Care transformations needed: an international policy perspective

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About me

- Prof. Health systems and finance, Radboud University Medical School & Global lead health policy, Royal Philips
- Side functions: Supervisory board Dutch guarantee fund healthcare, Associate editor Health Policy, Chair selection committee Dutch Harkness fellow Commonwealth Fund
- Team lead strategy and science officer Ministry of Health (2010-2016)
- International consultancies: OECD, EU, WHO, ADB, Finland, Austria, Switzerland, Cyprus, Aruba, Georgia, Armenia, South-Korea
- Academic: 100+ peer reviewed papers, co-authored 5 books
- Topics: political economy of health system (reform), healthcare finance, comparative health systems, for-profit delivery models, hospitals, mental health, administrative expenses, multimorbidity, tertiary care
- Education: public policy and health economics (Msc. and Ph.D)

Main messages

- Care transformation is urgent (top-3 topic): costs, worker shortages, environmental pressure, planetary health etc.
- Mechanisms successful policy: increase high value care, reduce low value care & reduce price.
- Substantial barriers: persistent system varieties and resistance through a political economy of healthcare.
- Higher labor productivity prerequisite to solve increasing labor shortages
- Better embeddedness diagnostic systems in broader health systems to gain more appropriate care
- Governance challenge: ‘ending’ incremental adjustments by explicit policy choices

Agenda

1. Waves of health reform

2. Transformation

3. Varieties in systems

4. Political economy

5. Higher labor productivity

6. Stronger diagnostics

7. Explicit policy choices

1. Waves of Health System Reform

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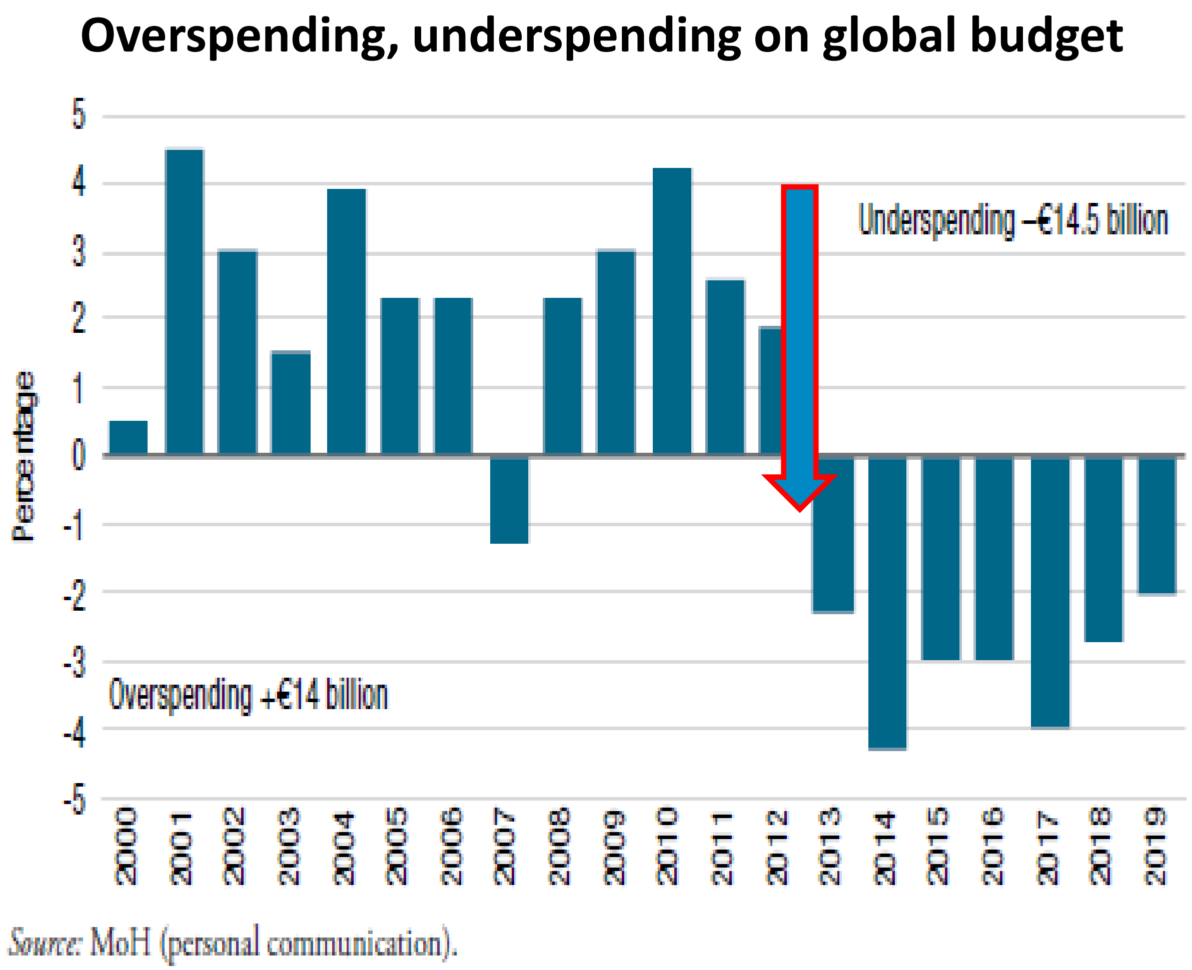
From waves of health system reform towards transformation of care

	Goal	Policy instruments
(**1**) 1945 …	Universal coverage and equal access	NHS, (social) insurance
(**2**) 1970 …	Controls, rationing and expenditure caps	certificate-of-need (capital investments), global budgets, prospective payment (drg's)
(**3**) 1990 …	Incentives and competition	managed/regulated competition, privatization, active purchasing
(**4**) 2010 …	Nudging professionals to 'appropriate' care (NCD's)	EBM, guidelines, prevention, AI, high value care, digital, alternative payment models, intelligence (self-management & monitoring) and (timely) diagnostics, choosing wisely

Source (1) – (2) – (3): Cutler, 2002,
Journal of Economic Literature

Netherlands: 3rd (competition) to 4th (care transformation) wave



Source, Jeurissen and Maarse, 2021

Fiscal Policies (2012):

- Ending insurer risk equalization and underwriting
- Sectoral covenants with fiscal ceiling
- Increasing deductible

But: trade-off with access / quality-of-care exists

4th wave: Integral covenant appropriate care (2022)

- value-based, shared decision making, right-care-at-the-right-place, prevention, worker satisfaction
- 2.8 billion euro transition fund

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2. In need for care transformation (financial perspective)

JAMA | Special Communication

Health Care Spending in the United States and Other High-Income Countries

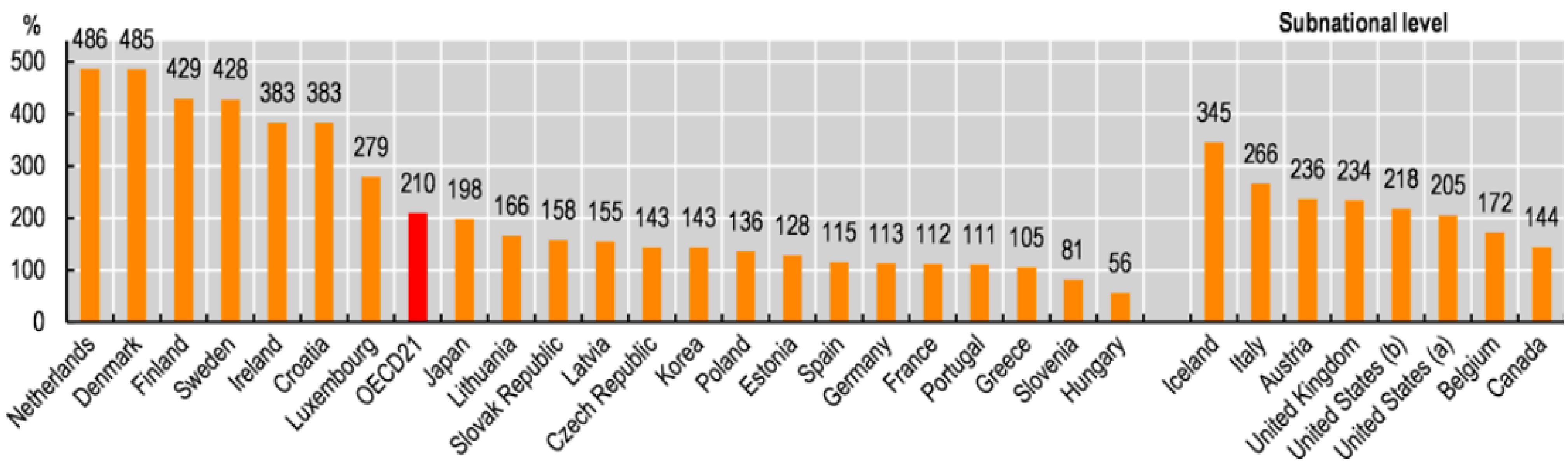
Irene Papanicolas, PhD; Liana R. Woskie, MSc; Ashish K. Jha, MD, MPH

IMPORTANCE Health care spending in the United States is a major concern and is higher than in other high-income countries, but there is little evidence that efforts to reform US health care delivery have had a meaningful influence on controlling health care spending and costs.

Major cost-drivers in need for solutions

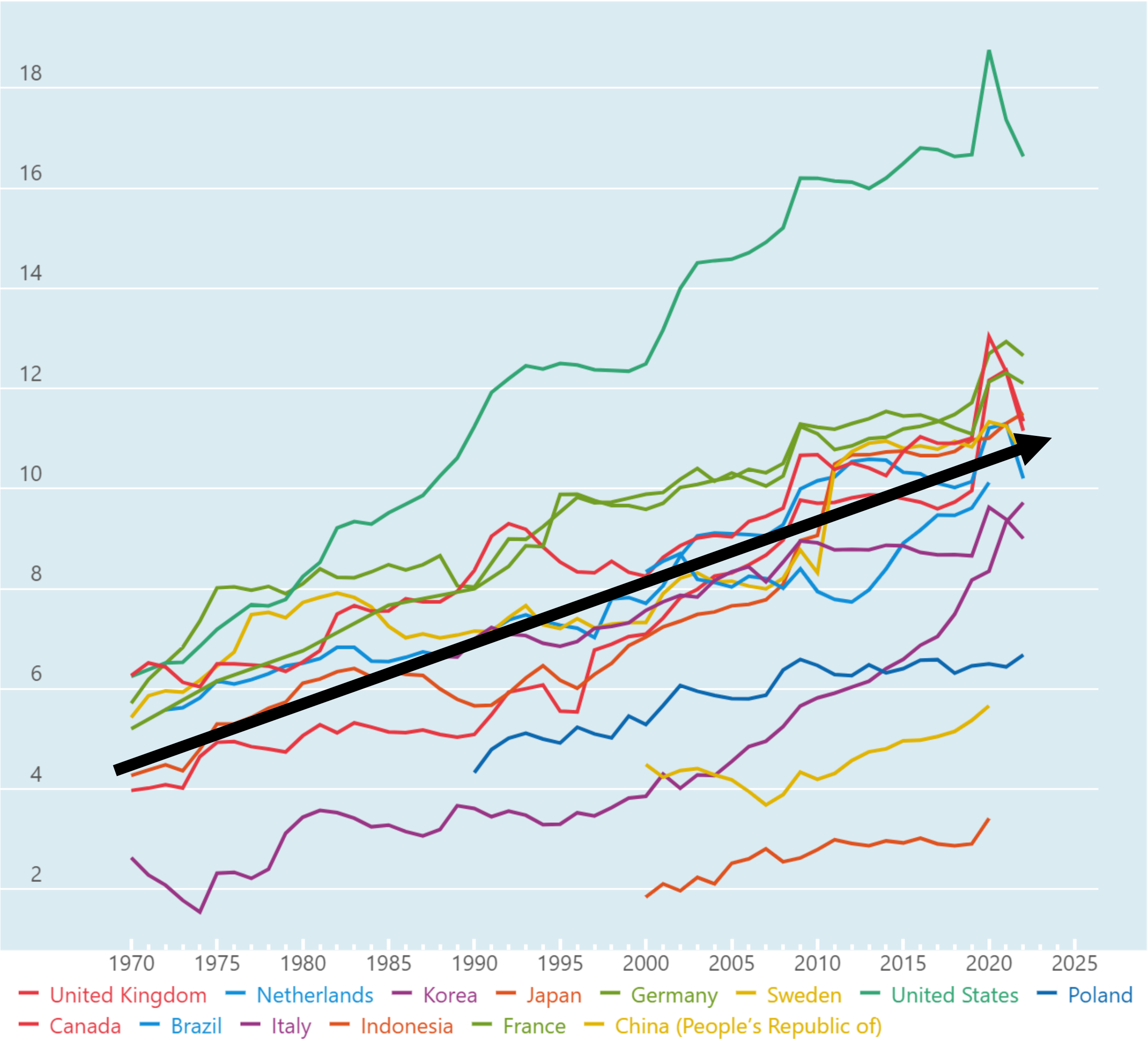
- Labor: long-term care
- Multi-morbidities (NCDs): (exponential) growth
- Increasing complexity & fragmentation: administrative burden
- Tertiary care: big hospitals, expensive pharmaceuticals
- Safety: complications major surgeries
- Additional technologies (few substitutions)
- Policy: unanticipated effects increase costs

