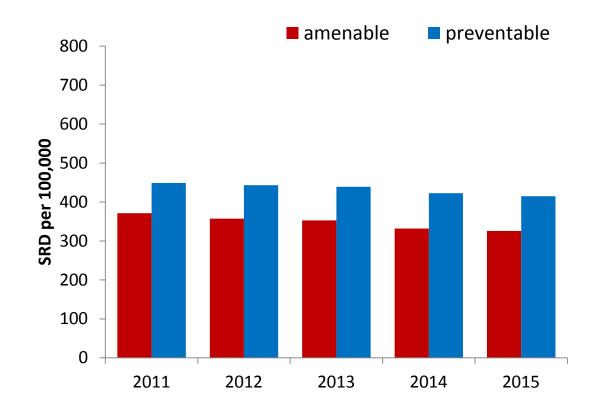


Amenable and preventable mortality (under 75s): example of Latvia

List by Nolte & McKee (2004)

amenable preventable other causes 800 700 600 SRD per 100,000 500 400 300 200 100 0 2011 2012 2013 2014 2015

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









WHO 2000 Rankings

		OVERALL PE	RFORMANCE																
Rank	Uncertainty interval	Member State		Index		certainty nterval	,												
1	1-5	France		0.994	0.98	2 - 1.000)												
2	1-5	Italy		0.001		81.000													
3	1-6	San Marino		l lé	ΠĨ		1									ernia			
-				ality Ir	2 2		5									Ininal	eases		
4	2 – 7	Andorra		qQue	infections		cance				ase	8 8	iseas	iseas		abdor	y dise		
5	3 – 7	Malta		Healthcare Access and Quality Index Tuberculosis Diamhoeal diseases	Lower respiratory infections Upper respiratory infections Diptheria	g cough disorders	Non-melanoma skin cancer	cer	ancer	Hodgkin s iympnoma Leukaemia	Rheumatic heart disease	ischaemic heart disease Cerebrovascular disease	Hypertensive heart diseas	respiratory disease	disease	citis femoral, and abdominal hemi	Sallbladder and biliary diseases		Diabetes mellitus
6	2 - 11	Singapore	-	fealthcare Access a uberculosis Jiarrhoeal diseases	Lower respiratory Upper respiratory Diptheria	Whooping cough Tetanus Measles Matemal disorders	I-melane	Cervical cancer Uterine cancer	festicular cancer	todgkin s Iy eukaemia	umatic	schaemic heart Cerebrovascular	ertensiv	Chronic resp	Peptic ulcer disease	endicity inal, fem	bladder	spsy	Diabetes mellitus
7	4 - 8	Spain			Upp	Wh Tet Mei Mai		Le Ce	Tes	Leu	Rhe	ls ch	Hyp	Ъ.	Pep	the large	Gall	Epil	Dial
			Andorra	95 98 99 94 95 97	85 100 100	98 99 100 100 99	9 82	93 96	67 6	73	96	34 96	95	97	95 9	9 93	91	92	96
8	4 - 14	Oman	Switzerland	92 99 91	87 99 100	100 100 100 97 8	0 76	90 94	75 7	2 72	96	86 100	85	97	92 9	6 92	86	89	94
9	7-12	Austria	Sweden	90 98 96	80 99 100	100 100 100 98 9	78	76 99	83 7	6 67	91	73 88	94	95	79 9	8 92	86	85	78
			Australia	90 95 92 90 100 94	78 99 100	100 100 100 99 99 100 100 99 96 8	0 81	81 91	65 7	0 76	93 86	78 87	99	95	80 9 93 9	8 92	86	80	78
10	8 - 11	Japan	Finland	90 93 99	39 99 100	100 100 99 98 8	5 84	95 95	78 6	9 72	96	67 80	75	98	75 9	6 84	79	76	79
11	8-12	Norway	Spain	90 92 96	80 99 100	98 100 100 99 8	5 74	83 90	82 6	66	76	86 91	93	95	96 9	4 84	74	97	98
		,	Netherlands	90 99 94	71 99 100	100 100 100 96 7	80	83 96	74 6	5 78	93	79 85	97	94	90 9	5 87	79	82	84
12	10 - 15	Portugal	Japan	89 99 87 89 89 94	85 99 100 61 99 100	98 100 100 92 9 100 100 99 98 10	3 74 0 87	84 96	82 7	3 65	81 92	53 88 94 75	91	97	91 9 87 9	3 85	78	79	90
13	10-16	Monaco	Italy	89 95 96	90 99 100	99 99 100 100 8	1 74	85 89	76 6	60 60	78	84 88	72	98	95 9	8 88	78	93	89
