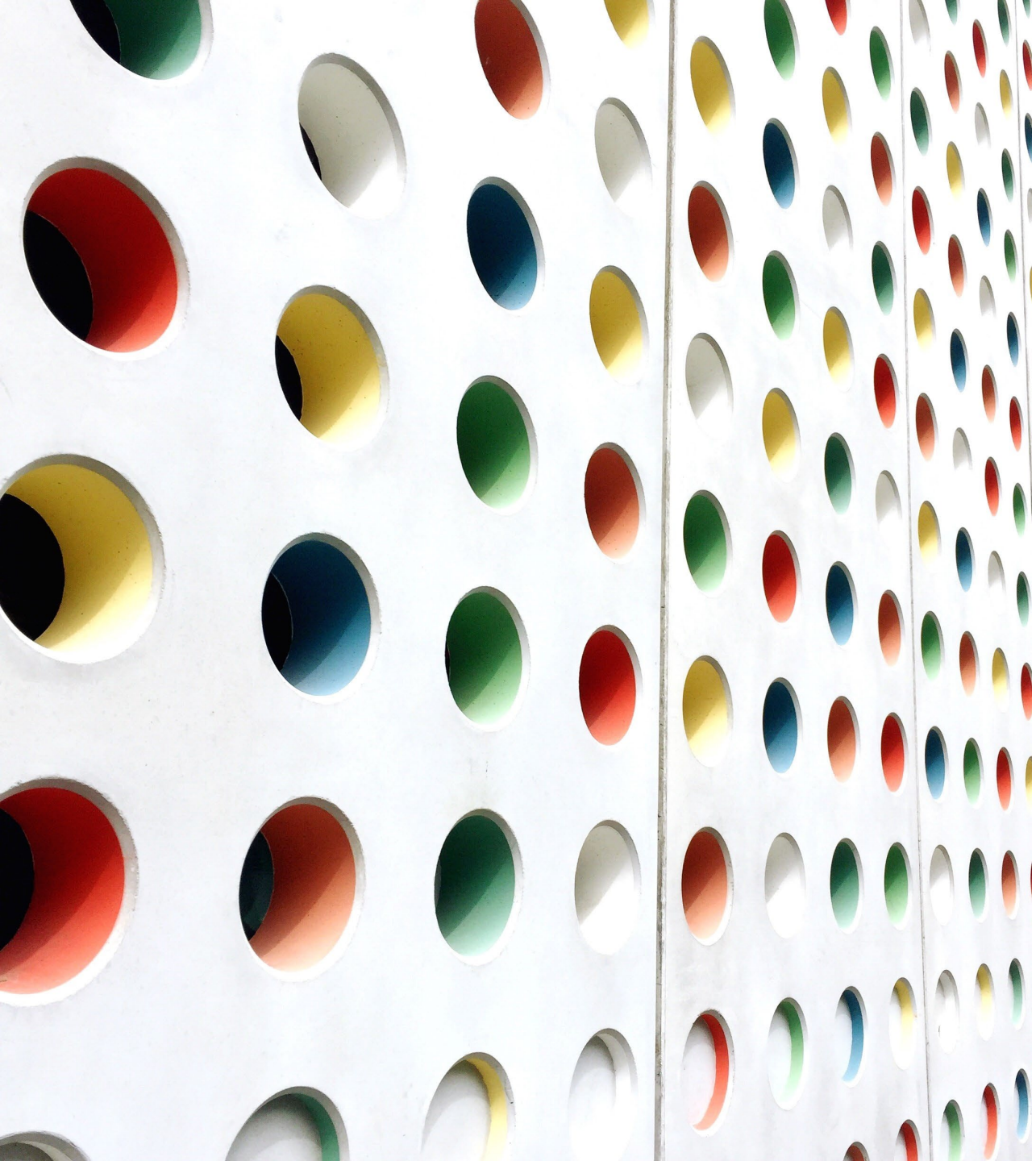

Global Resilience... The Challenges

DR. AHMED ELREFAEY

FRCA, DESA, EDRA, MSC, MBBCH

CONSULTANT ANAESTHETIST

OXFORD UNIVERSITY HOSPITALS NHS FOUNDATION TRUST

Aerial view of Oxford.

Photo: Klammet & Aberl.


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Resilience

Is the ability of an object to spring back into shape

Is the capacity to recover quickly from difficulties

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https://doi.org/10.1186/s12913-020-05208-3

BMC Health Services Research

RESEARCH ARTICLE Open Access

Resilient Health Care: a systematic review of conceptualisations, study methods and factors that develop resilience

Mais Iflaifel[1], Rosemary H. Lim[1*], Kath Ryan[1] and Clare Crowley[2]

RHC is the ability of the system to adjust its functioning prior to, during, or following events and thereby sustain required operations under both expected and unexpected conditions.

Global Resilience in Health Care

A system or a plan that can be applied internationally to any health care system to allow those systems to function normally during disasters, and minimise the impact imposed by any unexpected disaster on those systems by mitigating the known risk factors and weaknesses.

Is It Doable ?!

- Understand different health care models around the world
- Identify the problems within those models
- Analyse the factors that make those systems not resilient
- Find a common ground to start building the plan that works for all the models

The Models

- Finance (free, paid for. Out of pocket, insurance schemes or tax funded)
- Care provision (public or private based)
- Standards of care (who gets what, who does what and where to do it)
- Workforce

Health financing

Table 1. Types of healthcare funding systems in several countries

Funding System	Country
General taxation	United Kingdom
Local taxation with local councils managing providers	Denmark
Social health insurance paid by employer and employee, with multiple, noncompetitive, autonomous, third party payers (insurers)	France
Social health insurance paid by employer and employee, with autonomous, competitive third party payers (insurers)	Germany
Compulsory social health insurance for basic care paid by individuals, with competitive third party payers (insurers) and government-defined benefit package	Switzerland
Voluntary health insurance predominantly paid by employers, with tax subsidies for employers and employees	United States
Voluntary health insurance paid by individuals, with tax subsidies	Australia
Catastrophic health insurance and tax-exempt health savings account	Singapore
Compulsory social health insurance for catastrophic illness and long-term care and social health insurance for acute medical services paid by employer and employee	The Netherlands

Note. Content source: Health Policy Consensus Group. *Options for Healthcare Funding*. Retrieved from The Institute for the Study of Civil Society, London, UK website: http://www.civitas.org.uk/pdf/hpcgSystems.pdf Accessed August 26, 2011.

Table 2. Models of European health systems

National Health Insurance	Social Insurance
Denmark	Austria
The United Kingdom	Belgium
Greece	France
Italy	Germany
Portugal	Luxemburg
Spain	Netherlands
Sweden	

Note. Source: Flood & Haugan, 2010; Saltman & Figueras, 1997; Freeman, 1998.