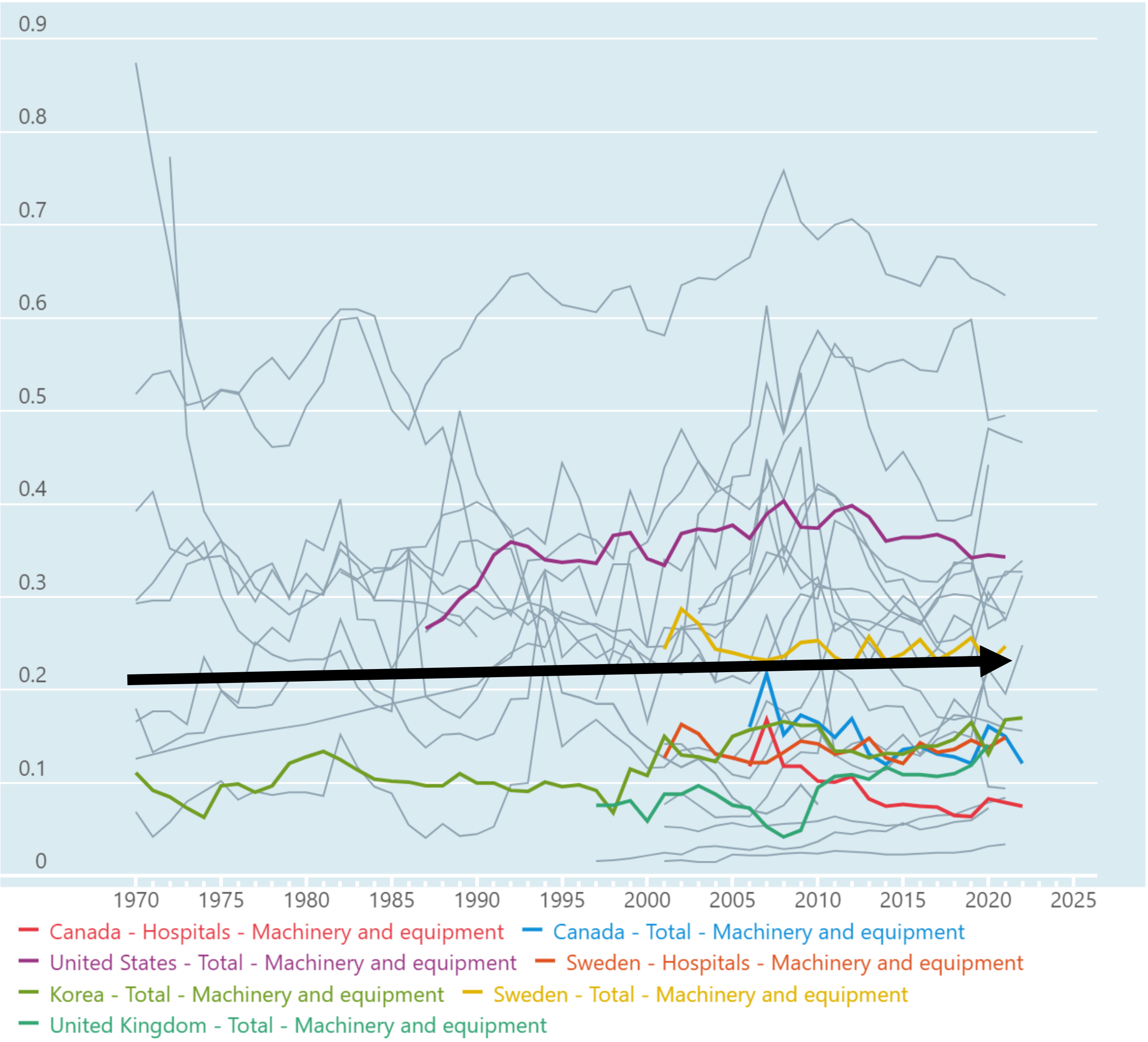
Cost of institutional LTC (65+ with severe needs), as share median income, 2022



Source: OECD, Health at a Glance, 2023

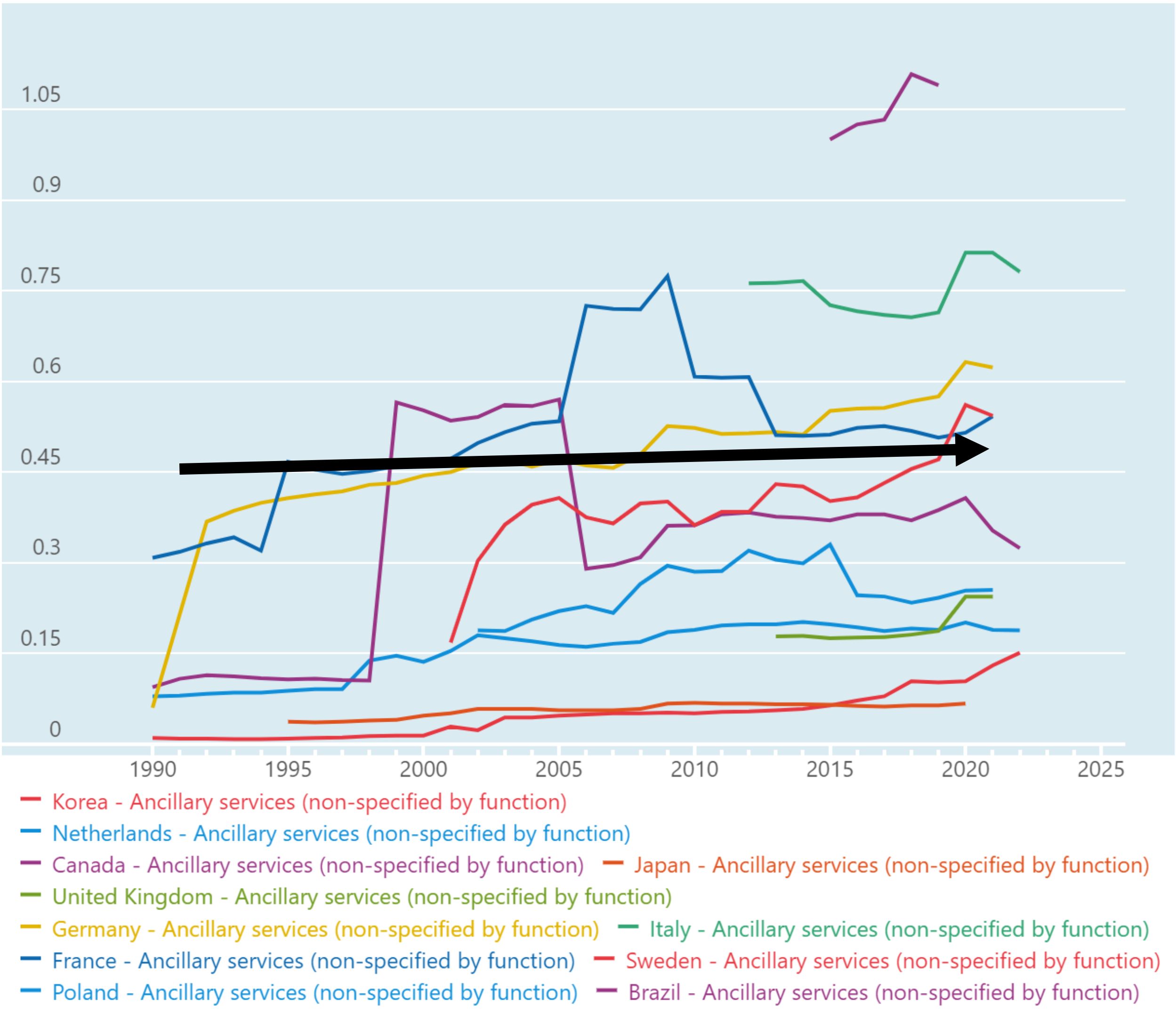
Growing expenses (% GDP) Medical equipment (% GDP)