			Ireland	88 91 94	71 99 100	100 100 100 98 9	59	76 92	82 5	8 69	87	73 92	93	93	81 9	9 86	81	81	91
14	13 – 19	Greece	Austria	88 95 92 88 92 92	95 99 100 76 99 100	100 100 99 99 84 99 100 99 93 84	_	78 89	71 7	0 67	86 80	/6 93 87 80	77	96	88 9 91 9	8 89	84	89	84
15	12 - 20	Iceland	Belgium	88 94 92	58 99 100	99 100 100 95 8	3 68	79 91	84 6	5 67	90	78 86	97	94	84 9	7 86	79	76	90
			Canada	88 98 93	73 99 100	99 100 100 96 7	1 64	79 93	8 81 7	1 71	82	72 90	95	92	89 9	6 86	82	91	78
16	14 - 21	Luxembourg	Slovenia Greece	87 92 99 87 87 90 100	B0 98 100 B4 98 100	100 100 99 97 9	1 71	77 92	60 6	5 74	77 94	3 78	71	100	76 9 85 10	7 79	76	89	100
17	14 - 21	Netherlands	Greece	86 98 95	84 98 100 73 99 100	100 99 100 95 8 100 100 100 96 8	2 75	78 94	66 6	1 62 8 68	94 81	51 72 71 85	83	98	80 9	0 92 95 91	85	75	84
_			Singapore	86 79 96	39 99 100	100 100 100 99 9	88 88	75 85	99 8	6 63	93	74 77	53	95	87 9	9 93	79	98	94
18_	16 - 21	United Kingdom	New Zealand	86 96 90	87 99 100	100 100 99 89 7	60	82 87	73 6	6 62	70	59 84	93	86	89 9	6 89	81	80	83
19	14 - 22	Ireland	South Korea Denmark	86 67 97 86 96 90	79 98 100 74 98 100	99 99 98 94 8 100 100 100 99 8	5 89	79 80	99 8	57 55 53 72	98 90	0 67 79 81	84	95	92 9	3 98	72	81	63
			< keel	86 95 91	59 99 100	99 100 100 92 8	5 64	79 92	_	7 62	71	81 85	98	91	97 9	6 87	75	80	81
20	17 – 24	Switzerland	Cyprus	85 96 84	84 99 100	97 98 99 100 7	2 67	84 94	75 6	is 56	64	58 86	82	94	99 9	6 92	73	94	71
			Qatar Malta	85 83 94 85 100 86	77 99 100	97 98 94 89 6 100 99 100 98 6	2 84	96 99	96 8	67	94	55 86	96	88	93 9	2 93	88	87	77
			Maita Czech Republic	85 96 96	79 99 100 70 98 100 1	100 99 100 98 6	s 73 8 66	66 81	53 5	8 72	80	61 75	78	93	68 5	3 84	69	85	85
			UK	85 94 93	54 99 100	99 100 100 92 7	3 69	79 92	79 5	8 67	85	77 88	8 83	87	72 9	0 76	70	74	86
			Portugal	85 81 92	50 98 100	99 100 99 97 9	1 65	74 8;	76 6	63 59	80	87 70	92	91	86 9	1 82	72	87	84
			Kuwait	82 77 91 82 85 96	50 99 100 87 07 100	100 100 95 96 6 100 100 97 94 7	9 87 5 69	93 93 69 83	92 8 7 51 5	2 71 6 67	93 81	55 74 62 61	54 1 66	91	89 8 69 9	37 95 91 77	83	85	92
			Estonia	81 75 98	72 97 100	99 100 100 98 9	1 71	65 90	75 6	62 63	72	58 71	43	99	67 5	5 85	81	66	74
			USA	81 97 89	50 98 100	99 100 100 82 6	9 68	77 90	73 6	57 71	75	62 83	64	84	88 9	0 85	76	96	67
			Montenegro	81 88 96	90 96 100	91 99 97 97 6		65 74	52 3	16 50	71	\$6 46	97	100	77 9	3 94	74	87	66
			Lebanon	80 81 88 80 91 93	94 97 100	95 98 97 88 6 100 100 100 95 7		83 89 60 86	50 3 36 6	49 4 61	88	48 76	72	90	91 9 58 8	90 96 35 74	86	79	64
			Poland	80 80 97	58 97 100	100 100 100 95 7		59 86		4 61 1 66	79 70	61 66	5 75	94 99		91 78	78	72	78
	@OBSH	aalth	Saudi Arabia	79 64 81	59 98 100	97 97 93 85 5	_	100 98	3 92 7	6 80	86	59 68	87	88	97 8	6 100	89	81	89
				79 96 94															