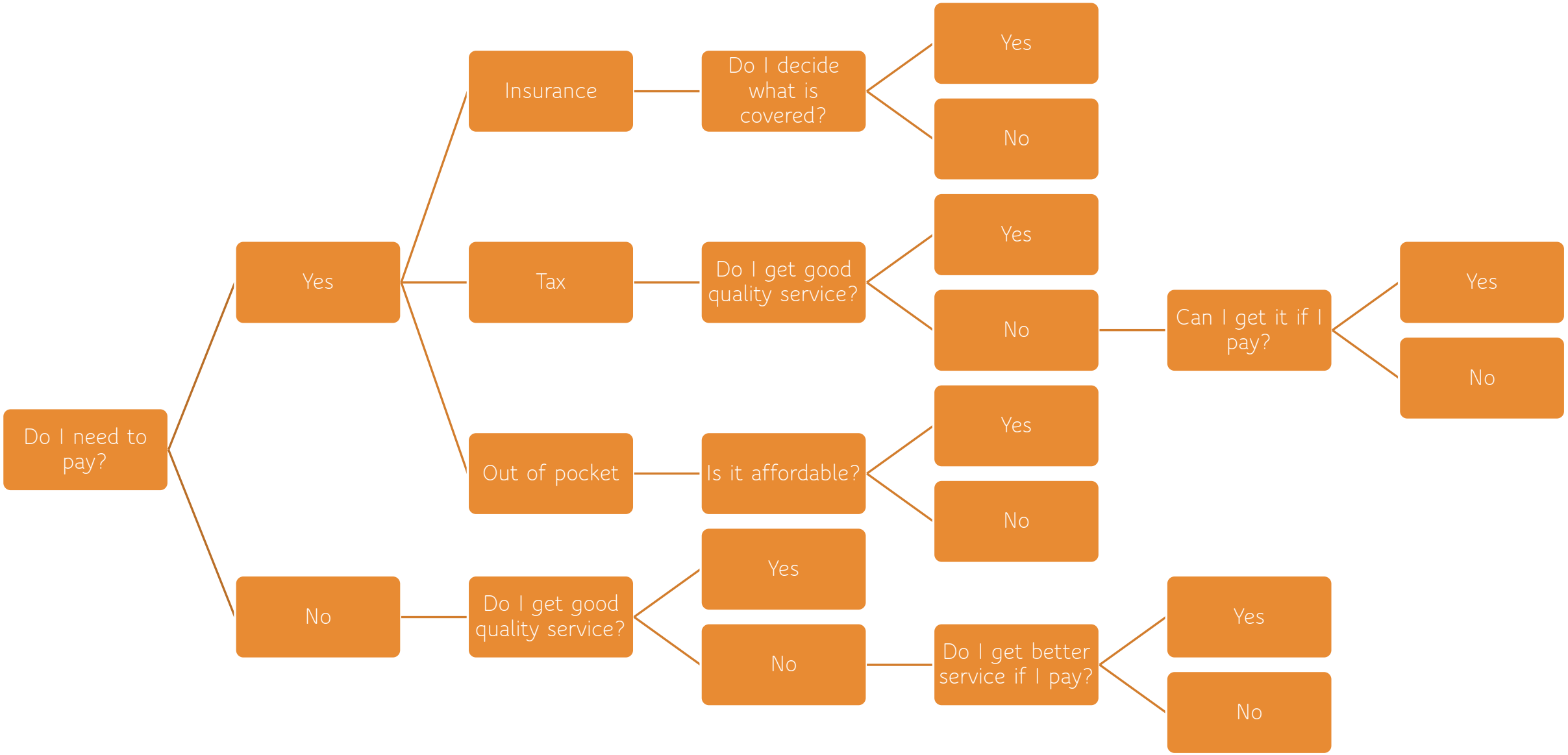
National Health Insurance

Social Insurance

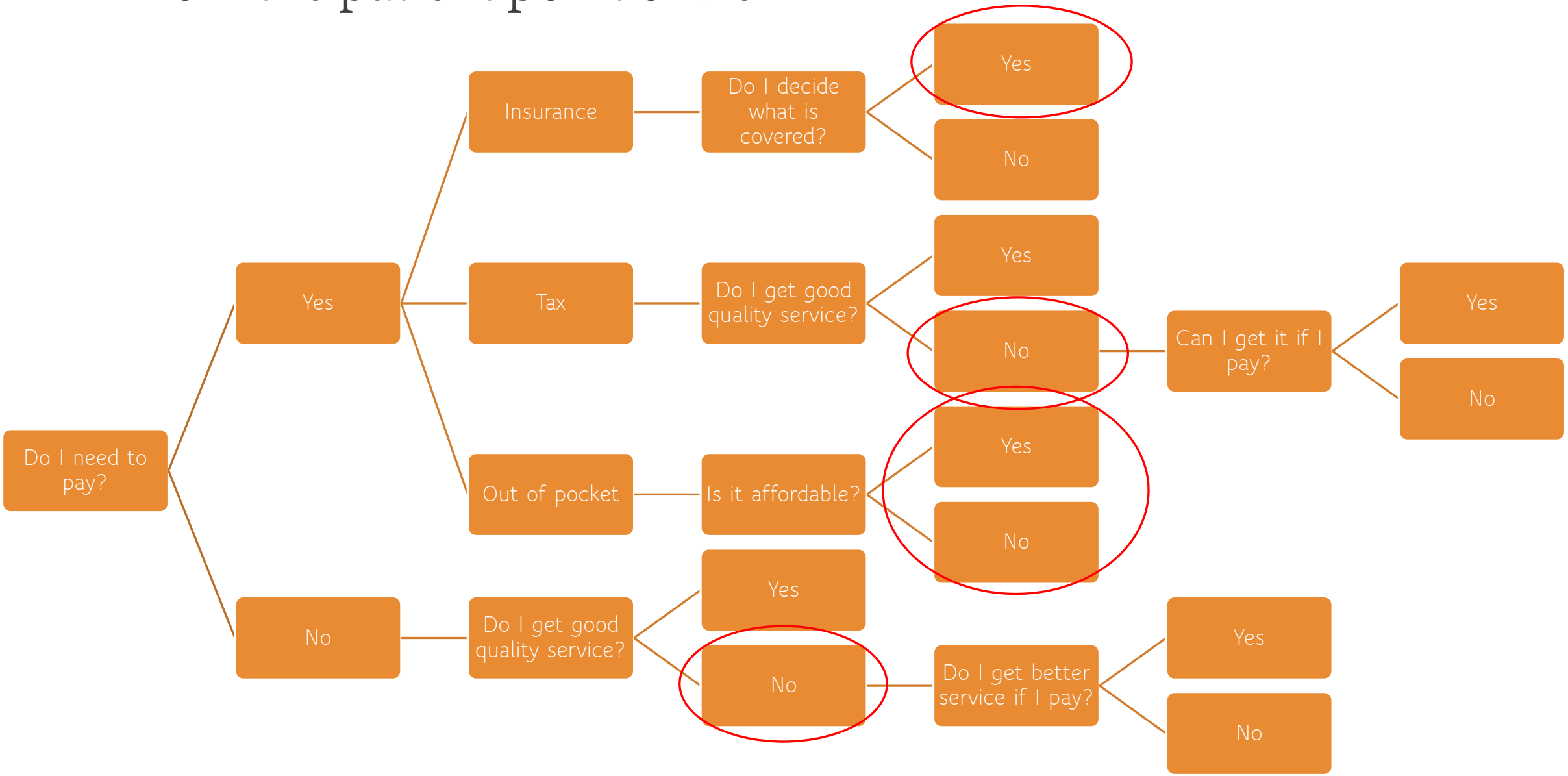
LALA land

Every Man for himself

From the patient point of view



From the patient point of view



Quality

- **safe**: Avoiding harm to patients from the care that is intended to help them.
- **Effective**: Providing services based on scientific knowledge to all who could benefit and refraining from providing services to those not likely to benefit (avoiding underuse and misuse, respectively).
- **Patient-centered**: Providing care that is respectful of and responsive to individual patient preferences, needs, and values and ensuring that patient values guide all clinical decisions.
- **Timely**: Reducing waits and sometimes harmful delays for both those who receive and those who give care.
- **Efficient**: Avoiding waste, including waste of equipment, supplies, ideas, and energy.
- **Equitable**: Providing care that does not vary in quality because of personal characteristics such as gender, ethnicity, geographic location, and socioeconomic status.

Universal Health Coverage UHC

UHC means that all individuals and communities receive the health services they need without suffering financial hardship.

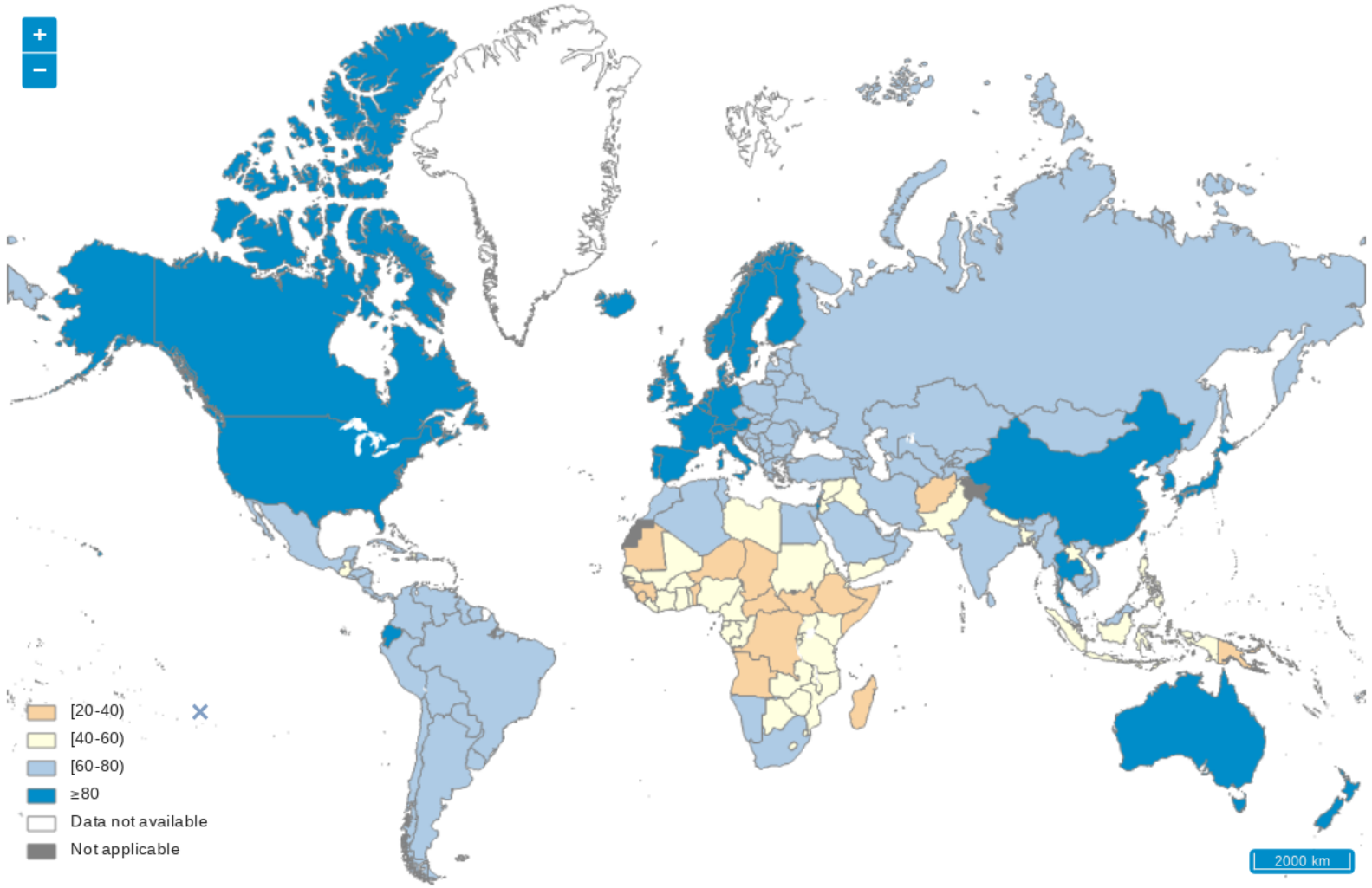
It includes the full spectrum of essential, quality health services, from health promotion to prevention, treatment, rehabilitation, and palliative care across the life course.