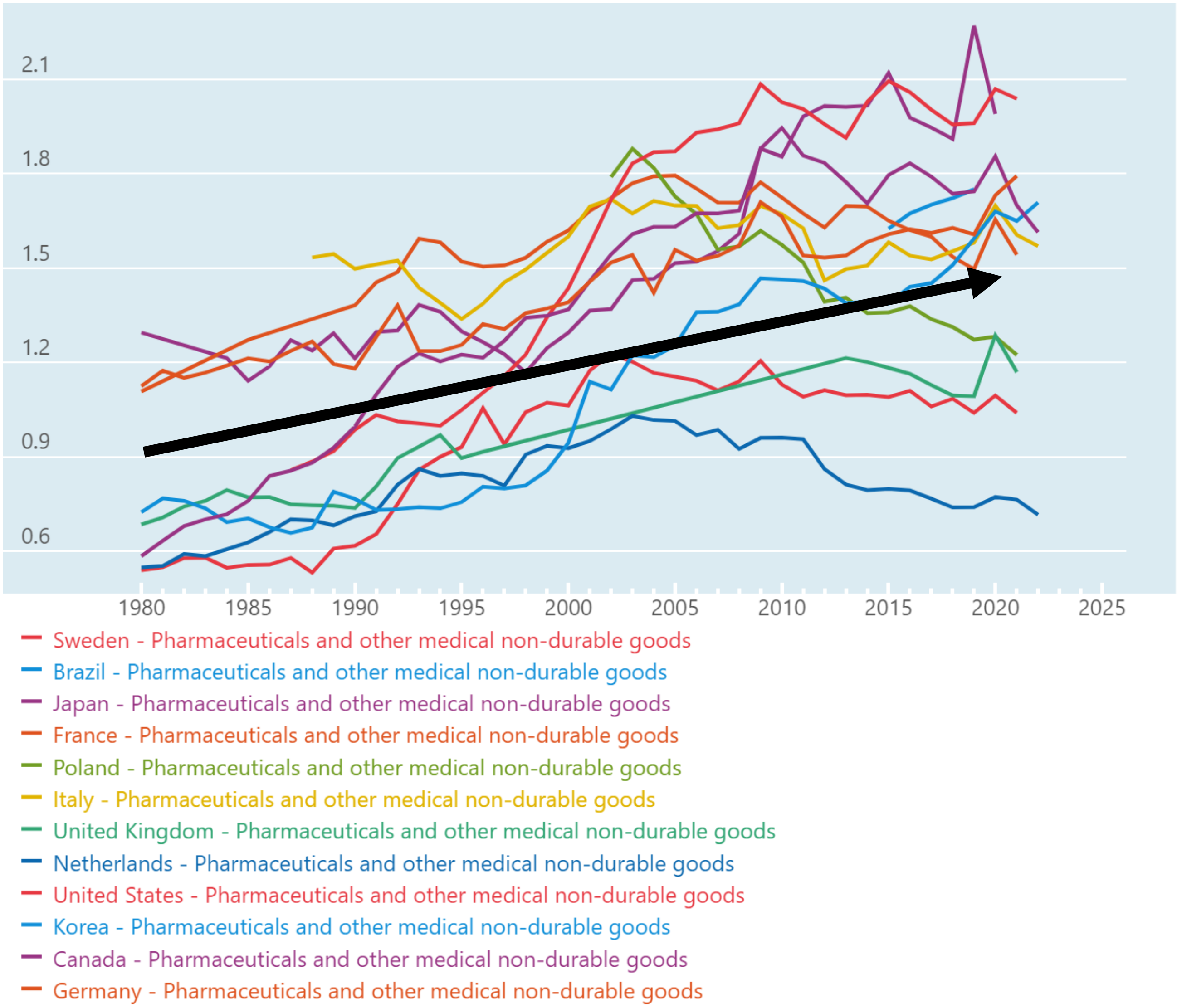
Source: OECD, 2024

Ancillary services (% GDP)



Source: OECD, 2024

Pharmaceuticals (% GDP)



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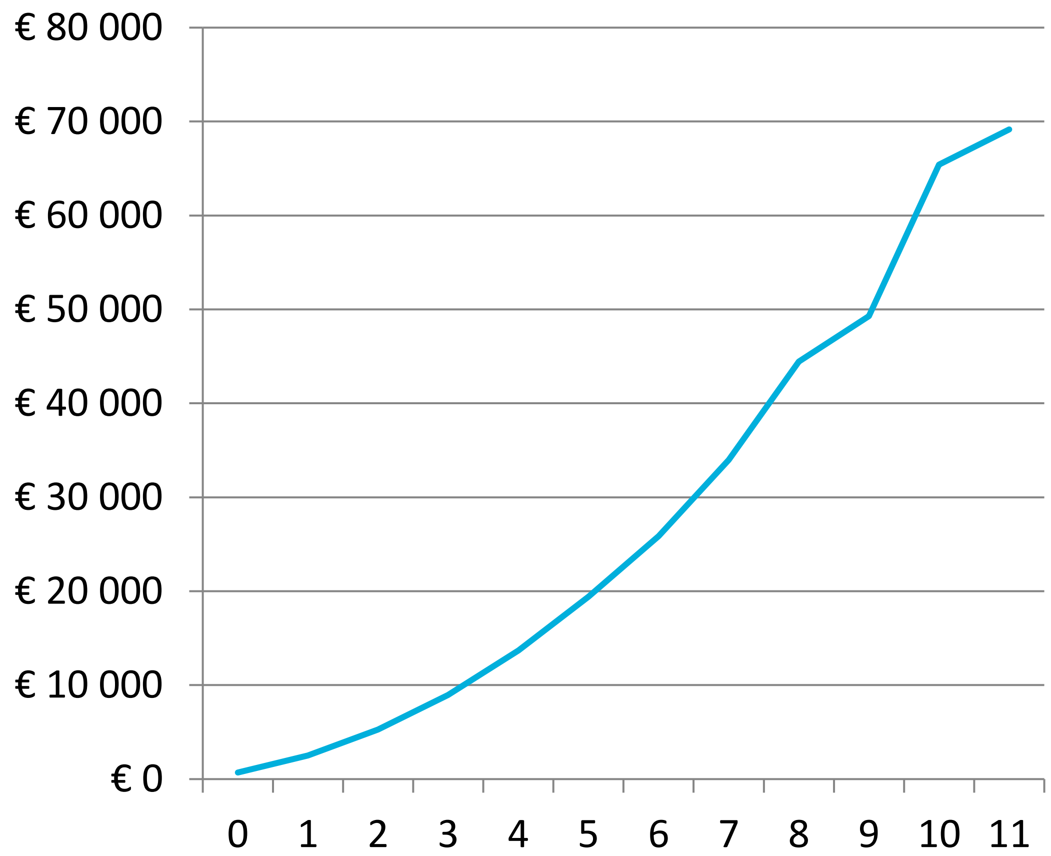
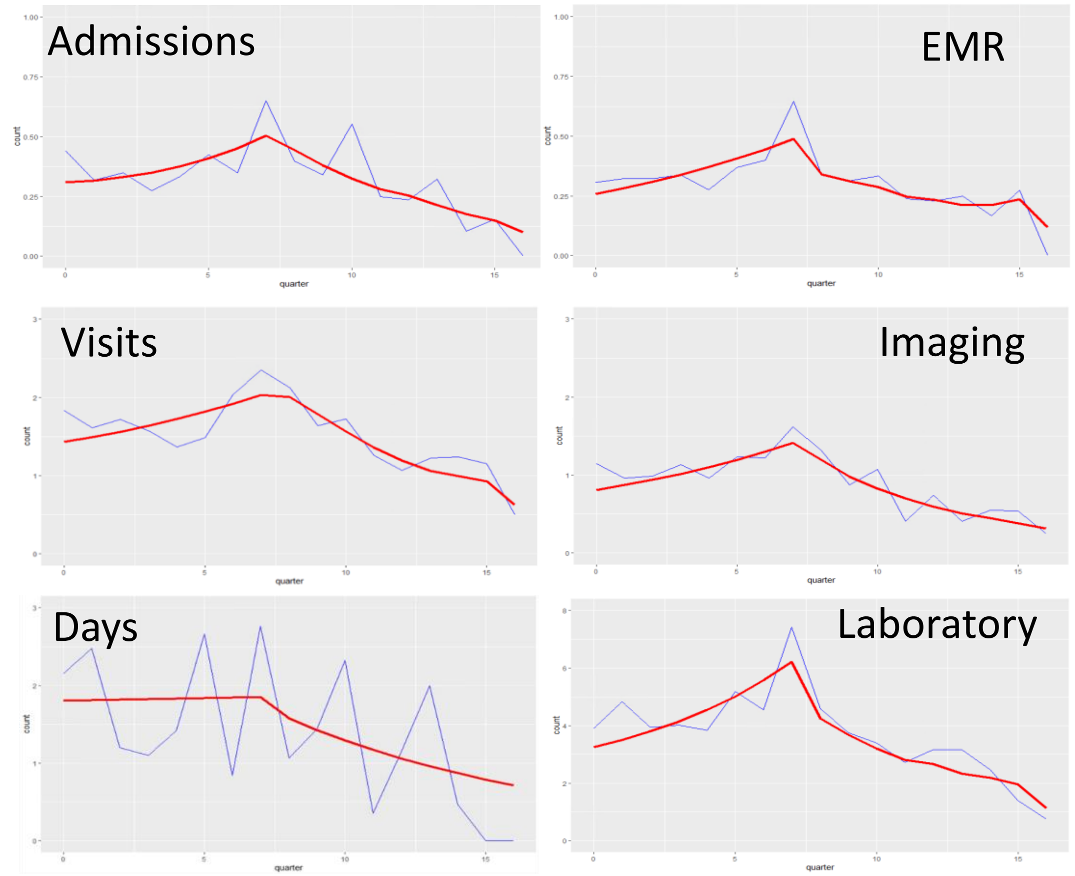
Multimorbidity: increasing burden and expensive

Average per capita costs per enrolee versus # co-morbidities, main Dutch insurer (2012)



Source: Wammes, Jeurissen, 2014

Model outcomes for care use (quarter) in CORE-clinic for HNHC patients (red line) and actual averages per quarter (blue line)



Source: Remers, Jeurissen et al, 2024, Journal of evaluation of clinical practice

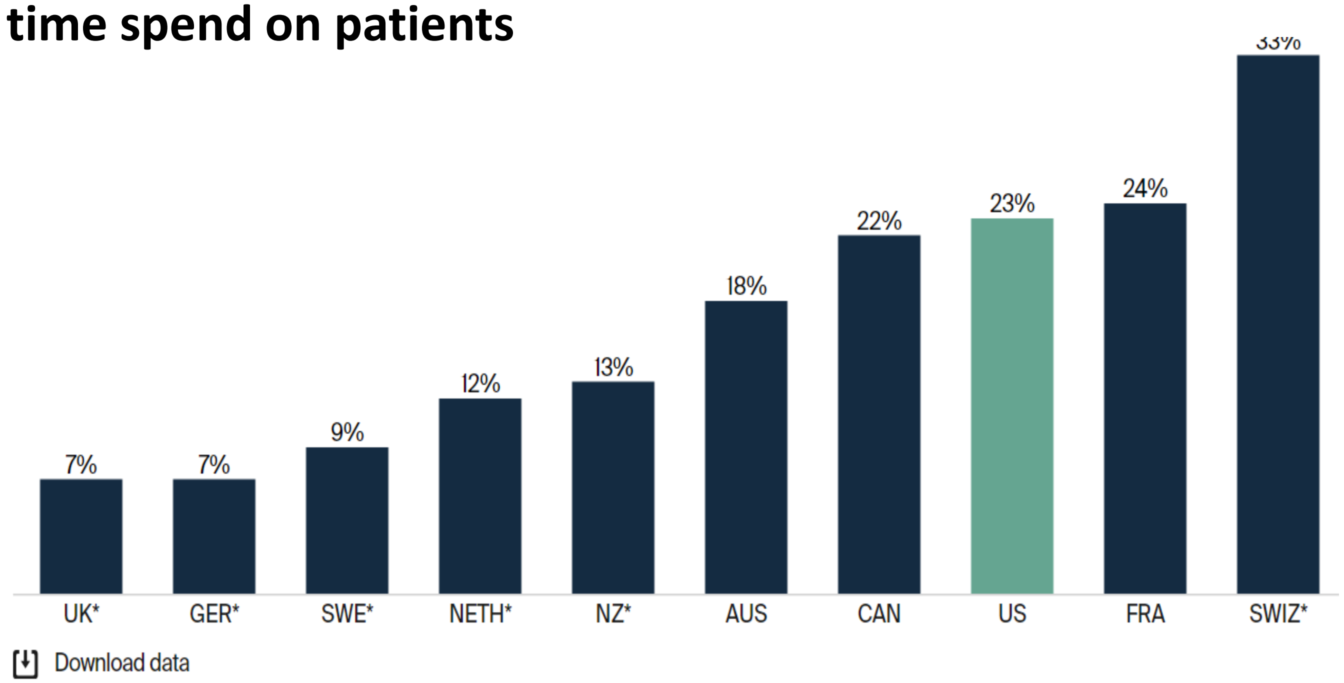
Administrative burden: another main cost driver

Hospital overhead expenses

	Core	Total	% GDP
US	15.51%	25.32%	1.43
Netherlands	10.85%	19.79%	0.77
Canada	7.40%	12.42%	0.41
France	8.77%	n/a	n/a
Germany	9.00%	n/a	n/a
England	n/a	15.45%	n/a
Scotland	n/a	11.59%	0.51
Wales	n/a	14.27%	0.66