Exhibit 2. Health Care System Performance Rankings

AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	swiz	UK	US
2	9	10	8	3	4	4	6	6	1	11
2	6	9	8	4	3	10	11	7	1	5
4	10	9	2	1	7	5	6	8	3	11
1	6	11	6	9	2	4	5	8	3	10
7	9	10	6	2	8	5	3	4	1	11
1	9	5	8	6	7	3	2	4	10	11
	2 2 4 1 7	2 9 2 6 4 10 1 6 7 9	2 9 10 2 6 9 4 10 9 1 6 11 7 9 10	2 9 10 8 2 6 9 8 4 10 9 2 1 6 11 6 7 9 10 6	2 9 10 8 3 2 6 9 8 4 4 10 9 2 1 1 6 11 6 9 7 9 10 6 2	2 9 10 8 3 4 2 6 9 8 4 3 4 10 9 2 1 7 1 6 11 6 9 2 7 9 10 6 2 8	2 9 10 8 3 4 4 2 6 9 8 4 3 10 4 10 9 2 1 7 5 1 6 11 6 9 2 4 7 9 10 6 2 8 5	2 9 10 8 3 4 4 6 2 6 9 8 4 3 10 11 4 10 9 2 1 7 5 6 1 6 11 6 9 2 1 7 5 6 7 9 10 6 2 8 5 3	2 9 10 8 3 4 4 6 6 2 6 9 8 4 3 10 11 7 4 10 9 2 1 7 5 6 8 1 6 11 6 9 2 8 5 3 4	2 9 10 8 3 4 4 6 6 1 2 6 9 8 4 3 10 11 7 1 4 10 9 2 1 7 5 6 8 3 1 6 11 6 9 2 4 5 8 3 7 9 10 6 2 8 5 3 4 1

Mirror, Mirror (2017) – Commonwealth Fund

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

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Healthcare Access and Quality Profile

nitoring national levels of personal healthcare access and quality is critical to understa

estimate a summary measure of healthcare access and quality, the Healthcare Access and Figure 3.1 EHCI 2015 total scores.

improve health service delivery. Researchers used findings from the Global Burden of Di

1 IHME

GBD Results Too

Data Visualizations

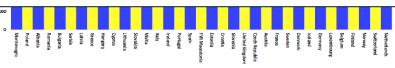
Country Profiles

1000		
	HCI 2015 total scores	
800	823 828 832 836 845 854 760 774 775 785 793	
Culus		

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





- 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)