UHC Service Coverage Index (SDG 3.8.1)

FILTERS

Year

Latest



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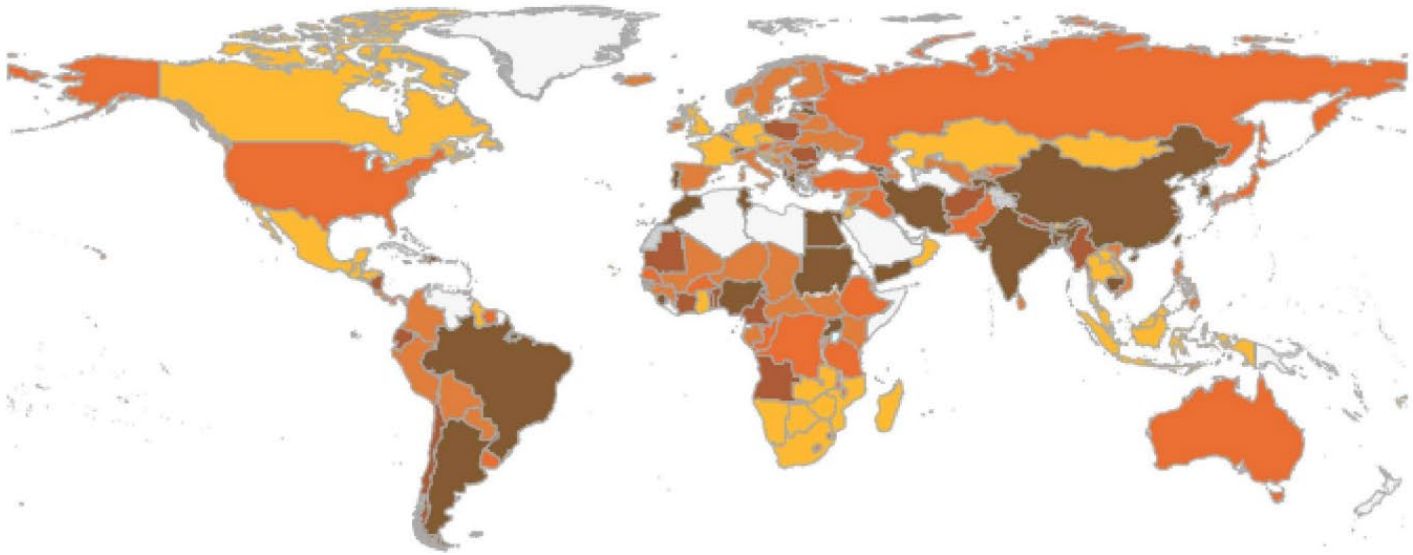
World Health Organization

Universal Health Coverage (UHC): incidence of catastrophic health spending - SDG indicator 3.8.2, latest year

Percent of population with household expenditures on health exceeding 10% of total household expenditure or income

Household expenditures >10% of total household expenditure | Household expenditures >25% of total household expenditure | Filter by WHO region | Help | Print

Map (mouse over country to display data)



Map disclaimer

The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement. The borders of the map provided reflect the current political geographic status as of the date of

Note

WHO and World Bank estimated values are based on standard definitions and methods to ensure cross-country comparability. Estimates are based on data availability for global monitoring which may not necessarily align with availability of data at national or regional levels as of July 2019.

Percent of population (%)

- < 3.00
- 3.00–4.99
- 5.00–9.99
- 10.00–14.99
- ≥15.00
- Not applicable

Source: Global database on financial protection assembled by WHO and the World Bank.

Population with household spending on health greater than 25% of total household budget (SDG 3.8.2, reported data) (%)

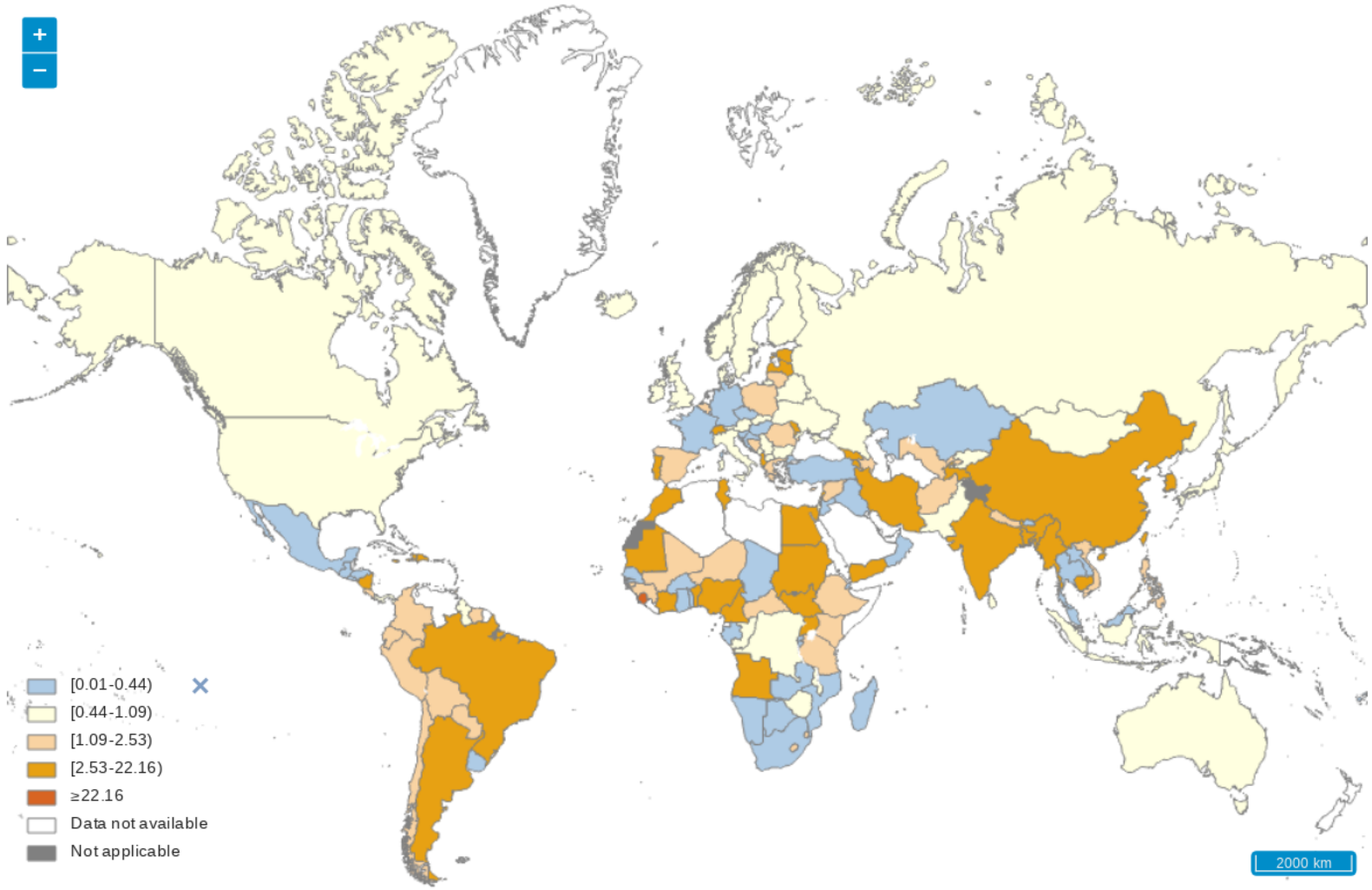
FILTERS

Year

Latest

Residence Area Type

Total



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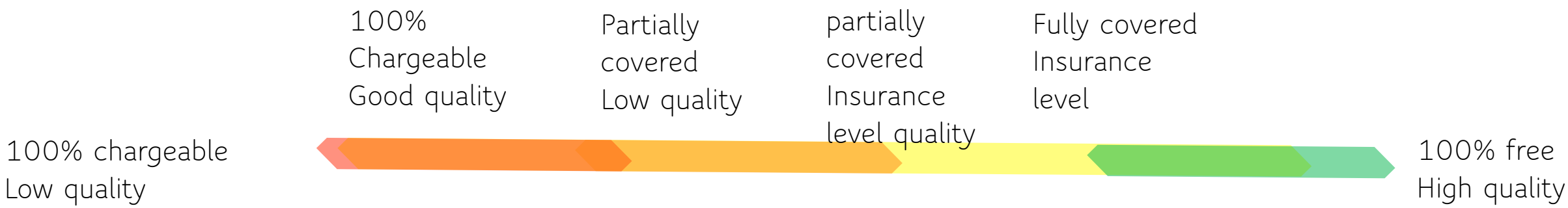
World Health Organization

Finance Spectrum




DENZEL WASHINGTON
Jusqu'où iriez-vous pour sauver votre enfant ?
JOHN Q.
UN FILM DE NICK CASSAVETES
ROBERT DUVALL JAMES WOODS
ANNE HECHE KIMBERLY ELISE
ET RAY LIOTTA
METROPOLITAN FILM & VIDEO
NEW LINE CINEMA
An AOL Time Warner Company
TF1 VIDEO

Or you simply die because you don’t know that the service you need exists

Examples

NHS UK, Tax funded, high quality 100% free at the point of care, non-profitable.

Follows strict rules in what to be done, who and where.

The rules are called the NHS constitution

Of course there are down sides to such systems, generally are low efficiency, long waiting times, and futility.

https://www.gov.uk/government/publications/the-nhs-constitution-for-england/the-nhs-constitution-for-england

Examples

Across the Atlantic in the USA, it is a money based system with a big bulk of it being profit making. So someone has to pay which is usually the employer via different insurance systems. But there are differences in levels of insurance and what you can get based on how much you earn/can afford. But still high quality care if you can afford it. There are a significant percentage of the population still not insured.

Such system has high quality and efficiency with good financial incentives for providers to work more and for companies to innovate, but seems to be not fair.

Examples

But in other parts of the world, you have to pay for healthcare, and even when you do you don't get the service you need or deserve.

Select a country

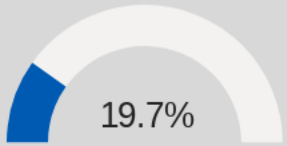
United Kingdom

HIGH INCOME

Socio-economic | Universal health coverage | Health spending | Pooling & IHR | PFM | Health taxes

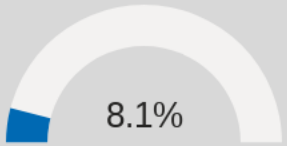
World Health Organization

GGHE-D % GGE (2019)



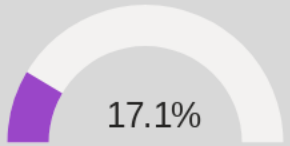
General government health expenditure: what priority is given to health in the budget?