Source: Himmelstein et al, Health Affairs, 2012

% primary care physicians very satisfied with amount of time spend on patients



Source: CWF international survey, 2022

Addressing determinants: 1. reducing complexities, 2. harmonization, 3. data interoperability

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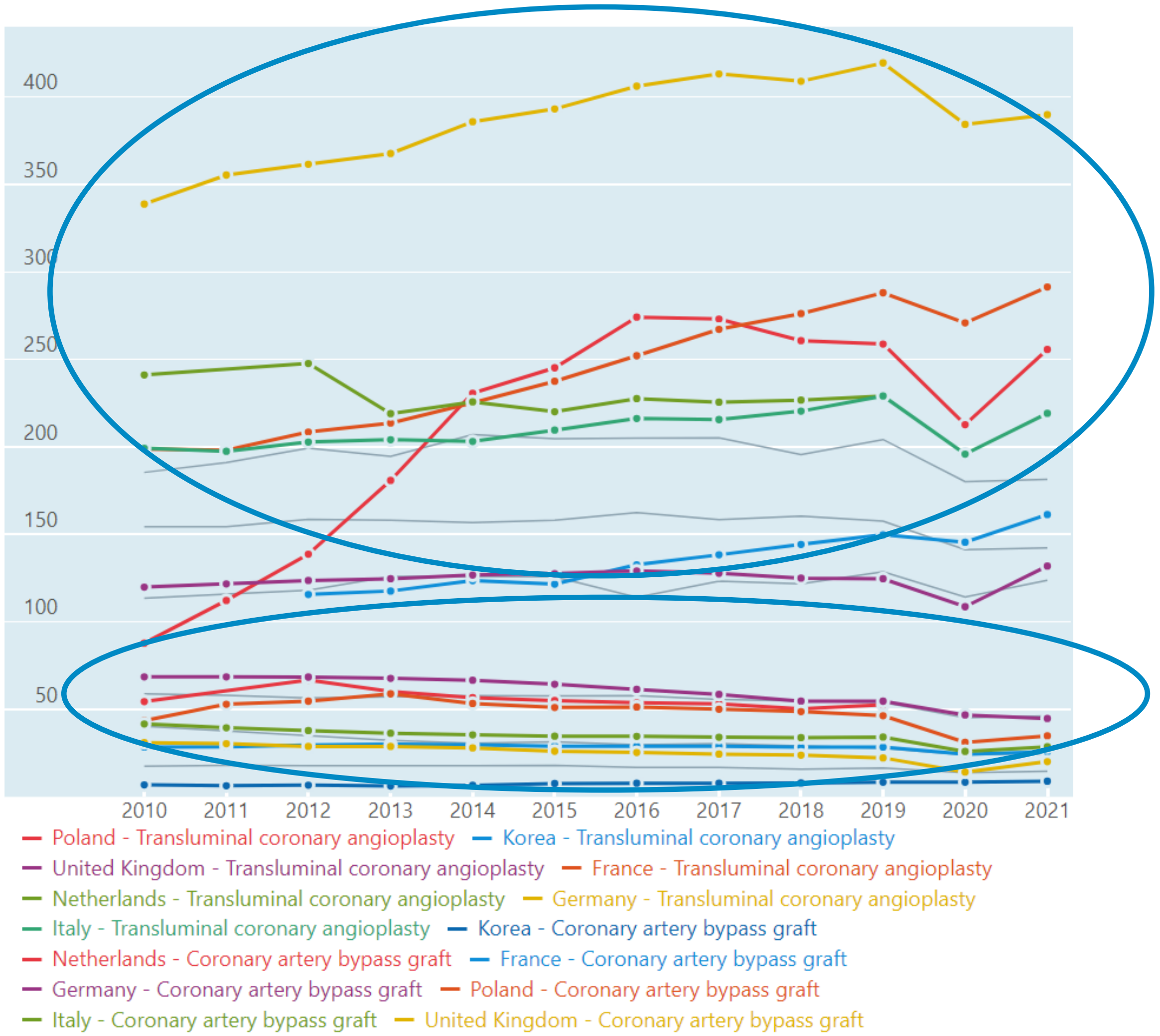
Technologies: substitution or add-on

Minimal invasive increases faster dan decline of heart surgery (OECD)



- (New) technologies cheaper, but add to volume. Will newest technologies be different (micro-electronics, AI etc.)?
- FAME 3 Rct (2021): 3-year cumulative costs three vessel disease, PCI ($ 24,063) versus CABG ($ 35,714)
- Real-world savings: addressing expensive hospital infrastructures, operation room, EMR, ICU – is paramount
- Some no brainers: AMR prevention, generics/refurbished, primary care, kidney transplants etc.

Unanticipated policy effect appropriate care: cost-shifting and silo's hamper savings effective dementia networks

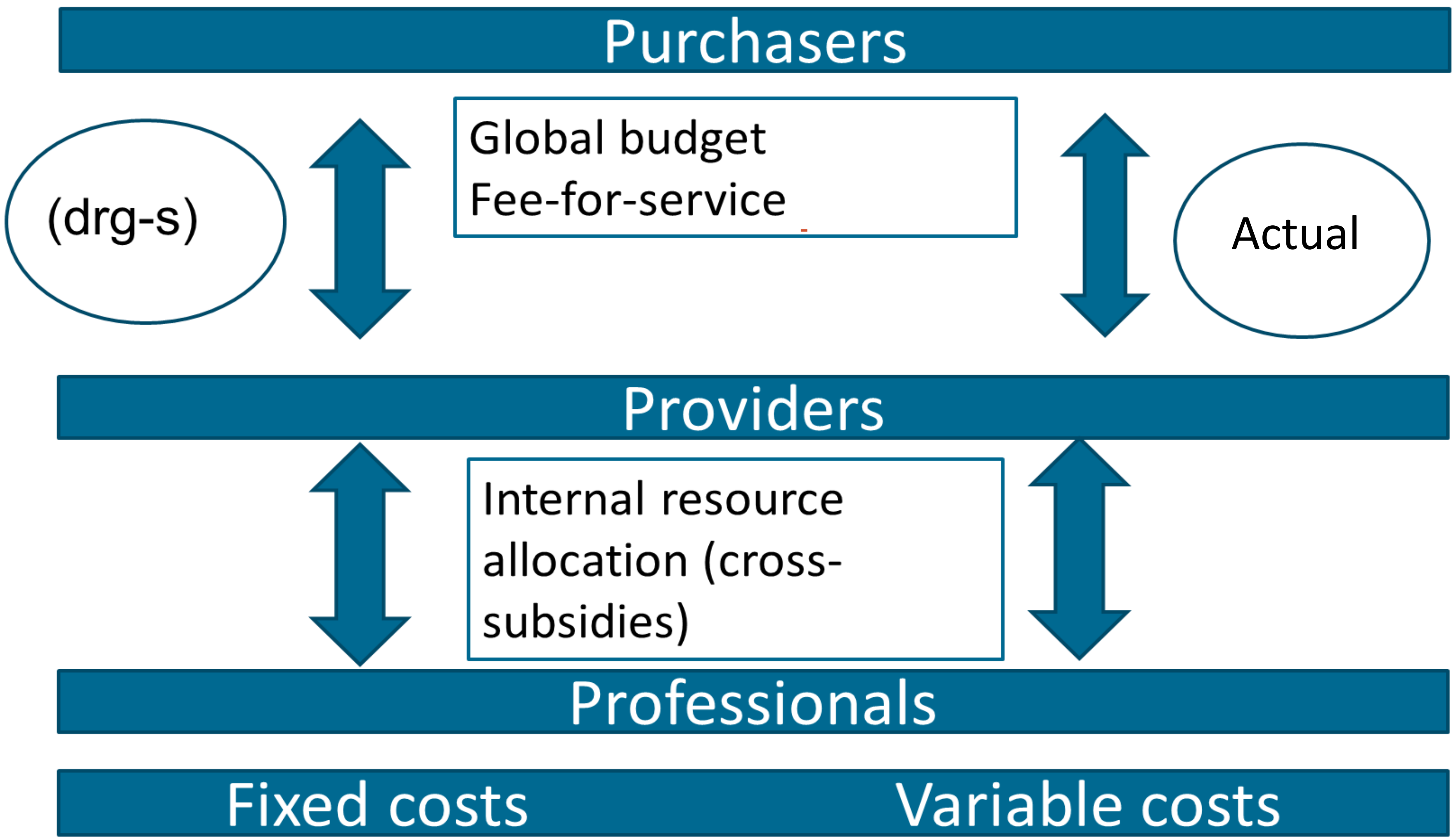
Type of admission	Risk for intervention compared to control (confidence interval)	p-value
Hospital admission[2] (n = 37,205)	OR 0·83 (0·67 – 1·03)	0·096
Intensive care unit (ICU) admission[2] (n = 37,205)	OR 0·59 (0·34 – 1·01)	0·055
Emergency department (ED) visit[2] (n = 37,205)	OR 0·88 (0·72 – 1.08)	0·234
Odds of increased Length of Stay (by one day)[3] (n = 17,798)	OR 0·88 (0·77 – 0·96)	< 0·01
Primary care emergency admissions[2] (n=28,792)	OR 0·75 (0·43 – 1·32)	0·320
Admission to nursing home setting[4] (n = 9,677)	OR 0·96 (0·80 – 1·15)	0·656

1: Mixed effects linear regression models
2: Mixed effects logistic regression model with binary distribution (yes/no)
3: Mixed effects logistic regression model with Poisson distribution (inpatient days)
4: Logistic regression model with binary distribution (yes/no)

Cost category	Change per year for intervention compared to control (95% CI)	p-value
Total healthcare costs[1] (n= 9,378)	-€1,925 (-€5,592 – €1,742)	0·303
Total curative care costs[2] (n = 38,525)	- 3·0 % (+8·2% – -13·0%)	0·58
Hospital care costs[2] (n = 37,205)	- 19·7 % (-7·6 – -30·3%)	< 0·01
Primary care costs[2] (n = 38,267)	+ 10·2 % (+2·3% – +18·6%)	0·010
District nursing care costs[2] (n = 28,792)	+ 0·10 % (-14·7% – +18·5%)	0·949
Pharmaceutical costs[2] (n= 37,751)	- 4·1 % (-11·7% – +4·1%)	0·318
Long-term care costs (n= 9,677)	+€502 (-€3,191 – €4,195)	0·789

1: Curative and long-term care combined
2: Log-transformed outcome variable because of skewed distribution

Unanticipated policy effect finance: reimbursement does not equal actual costs (endemic cross-subsidies)



Transparent (sort of) and researched

Black-box and cross-subsidies (hampers payment incentives)

High fixed cost (hampers cashing savings)