GGHE-D % GDP (2019)



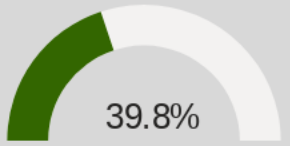
How significant is public spending on health within the economy as a whole?

OOPS % CHE (2019)



Out-of-pocket payments are often a major driver of financial hardship for patients.

PHC % CHE (2019)



What share of total health spending goes to primary health care?

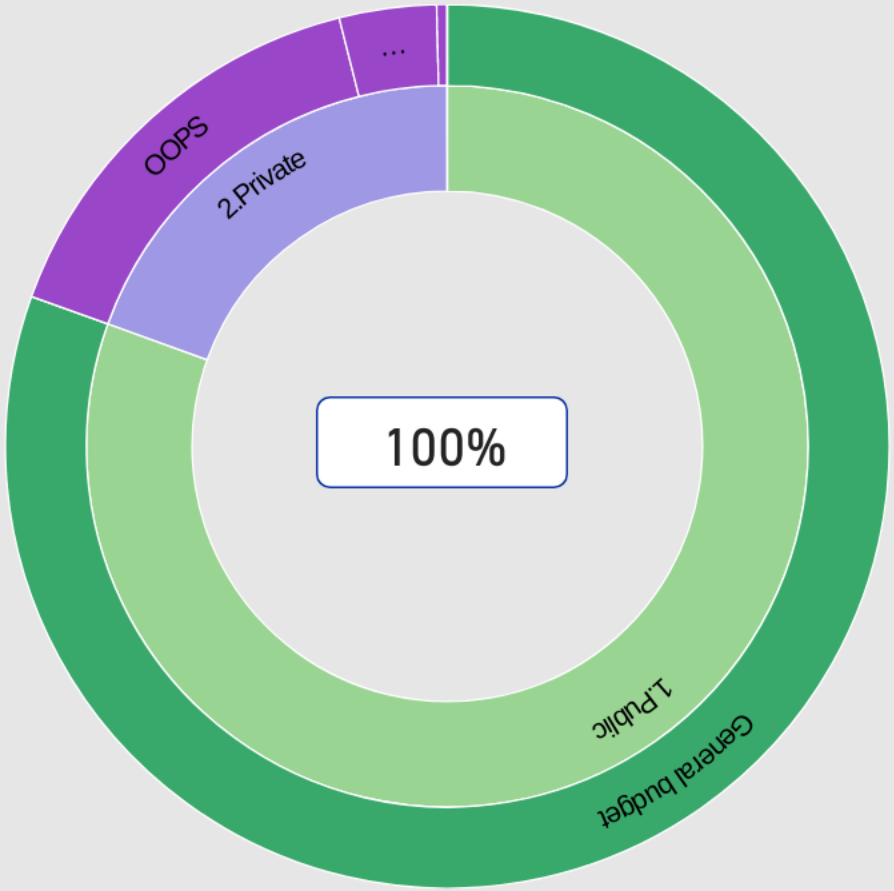
REVENUE SOURCES

SOURCE	VALUE 2019	INCOME GROUP (avg)	TREND LINE (click on chart)
Domestic public as % total health spending (GGHE-D%CHE)	79.5%	25.9%	
External as % total health spending (Ext%CHE)	0.0%	0.5%	
Private as % total health spending (private...%CHE)	20.5%	27.6%	

HEALTH EXPENDITURES

INDICATORS	VALUE 2019	INCOME GROUP (avg)	TREND LINE (click on chart)
a). Budget priority to health (GGHE-D%GGE)	19.7	13.8	
b). Public spending on health as % GDP (GGHE-D%GDP)	8.1	5.3	
c). Total health spending (CHE per capita USD)	4,312.9	3,007.3	
d). GGHE-D p.c (PPP)	4,042.8	2,592.7	

REVENUE SOURCES (disaggregated)



Select a country

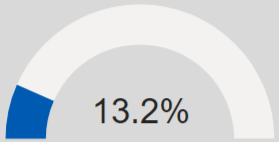
Italy

HIGH INCOME

Socio-economic | Universal health coverage | Health spending | Pooling & IHR | PFM | Health taxes

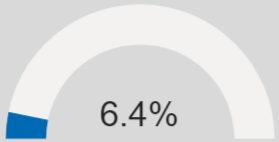
World Health Organization

GGHE-D % GGE (2019)



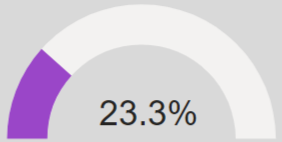
General government health expenditure: what priority is given to health in the budget?

GGHE-D % GDP (2019)



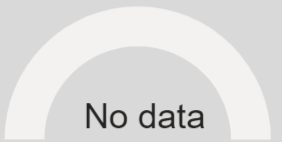
How significant is public spending on health within the economy as a whole?

OOPS % CHE (2019)



Out-of-pocket payments are often a major driver of financial hardship for patients.

PHC % CHE (No data)

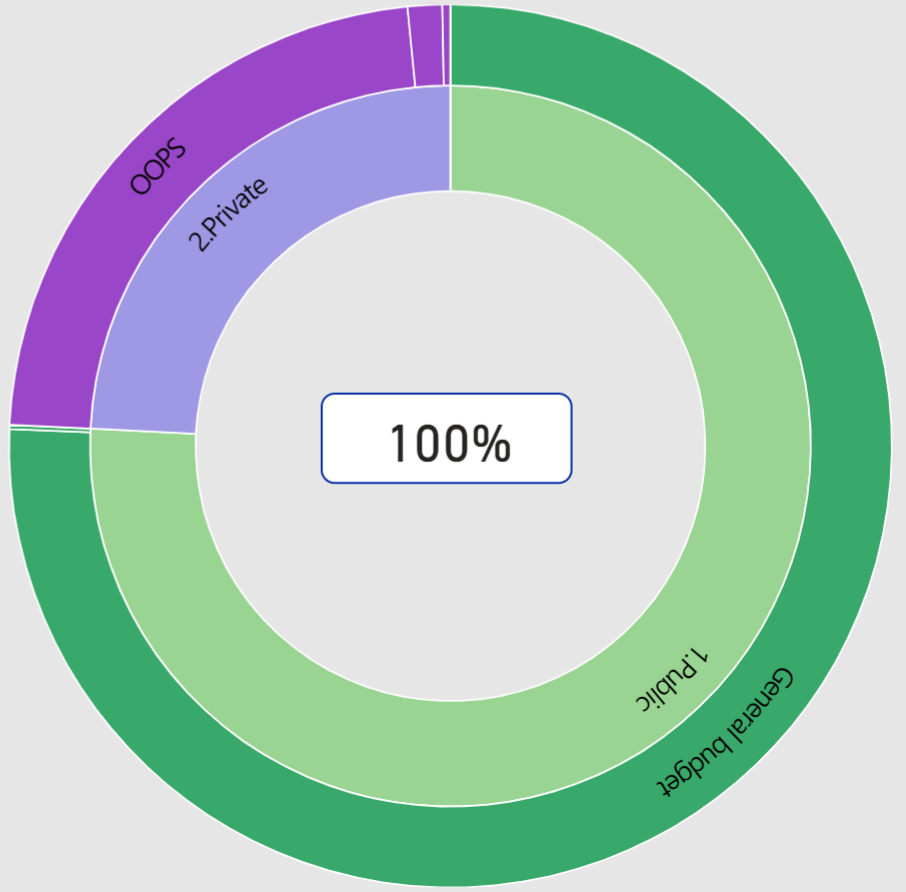


What share of total health spending goes to primary health care?

REVENUE SOURCES

SOURCE	VALUE 2019	INCOME GROUP (avg)	TREND LINE (click on chart)
Domestic public as % total health spending (GGHE-D%CHE)	73.9%	51.7%	
Private as % total health spending (private...%CHE)	26.1%	27.6%	

REVENUE SOURCES (disaggregated)



HEALTH EXPENDITURES

INDICATORS	VALUE 2019	INCOME GROUP (avg)	TREND LINE (click on chart)
a). Budget priority to health (GGHE-D%GGE)	13.2	13.8	
b). Public spending on health as % GDP (GGHE-D%GDP)	6.4	5.3	
c). Total health spending (CHE per capita USD)	2,905.5	3,007.3	
d). GGHE-D p.c (PPP)	2,955.3	2,592.7	

Select a country

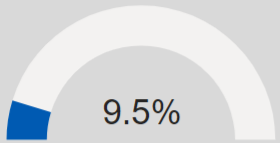
Turkey

UPPER MIDDLE INCO...

Socio-economic | Universal health coverage | Health spending | Pooling & IHR | PFM | Health taxes

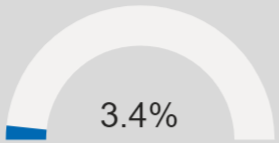
World Health Organization

GGHE-D % GGE (2019)



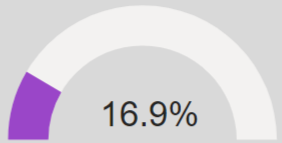
General government health expenditure: what priority is given to health in the budget?

GGHE-D % GDP (2019)



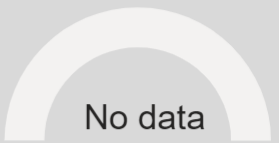
How significant is public spending on health within the economy as a whole?

OOPS % CHE (2019)



Out-of-pocket payments are often a major driver of financial hardship for patients.