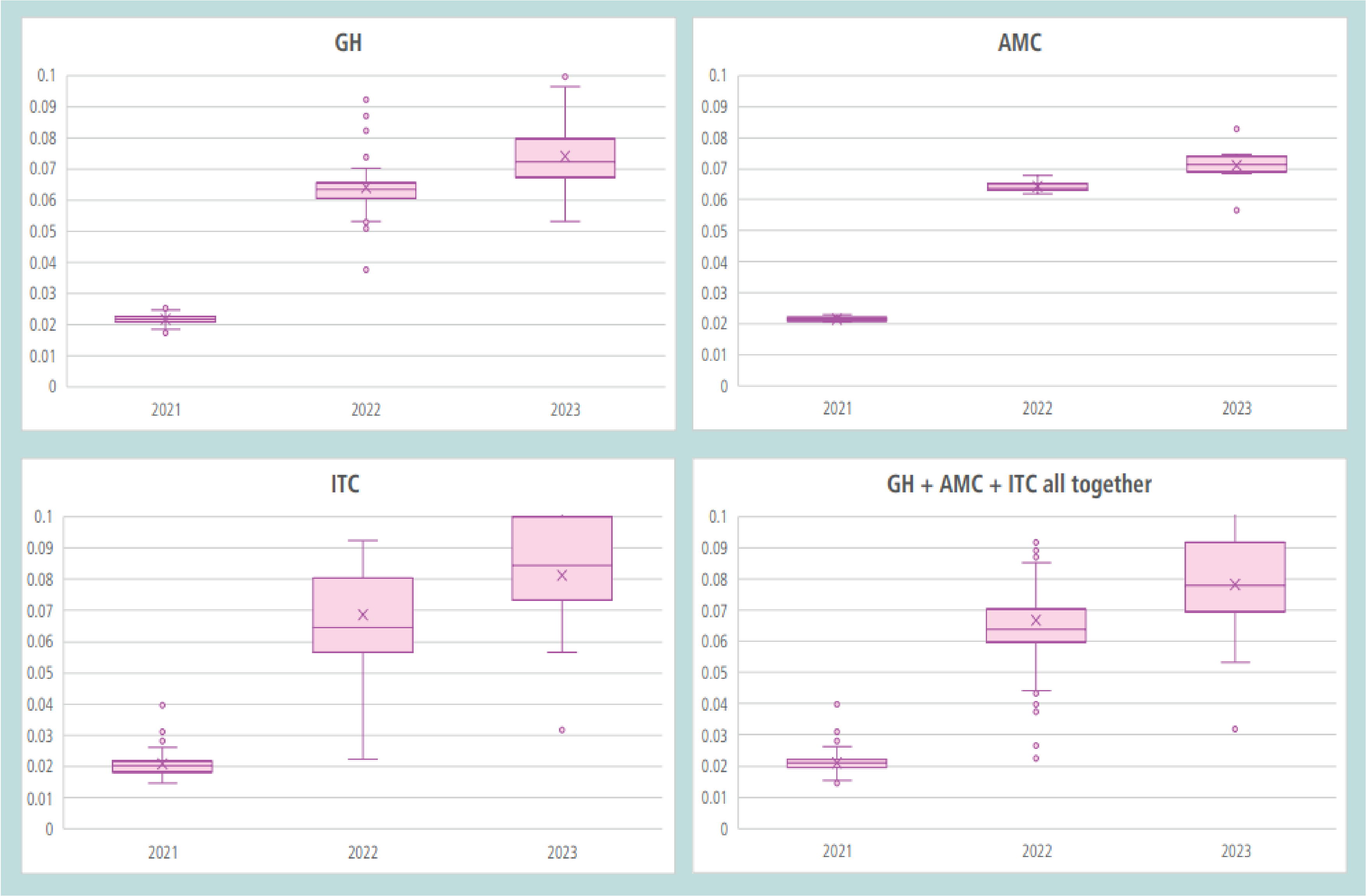
Unanticipated policy effects incentives: outcome payments (>10%): mixed results

	Quality	Costs	# Studies	D&B score
Bonus penalty groep				
CQUIN (UK)	+	?	3	9,0
HQID	mixed	-	13	11,4
HRRP	+	?	2	9,0
Hudson Plan	mixed	-	2	13,0
Maryland	+	?	1	10,0
PAMC P4P	-	?	2	10,5
QOF (UK)	+	-	43	11,9
VBP	-	?	3	12,0
VIP (K)	+	?	3	12,0
ACO				
AQC	+	+	10	12,4
MSSP	+	+	2	11,0
Pioneer ACO	+	+	2	11,0

Source: Vlaanderen, Jeurissen, 2019, European Journal of Health Economics

- Limited indicators: cholesterol, HbA1C, blood pressure, albumine, lithium, mortality, readmissions, complications / infections
- Process indicators improve more than outcome indicators
- ACO improvements more resistant; B/P: ceiling effect.
- B/P: negative effects non-incentivized indicators
- Private- and low performing providers show most improvement
- Complex patients do not improve more than other groups
- ACO cost savings increase: less EMR, outpatient care and extensive treatments, diagnostics; no savings on pharmaceuticals and mental health.
- B/P: bonus increases costs.

Unanticipated policy effects: no specific health inflation indicator and adjustments; hospitals vary in inflation susceptibility depending on cost structure (2021-2023)



Inflation increases the spread in projected cost growth, most notably in specialized facilities (ITCs)

Source: Jeurissen et al, 2024, OBS Policy Brief 65

3. Persistent varieties health systems (complex adaptivity, path dependency)

Limited variety families of health systems

Type of system	Examples	Characteristics
Beveridge	UK	State budgets – through central and targeted taxes – largely finance health system; strong role for the state and its agencies in planning health care; citizens have full access to health care
Bismarck	Germany	Financed largely through compulsory contributions from employees, employers and state subsidies, health care system managed by institutions that are largely independent of government; health risks are pooled over populations based on principle of social solidarity
Private	United States	Market-based system with heavy role for the private sector; costs of care largely covered by insurance or out-of-pocket spending except for some targeted groups (eg, older people)
Semashko	The then Soviet Union and some Eastern European countries	Centralised model based on a single-payer system with very high level of state control over planning and operation of health care services; free access to a wide range of services funded through national state budget; large role for multi-specialty primary care providers; health care facilities are owned by the state and clinical professionals are state employees

Source: Adapted from Smółka (2022)

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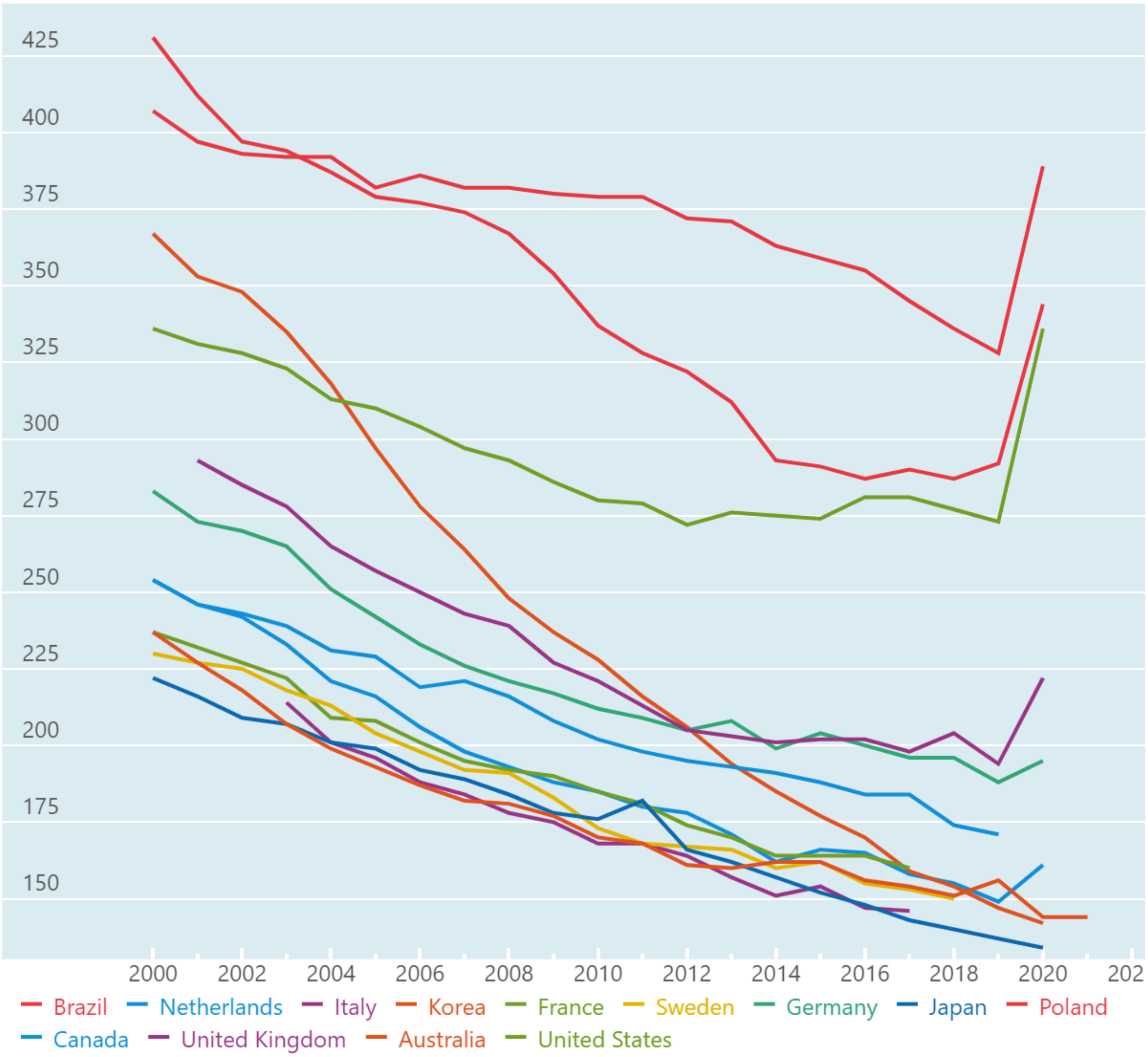
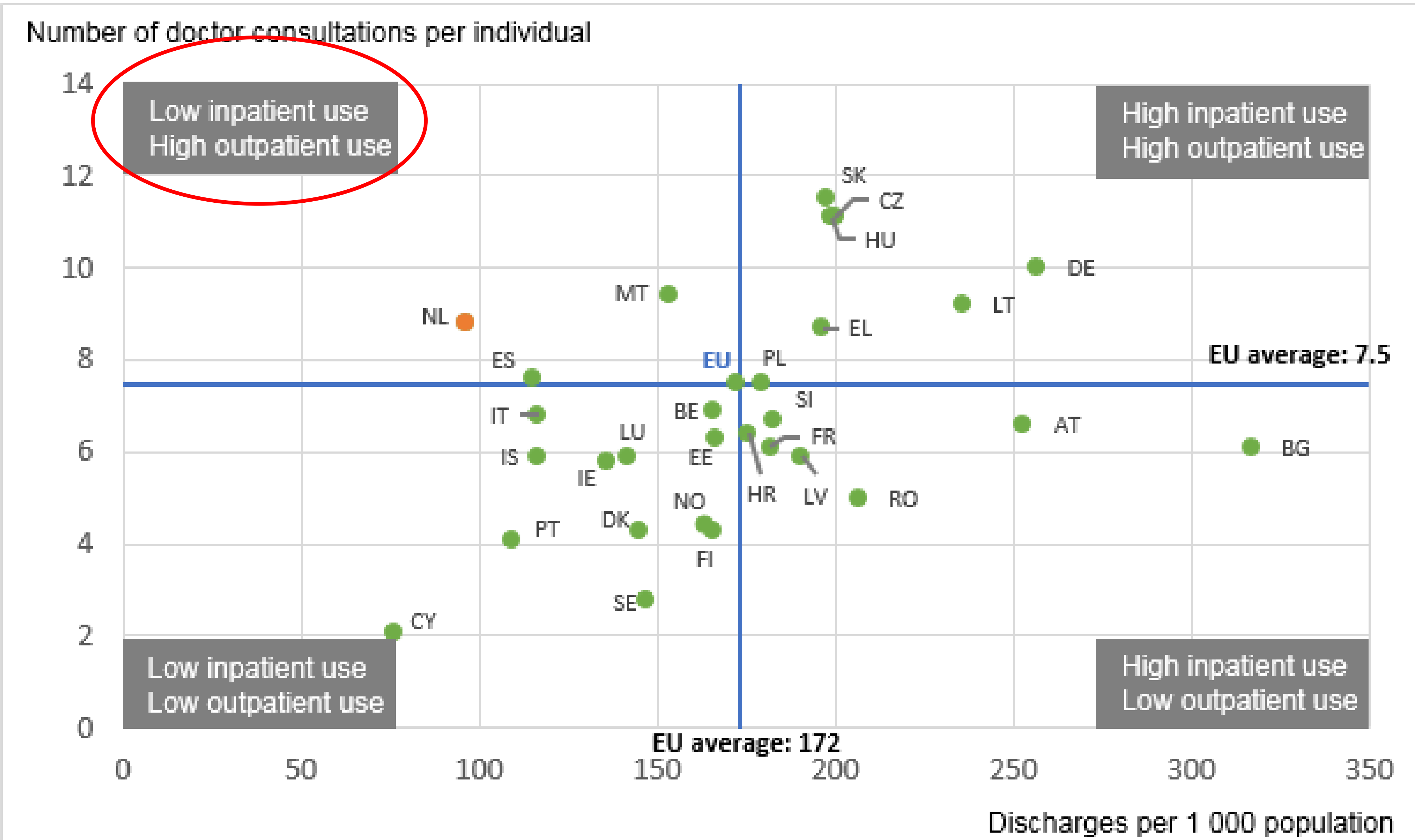
Substantial variety most other indicators. Example avoidable mortality (per 100.000)