PHC % CHE (No data)

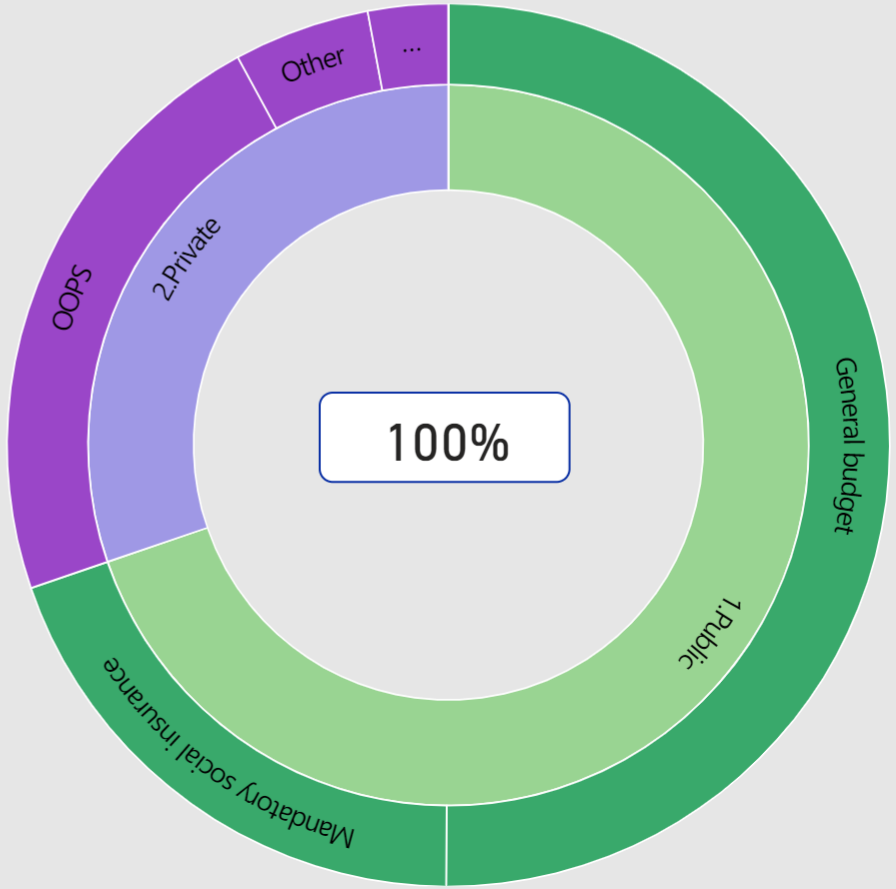


What share of total health spending goes to primary health care?

REVENUE SOURCES

SOURCE	VALUE 2019	INCOME GROUP (avg)	TREND LINE (click on chart)
Domestic public as % total health spending (GGHE-D%CHE)	77.9%	41.6%	
Private as % total health spending (private...%CHE)	22.1%	28.6%	

REVENUE SOURCES (disaggregated)



HEALTH EXPENDITURES

INDICATORS	VALUE 2019	INCOME GROUP (avg)	TREND LINE (click on chart)
a). Budget priority to health (GGHE-D%GGE)	9.5	11.9	
b). Public spending on health as % GDP (GGHE-D%GDP)	3.4	4.0	
c). Total health spending (CHE per capita USD)	396.5	482.7	
d). GGHE-D p.c (PPP)	924.7	605.3	

Select a country

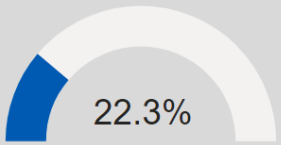
United States of ...

HIGH INCOME

Socio-economic | Universal health coverage | Health spending | Pooling & IHR | PFM | Health taxes

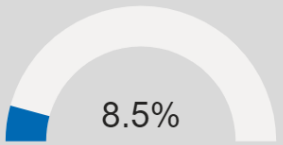
World Health Organization

GGHE-D % GGE (2019)



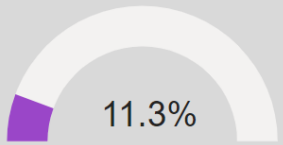
General government health expenditure: what priority is given to health in the budget?

GGHE-D % GDP (2019)



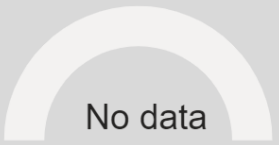
How significant is public spending on health within the economy as a whole?

OOPS % CHE (2019)



Out-of-pocket payments are often a major driver of financial hardship for patients.

PHC % CHE (No data)



What share of total health spending goes to primary health care?

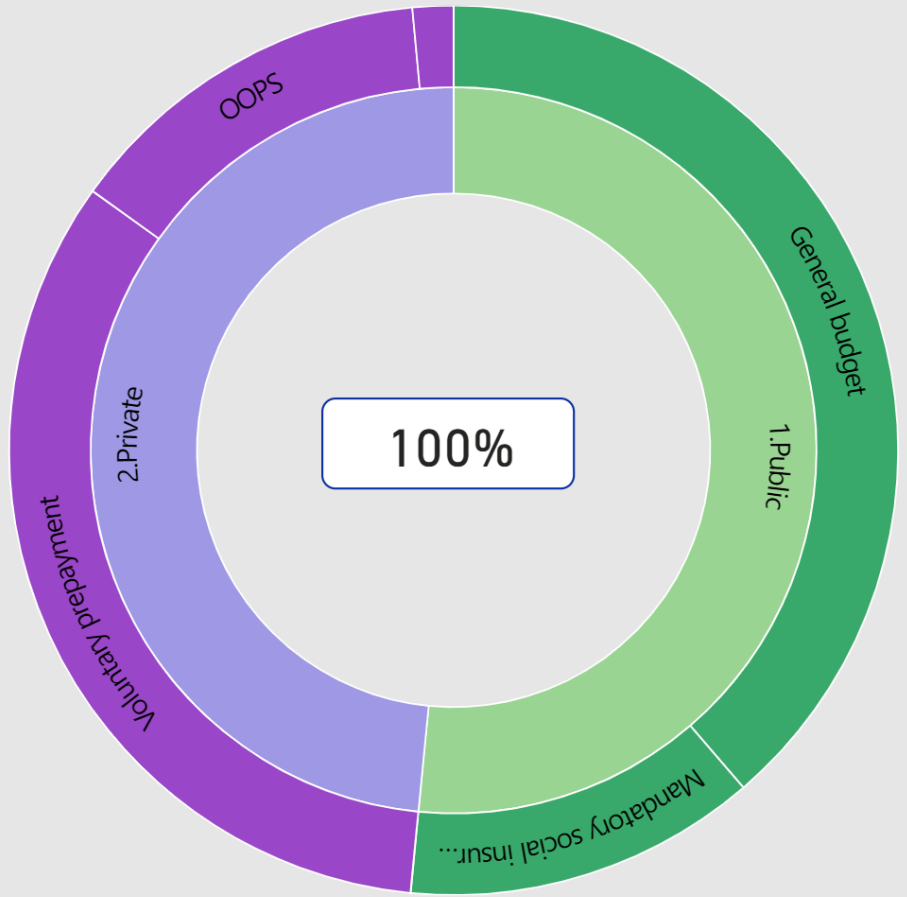
REVENUE SOURCES

SOURCE	VALUE 2019	INCOME GROUP (avg)	TREND LINE (click on chart)
Domestic public as % total health spending (GGHE-D%CHE)	82.7%	77.6%	
Private as % total health spending (private...%CHE)	17.3%	20.7%	

HEALTH EXPENDITURES

INDICATORS	VALUE 2019	INCOME GROUP (avg)	TREND LINE (click on chart)
a). Budget priority to health (GGHE-D%GGE)	22.3	13.8	
b). Public spending on health as % GDP (GGHE-D%GDP)	8.5	5.3	
c). Total health spending (CHE per capita USD)	10,921.0	3,007.3	
d). GGHE-D p.c (PPP)	5,552.6	2,592.7	

REVENUE SOURCES (disaggregated)



Select a country

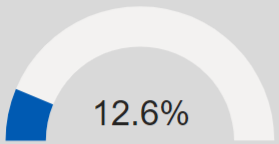
Tunisia

LOWER MIDDLE INCO...

Socio-economic | Universal health coverage | Health spending | Pooling & IHR | PFM | Health taxes

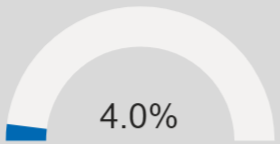
World Health Organization

GGHE-D % GGE (2019)



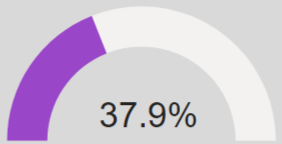
General government health expenditure: what priority is given to health in the budget?

GGHE-D % GDP (2019)



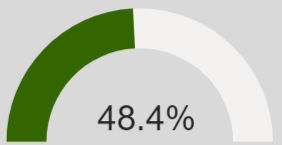
How significant is public spending on health within the economy as a whole?

OOPS % CHE (2019)



Out-of-pocket payments are often a major driver of financial hardship for patients.

PHC % CHE (2018)



What share of total health spending goes to primary health care?