- Families of health systems cannot explain actual varieties on the ground.
- Substantial varieties persist on HSPA indicators (health, clinical, resources, etc.)
- Even if policies converge (prospective reimbursement, competition etc.)
- Country-specific approaches often required

Substantial variety inpatient/outpatient distribution (EU)



Source: WHO European Observatory, 2023

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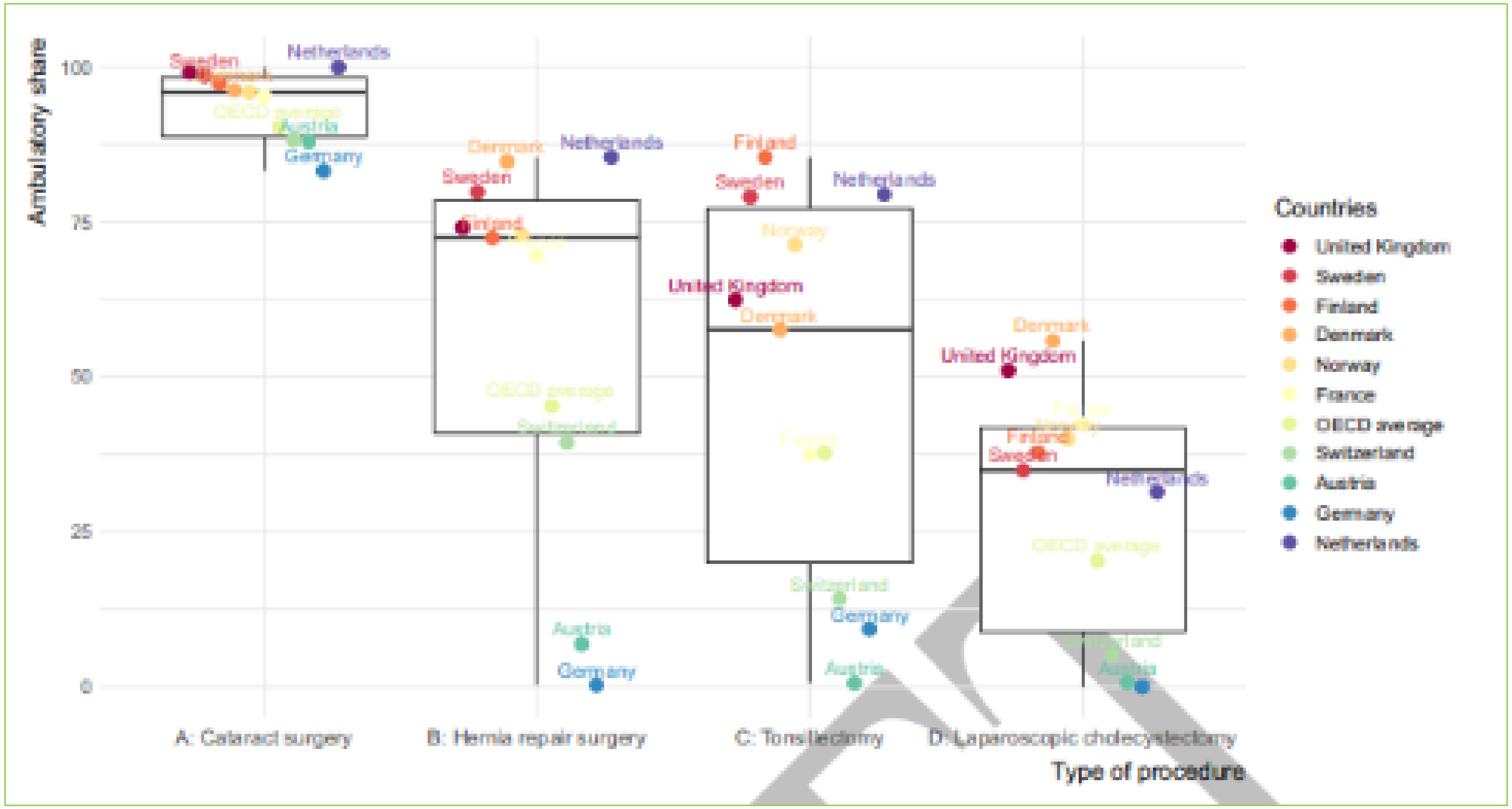
Substantial variety ambulatory surgeries



Source: Kreutzberg A, et al, 2024

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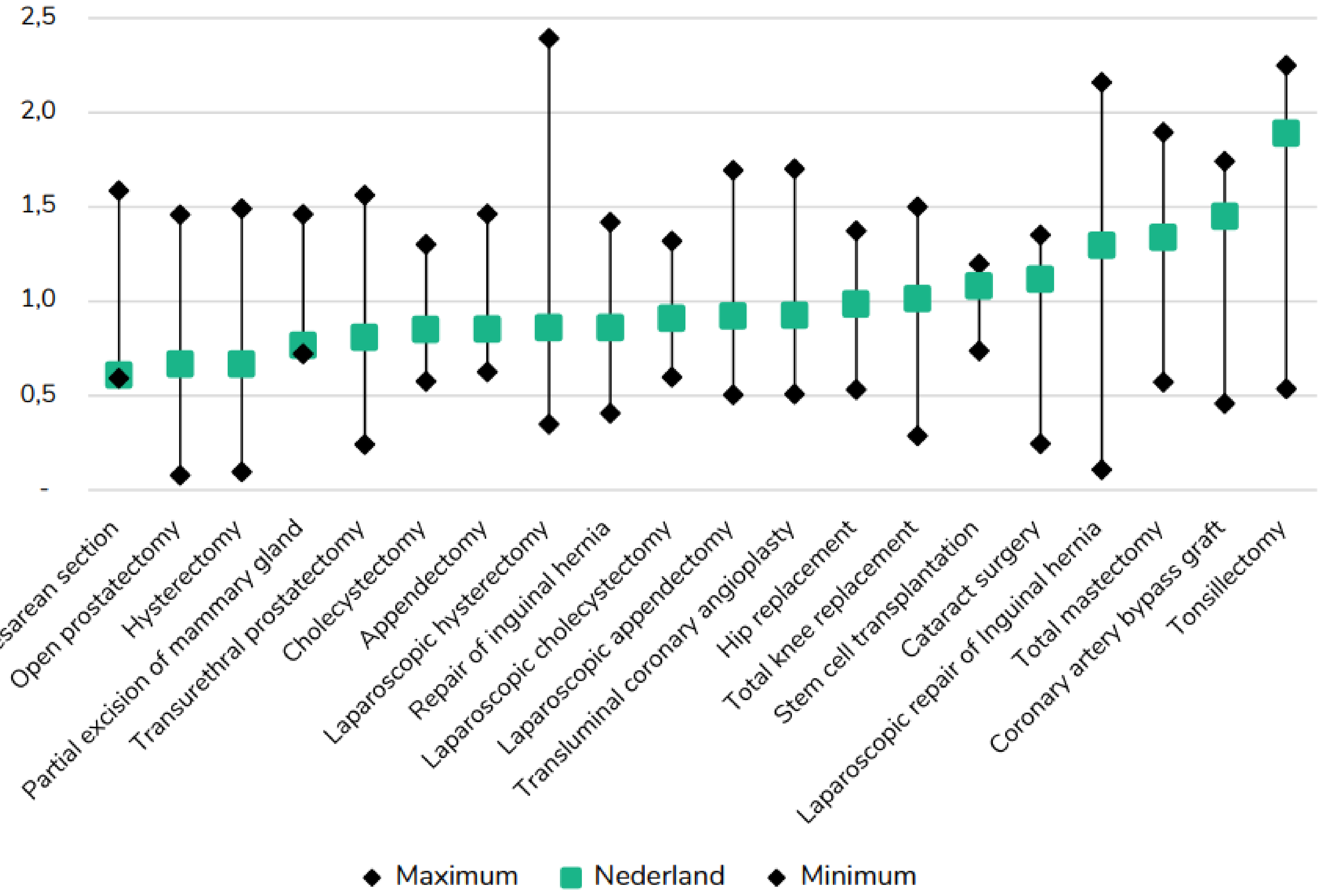
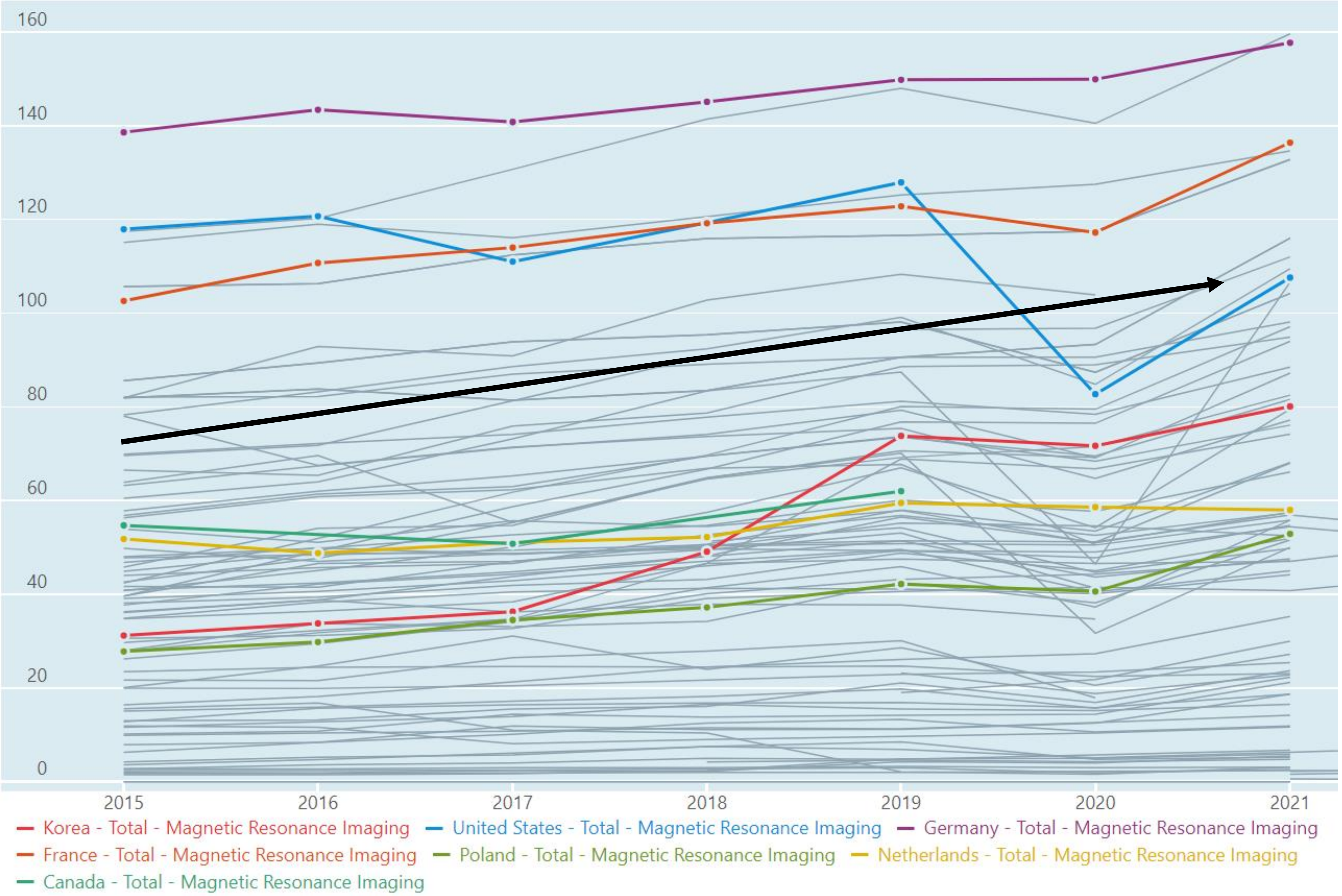
Substantial variety high prevalence treatments (Netherlands versus 15 European countries)