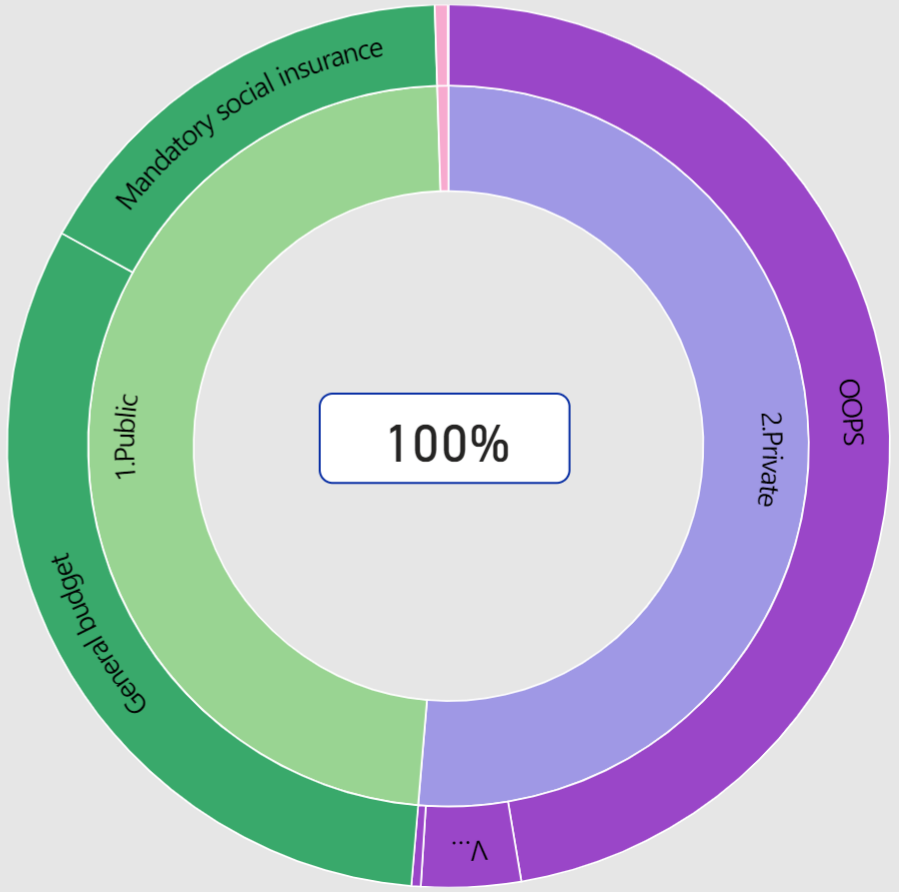
REVENUE SOURCES

SOURCE	VALUE 2019	INCOME GROUP (avg)	TREND LINE (click on chart)
Domestic public as % total health spending (GGHE-D%CHE)	57.1%	32.0%	
External as % total health spending (Ext%CHE)	0.4%	14.1%	
Private as % total health spending (private...%CHE)	42.5%	45.4%	

HEALTH EXPENDITURES

INDICATORS	VALUE 2019	INCOME GROUP (avg)	TREND LINE (click on chart)
a). Budget priority to health (GGHE-D%GGE)	12.6	7.4	
b). Public spending on health as % GDP (GGHE-D%GDP)	4.0	2.3	
c). Total health spending (CHE per capita USD)	233.1	123.8	
d). GGHE-D p.c (PPP)	450.9	152.6	

REVENUE SOURCES (disaggregated)



Select a country

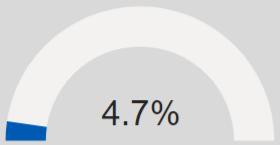
Egypt

LOWER MIDDLE INCO...

Socio-economic | Universal health coverage | Health spending | Pooling & IHR | PFM | Health taxes

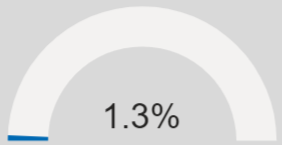
World Health Organization

GGHE-D % GGE (2019)



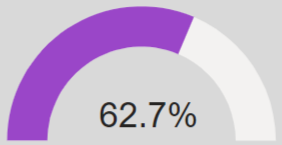
General government health expenditure: what priority is given to health in the budget?

GGHE-D % GDP (2019)



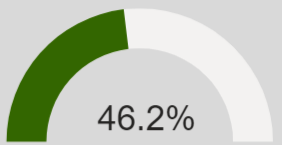
How significant is public spending on health within the economy as a whole?

OOPS % CHE (2019)



Out-of-pocket payments are often a major driver of financial hardship for patients.

PHC % CHE (2018)



What share of total health spending goes to primary health care?

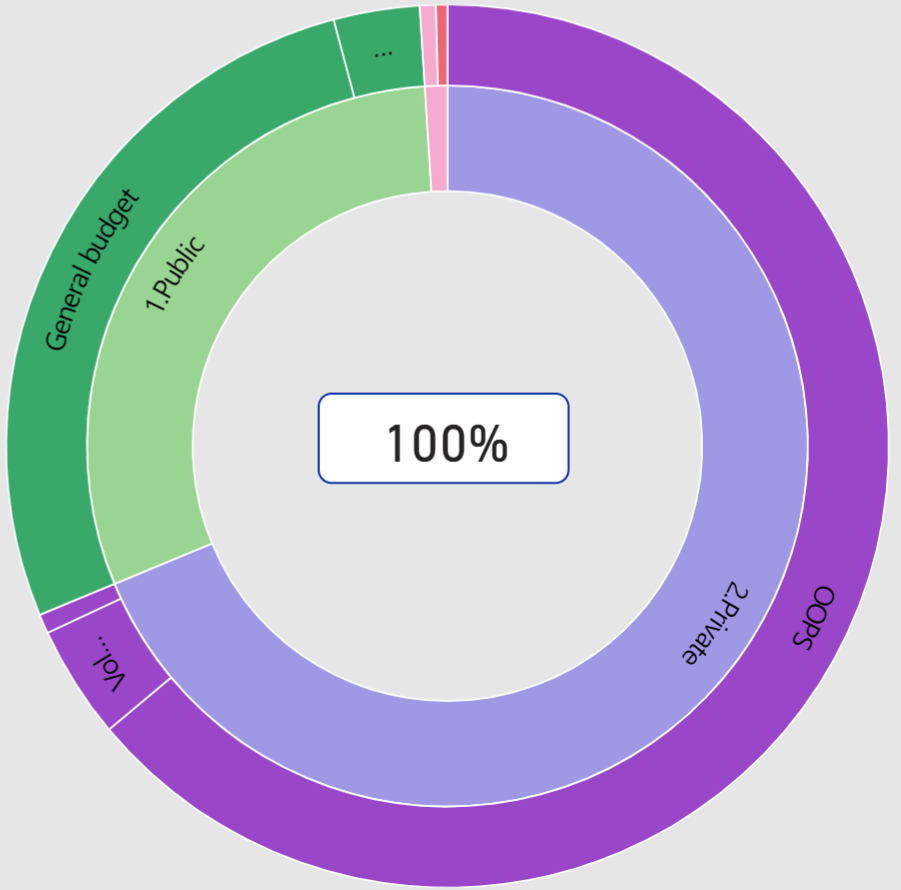
REVENUE SOURCES

SOURCE	VALUE 2019	INCOME GROUP (avg)	TREND LINE (click on chart)
Domestic public as % total health spending (GGHE-D%CHE)	27.8%	32.0%	
External as % total health spending (Ext%CHE)	1.1%	14.1%	
Private as % total health spending (private...%CHE)	71.2%	45.4%	

HEALTH EXPENDITURES

INDICATORS	VALUE 2019	INCOME GROUP (avg)	TREND LINE (click on chart)
a). Budget priority to health (GGHE-D%GGE)	4.7	7.4	
b). Public spending on health as % GDP (GGHE-D%GDP)	1.3	2.3	
c). Total health spending (CHE per capita USD)	149.8	123.8	
d). GGHE-D p.c (PPP)	161.8	152.6	

REVENUE SOURCES (disaggregated)



Select a country

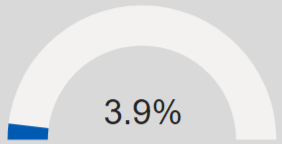
Afghanistan

LOW INCOME

Socio-economic | Universal health coverage | Health spending | Pooling & IHR | PFM | Health taxes

World Health Organization

GGHE-D % GGE (2019)



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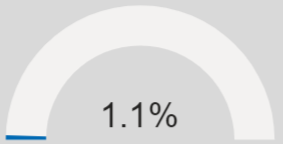

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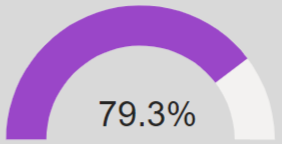
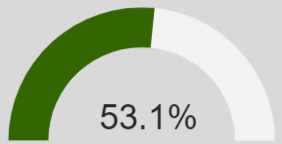


Out-of-pocket payments are often a major driver of financial hardship for patients.

PHC % CHE (2019)

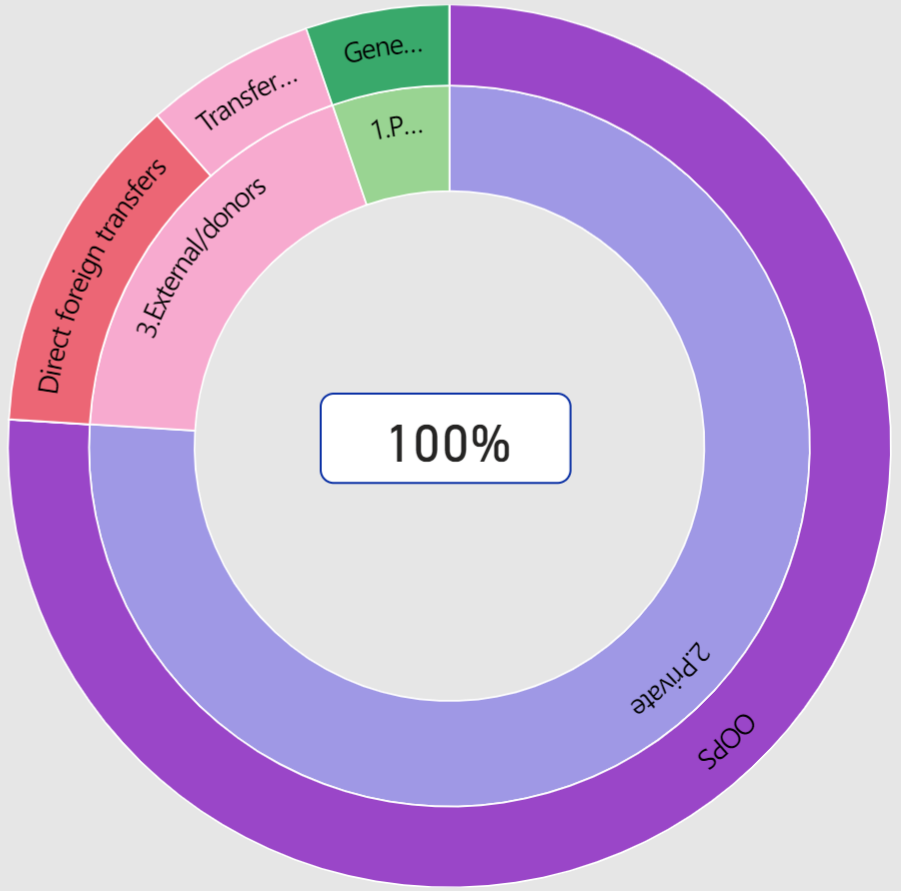


What share of total health spending goes to primary health care?

REVENUE SOURCES

SOURCE	VALUE 2019	INCOME GROUP (avg)	TREND LINE (click on chart)
Domestic public as % total health spending (GGHE-D%CHE)	8.2%	7.7%	
External as % total health spending (Ext%CHE)	12.4%	28.9%	
Private as % total health spending (private...%CHE)	79.4%	25.1%	

REVENUE SOURCES (disaggregated)



HEALTH EXPENDITURES

INDICATORS	VALUE 2019	INCOME GROUP (avg)	TREND LINE (click on chart)
a). Budget priority to health (GGHE-D%GGE)	3.9	5.6	
b). Public spending on health as % GDP (GGHE-D%GDP)	1.1	1.3	
c). Total health spending (CHE per capita USD)	65.8	39.2	
d). GGHE-D p.c (PPP)	23.4	24.7	

Finance and Covid / Disaster

- What immediate spending actions can be taken with existing budgets?
- How can the necessary budget for the COVID-19 response be secured through revisions to finance laws?
- What can be done to accelerate budget execution and funds release to frontline services?
- What is the best way to ensure rapid access to COVID-19 services for all those who need it, irrespective of ability to pay?
- How can the core of the health system be strengthened even as the immediate response takes priority?

Health financing is a core function of health systems that can enable progress towards universal health coverage by improving effective service coverage and financial protection. Today, millions of people do not access services due to the cost. Many others receive poor quality of services even when they pay out-of-pocket. Carefully designed and implemented health financing policies can help to address these issues. For example, contracting and payment arrangements can incentivize care coordination and improved quality of care; sufficient and timely disbursement of funds to providers can help to ensure adequate staffing and medicines to treat patients.

WHO's approach to health financing focuses on core functions:

- revenue raising (sources of funds, including government budgets, compulsory or voluntary prepaid insurance schemes, direct out-of-pocket payments by users, and external aid)
- pooling of funds (the accumulation of prepaid funds on behalf of some or all of the population)
- purchasing of services (the payment or allocation of resources to health service providers)

In addition, all countries have policies on which services the population is entitled to, even if not explicitly stated by government; by extension those services not covered, are usually paid for by patients (sometimes called co-payments).

In Practice

Health financing reforms cannot simply be imported from one country to another given the unique context of each country and its starting point in terms of health financing arrangements; the underlying causes of performance problems differ in each country and it is these causes which the reforms proposed in a health financing strategy must address.

However, there are lessons from international experience that allow a number of guiding principles for reforms which support progress towards UHC, to be specified. These do not constitute a “how-to” guide, but rather a set of “signposts” that can be used to check whether reform strategies (and more importantly, reform implementation) create an appropriate incentive environment and hence are pointing and moving in the right direction in terms of objectives and goals.

The guiding principles can be summarized as:

- moving towards predominant reliance on public funding sources
- reducing fragmentation in how funds are pooled or mitigating the consequences
- moving towards more strategic purchasing of health services, linking provider payments to data on their performance, and to the health needs of the populations they serve
- aligning coverage policies (benefits and copayments) explicitly with policy objectives.

Care Provision

Care provision

- The different models show different levels of involvement from both public and private sectors, each has their problems.

- public funded systems don't seems to be very efficient for obvious reasons. Mainly because they are not designed to make profit. They will swallow any amount of fund thrown into them and will always need more, but they tend to focus on patient care and effectiveness.

- Private systems are efficient to make profit, on the expense of patient care/needs.

- Mixed systems with insurance based fund are still money making businesses. So, profit will come first before patient care and needs.

- So, it makes more sense that when it comes for a disaster, public systems will be more resilient because of the baseline low efficiency, and the ability to provide care for patients who don't pay.

Standards of Care

This is a very difficult topic, but everyone who was involved in the management of Covid when it started will understand this and how it might affect the resilience and the outcome.

To explain the standards

I will use the NHS, NICE (national institute for health and care excellence) and compare it quickly to what happened around the world.

- When it all started, the management of critically ill Covid patients in the NHS remained as the standard management of any critically ill patient because there was no evidence to support any specific treatment for Covid.
- Different medications started to be promoted as potential treatments for Covid, but non of these were approved for use in the UK for lack of evidence. The development of evidence needs investment, research and time, so, in the UK the use of any medication was limited to research purposes with patients' consent. And later most of those treatment were proven to be not effective at all.
- That allowed the fund to go towards proper research and effective healthcare.

- In other systems where there were no standards or effective regulatory authorities, the clinicians tried every single medication, intervention, and rumour on their patients without consent or supporting evidence. That was without following the scientific research protocols or even data collection.
- That was made easy because the patients were paying for it (OOP) without knowing that these interventions/medications are not effective. There was no insurance company to investigate where the money is going, or a public fund source to allocate the fund effectively.
- 2 obvious examples are the HCQ and the Convalescent plasma which were sold in black market swallowing millions of Dollars and efforts once rumours were out that they are effective. Later it was proven that neither were.

So, if we take an example of an X healthcare system looking after 50 M people

- 20% of the population were diagnosed with Covid since the pandemic started (adopted from UK numbers) that means 10M
- Inappropriate interventions were done for them including unnecessary blood tests, CT scans, Abx, Antifungals, Antivirals, Anti-something else, Steroids, Anticoagulants, plasma, etc… with average cost of $1000 per patient
- The fund wasted on futile/ ineffective/ unnecessary interventions ~ $10 Billion in that system
- That fund could have been used in a much better and effective way to fight the pandemic

Workforce

Workforce

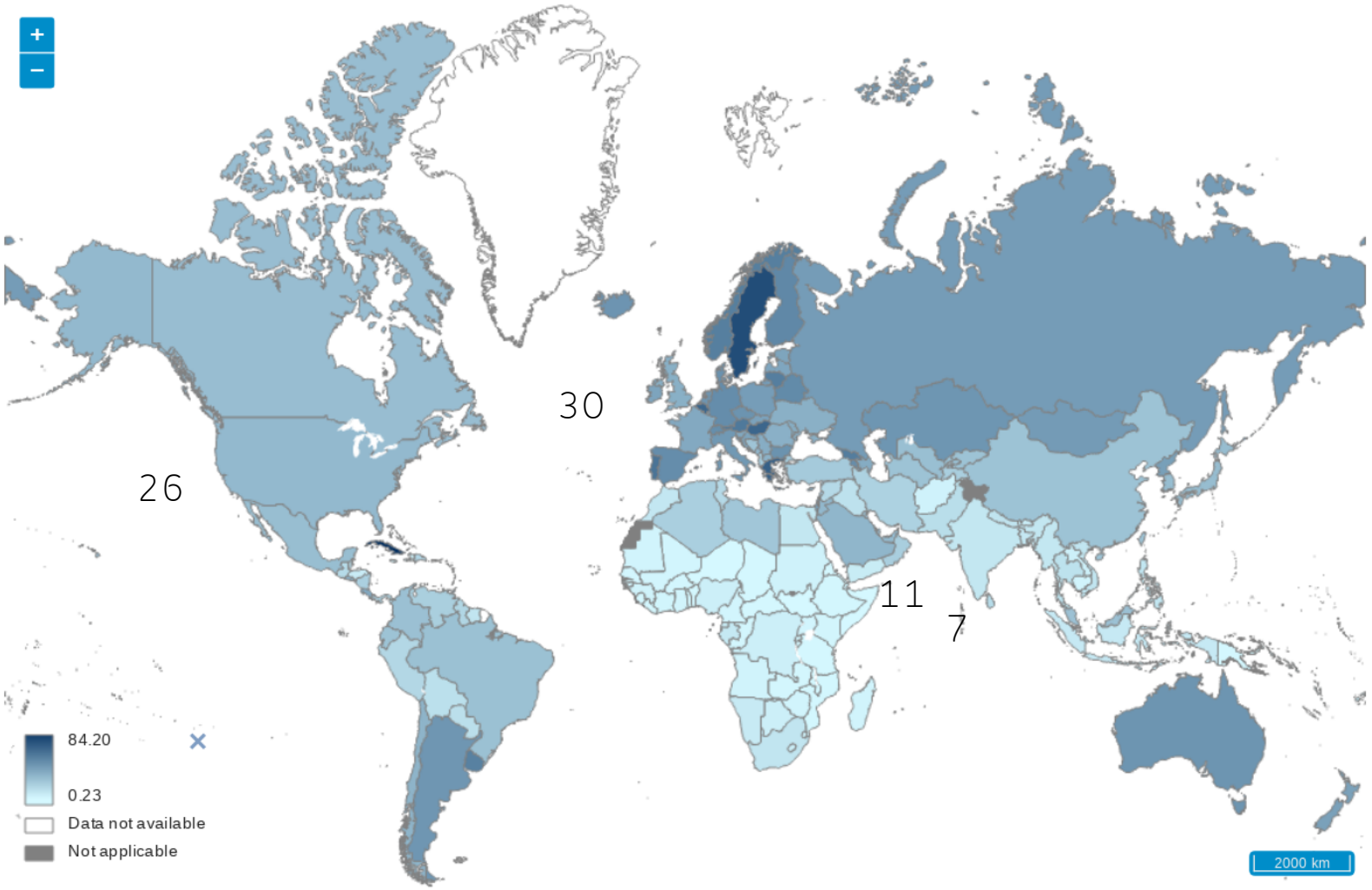
- Which is a big problem in terms of numbers, training and skill mix
- It is a huge ethical problem as well, since the so called first world health care systems (high income countries) relies mostly on professionals imported from the so called third world countries (low income countries) especially in times like this leaving low income countries even more deprived from professionals who they have educated and trained.
- Another solution being tried is the service fragmentation to avoid relying on highly skilled professionals who need a lot of qualifications and long time to train, and both are expensive. The downside of that solution is reduced skill mix which might lead to lower resilience.
- Healthcare professionals are just like normal people, they get sick, stressed and burntout