Substantial variety in MR exams (per 1.000)



Source: OECD, 2024

4. Political economy: balancing a) strong values with b) high costs and c) vested interests

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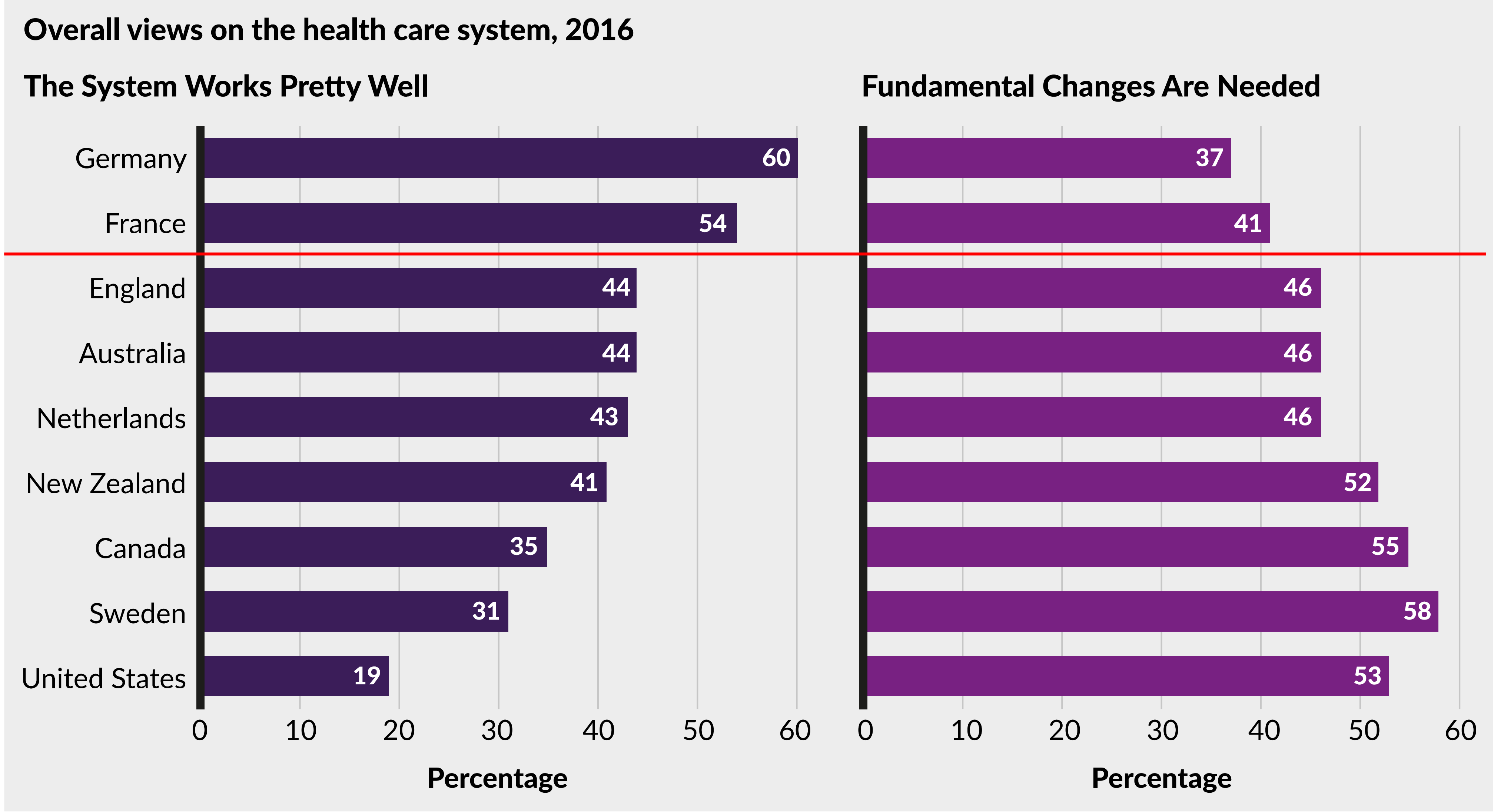
Voter perceptions on health systems: antagonism



Source: Kings Fund, 2023

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The political economy of health care

- *Voters prioritize health:* high willingness to pay
- *Increasing costs* of additional health gains: flat-of-the-curve medicine (Cutler, 2006)
- *Fat tails increase transfers by net-payers*: top 1% HNHC-patients (multimorbidity)
- Universal access for HNHC-patients implies *public regulation and funding*
- Health spend increases more rapidly than GDP: *decreases level of total public fiscal space (MoF)*
- Fierce *competition with other public expenses*

Political problem

- Substantial part health expenses: *'waste' or of 'no-value'* (OECD, 2017: 20%)
- *Politicians prefer painless cost-control*: more efficiency, presumes transformation

Preferable solution

Muddling through

- *High barriers towards change*: vested interests, citizen/patients, conservative care practices
- Policy-making skewed to *'softer' approaches* with *substantial agency autonomy*

Source: Jeurissen, 2016/2018/2021

5. Enabler: higher labour productivity

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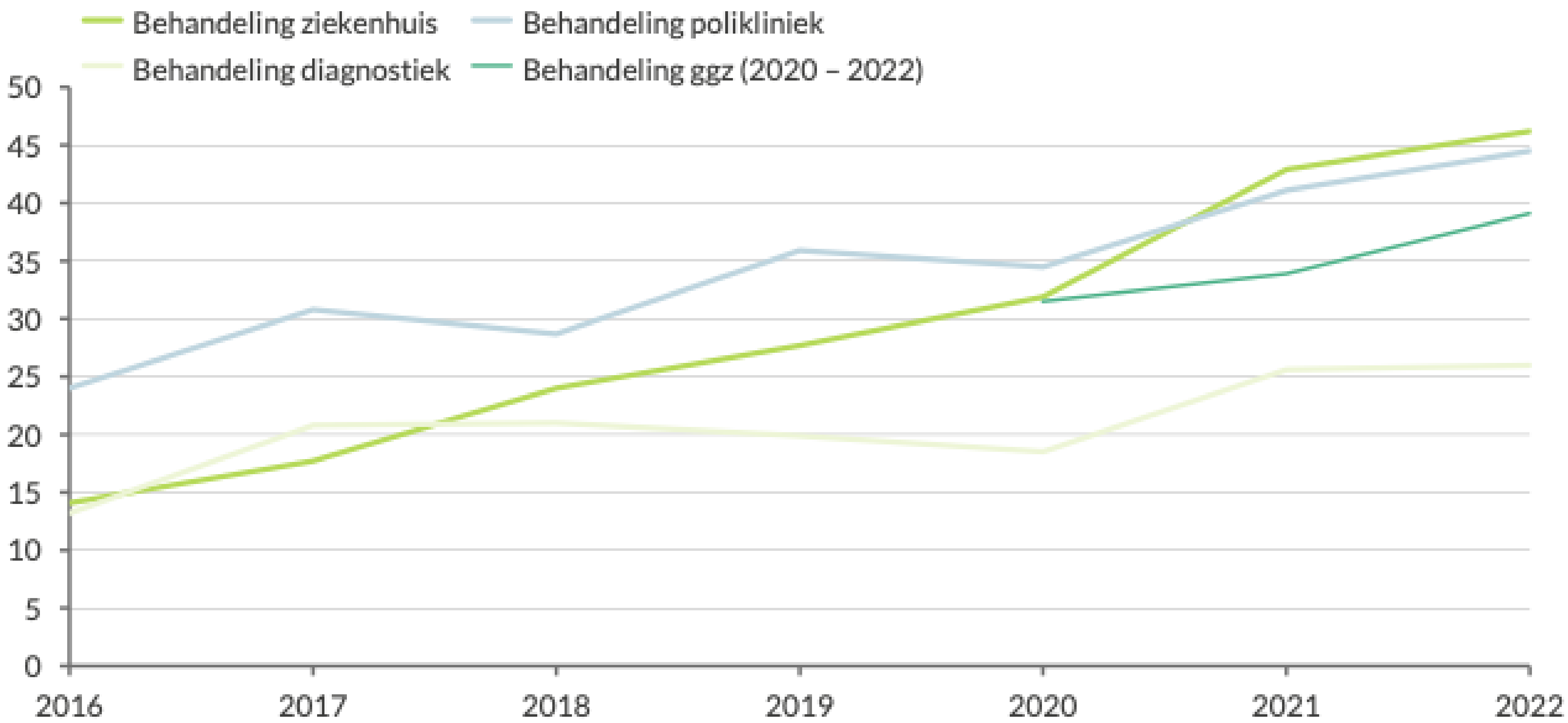
Common trends high-income countries

- Worker shortages: highly skilled nursing and assistance (190.000 in the Netherlands in 2033); informal care under pressure
- Workload and higher sickness rates (3-4%) than in other parts of economy leads to high job outflow rates
- Waiting lists tend/threaten to increase
- Increasing complexities: hospital may shoulder 30+ medical specialities, 300+ subspecialities, and 2500+ diagnoses
- Increasing compliance: administrative duties as high as 35-40%
- Dealing with breakthrough technologies: micro-electronics, sensors, AI etc.
- Implementation <u>has to</u> increase labour productivity, but require different knowledge, skills, and trust: smart monitors, implants, robots, protheses, diagnostics, wearables, sensors, voice recognition and HER and better decision support systems

Increasing waiting lists: canary in the coal mine?