Medical doctors (per 10,000)

FILTERS

Year

Latest



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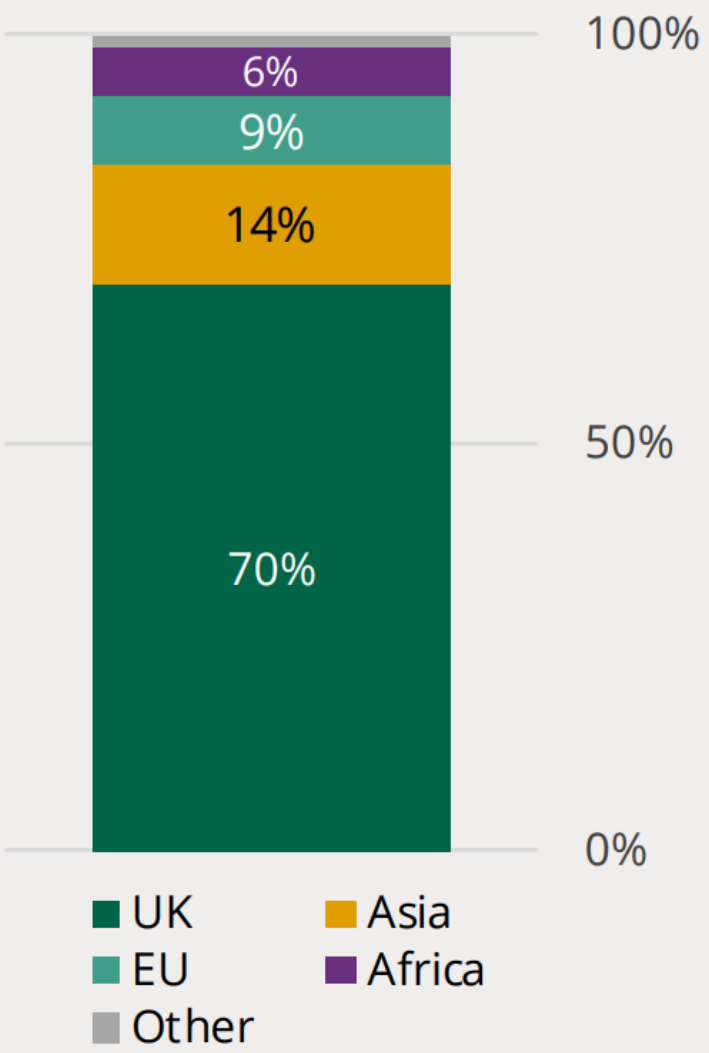
World Health Organization

House of Commons Library

Nationality of hospital doctors

England, March 2021, headcount basis

British	90,204
Indian	8,425
Pakistani	3,650
Egyptian	2,792
Irish	2,382
Nigerian	2,206
Malaysian	1,874
Greek	1,637
Italian	1,115
Sudanese	933
Sri Lankan	903
German	848



Of every 1,000 NHS staff in England...

- ...854 are British
- ...58 are Asian
- ...54 are from the EU
- ...25 are African
- ...9 are from somewhere else

These figures vary substantially across England. In London, 107 of every 1,000 staff (10.7%) are from the EU.

Most common nationalities of NHS staff

	UK/British	1,118,116		**Spanish**	5,405
	Indian	32,117		**Romanian**	5,251
	Filipino	25,423		**Pakistani**	4,902
	Irish	14,151		**Zimbabwean**	4,780
	Polish	10,520		**Ghanaian**	3,395
	Nigerian	10,494		**Greek**	3,348
	Portuguese	7,831		**Egyptian**	2,895
	Italian	6,660		**Malaysian**	2,581

EU Nationals in different NHS staff groups

Category	*Number*	*% of staff group*
ALL STAFF	70,660	5.4%
Nurses and Health Visitors	18,936	5.8%
Clinical Support Staff	18,849	4.5%
Hospital Doctors	11,206	8.7%
Infrastructure support	10,017	4.8%
Scientific, Therapeutic and Technical	9,982	5.8%

Non-EU nationals in different NHS staff groups

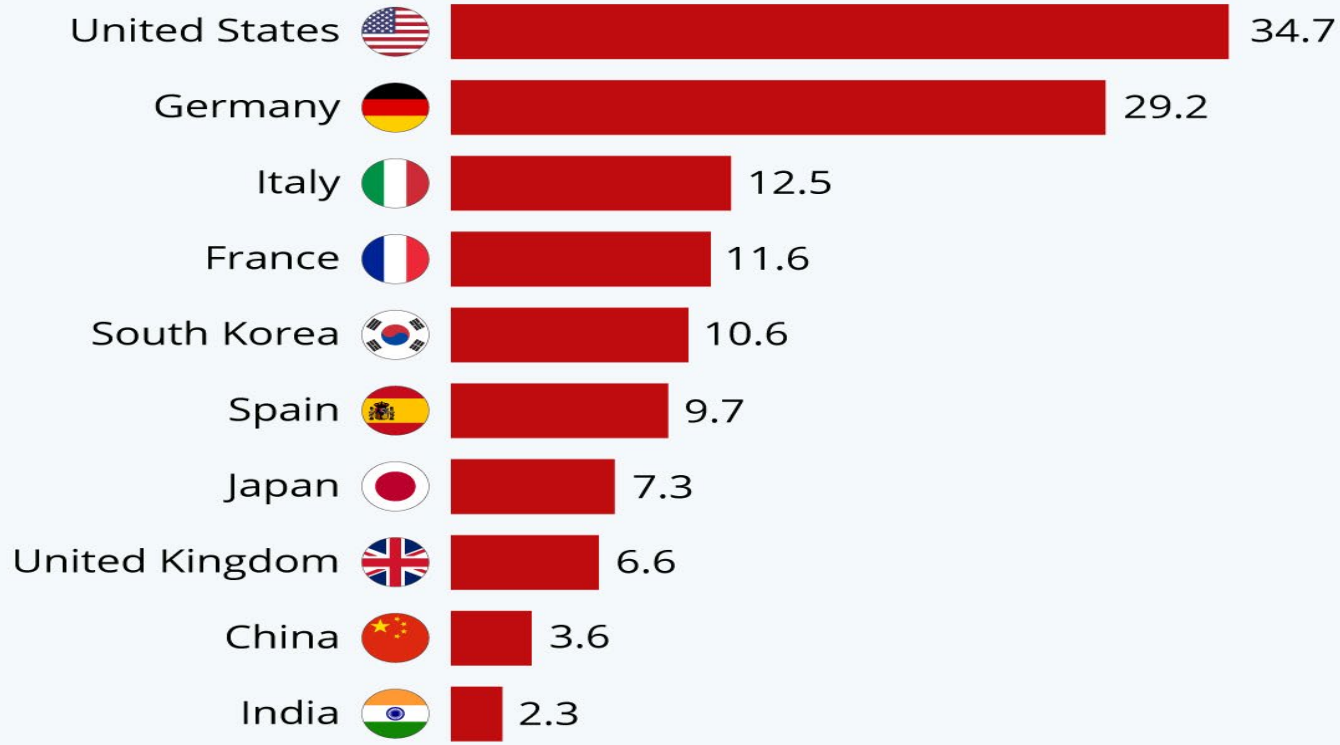
Category	*Number*	*% of staff gro*
ALL STAFF	119,911	9.2%
Nurses and Health Visitors	46,670	13.8%
Hospital Doctors	28,039	21.7%
Clinical Support Staff	27,035	6.5%
Infrastructure Support	8,668	4.2%
Scientific, Therapeutic and Technical	7,811	4.6%

Infrastructure

THIS IS ANOTHER MASSIVE CHALLENGE RELATED TO ALL THE PREVIOUS CHALLENGES

The Countries With The Most Critical Care Beds Per Capita

Total number of critical care beds
per 100,000 inhabitants in selected countries*



* Most recent U.S. and EU data from 2009 and 2012 respectively.
Asian data is from 2017.

Sources: National Center for Biotechnology Information, Intensive Care Medicine (journal), Critical Care Medicine (journal)

- When more ICU beds were needed, we didn’t have the capacity to accommodate.
- Hospitals were over stretched.
- Essential surgeries and interventions were cancelled to MANAGE THE DISASTER
- Field hospitals were tried, but again staff shortage and funding control that solution

- So when we look back on how we did in managing the pandemic we have to look for other things more than patients who were directly affected by the disease. We have to look for those who didn't have their cancer treated because the hospitals were too busy managing the pandemic patients, those who lost their vision from delayed eye operations, those who waited months for diagnostic tests, all of those who are considered to be collateral damage.
- We also have to look into the huge backlog and waiting lists after the pandemic and strategies to get it done.
- And finally the staff shortage from exhaustion and burnout.

To summarise

I am not providing solutions or pretending that we succeeded globally in managing a disaster, we are still far from that. This talk was just for brainstorming and sharing challenges that we need to deal with.

There are huge discrepancies and gaps between the countries of this world in their healthcare systems and minimal standards of healthcare provision. That need to be sorted as a first step in the journey of disaster mitigation planning. If we can't function when there is no disaster, we have no hope when disasters come.

Buildings, machines, and people will always be problems for healthcare, but it seems that money can solve all the problems when it exists. So, funding will always be THE PROBLEM. Money talks….

Thank you