Patients (%) who exceed waiting-time threshold (Netherlands)

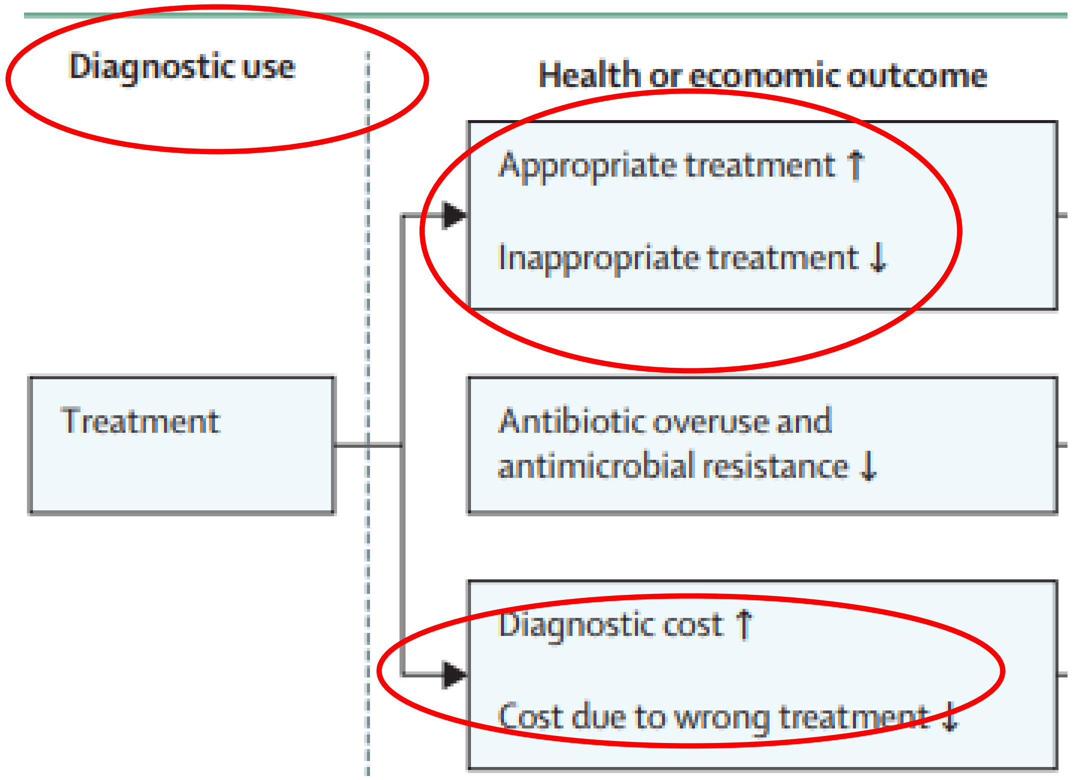


6. Enabler: stronger diagnostic systems

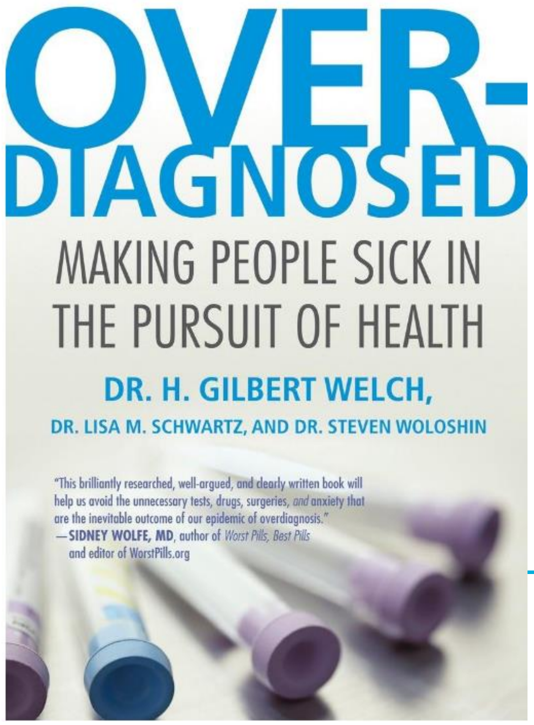
Stronger diagnostic systems

- Diagnostics fundamental to quality and appropriate care (high value)
- Diagnostic errors: 6%-17% hospital adverse events (US, 2015)
- Low policy priority (Lancet), WHO resolution essential diagnostics (2023!?)
- Capital budgets more volatile
- Rapidly changing provider landscape (centralized labs, POC) & low value diagnostics do exist.

Adequate diagnostics bear high value

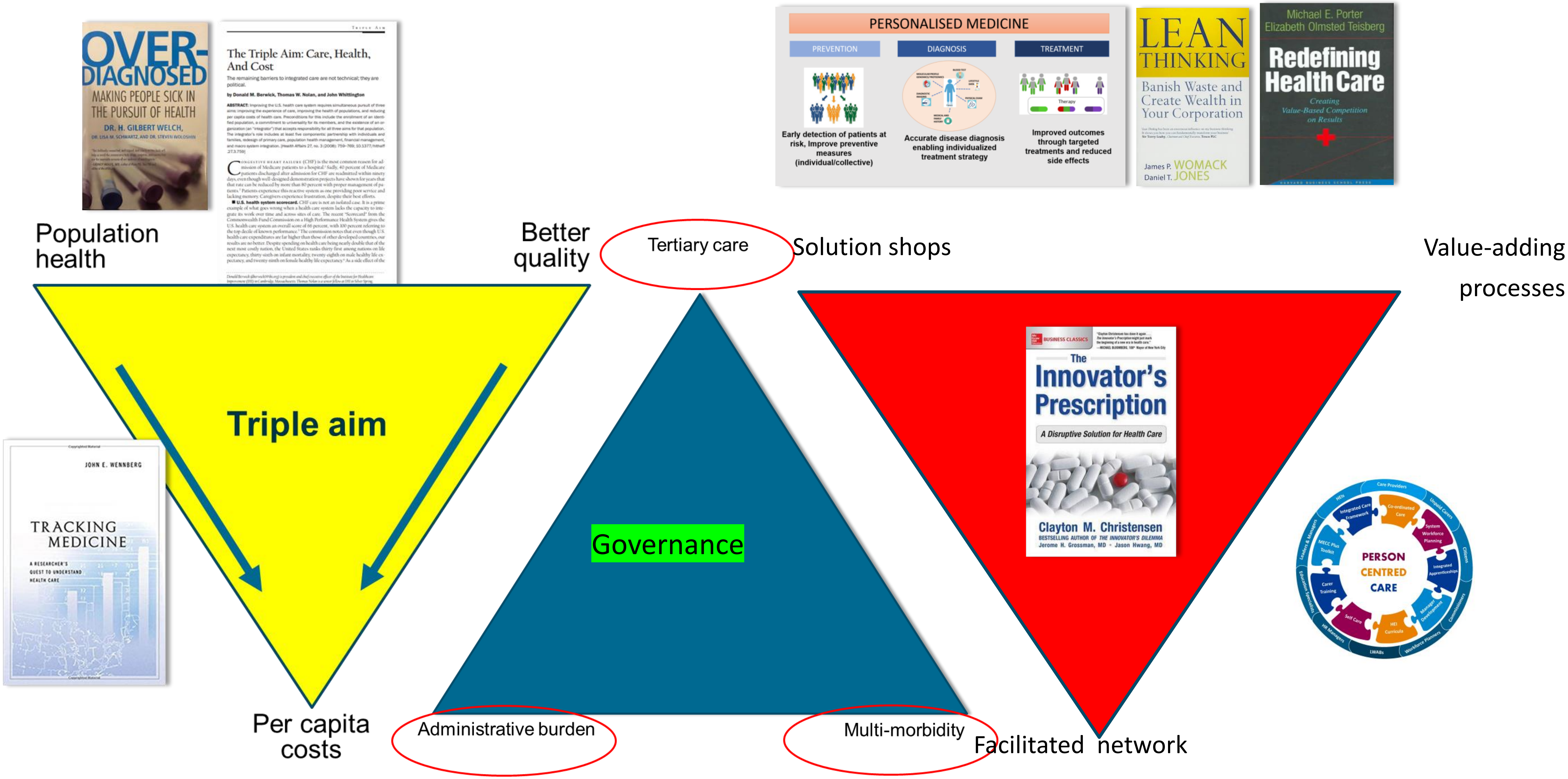


Source: Lancet Commission on diagnostics, 2021



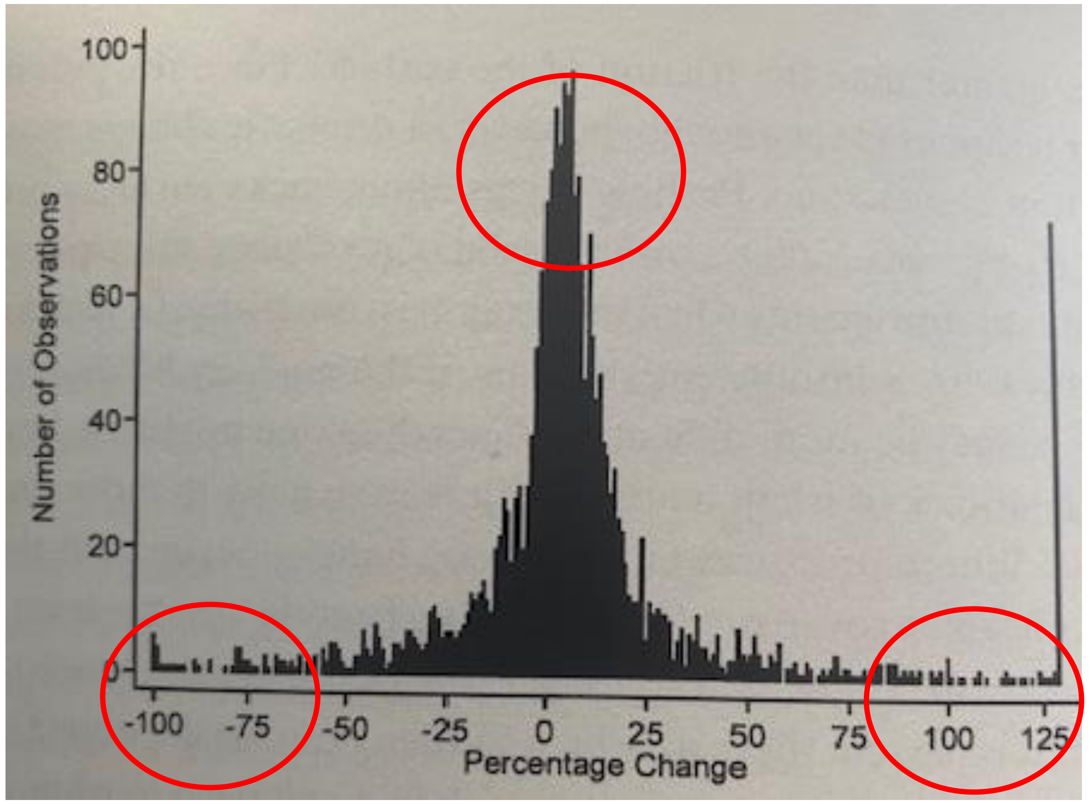
7. Explicit policy choices for a new equilibrium and real transformation of care

Theoretical focus points for policy choices



Incrementalism or substantial policy change (punctuated equilibrium)?

Annual changes US federal spending 1948 – 2000 (budget categories)



Source: Baumgartner et al, 2009

- Policymaking is overwhelmingly incremental
- Sometimes deviations come up: punctuated equilibria (PE)
- PE is validated theory <u>about</u> (budgetary) policy changes
- More about issue-definition early on (thought leadership) than changing institutional procedures. Example: personal budgets (UK, Netherlands)
- Very effective (new) disruptive technologies may create a PE (Christensen)

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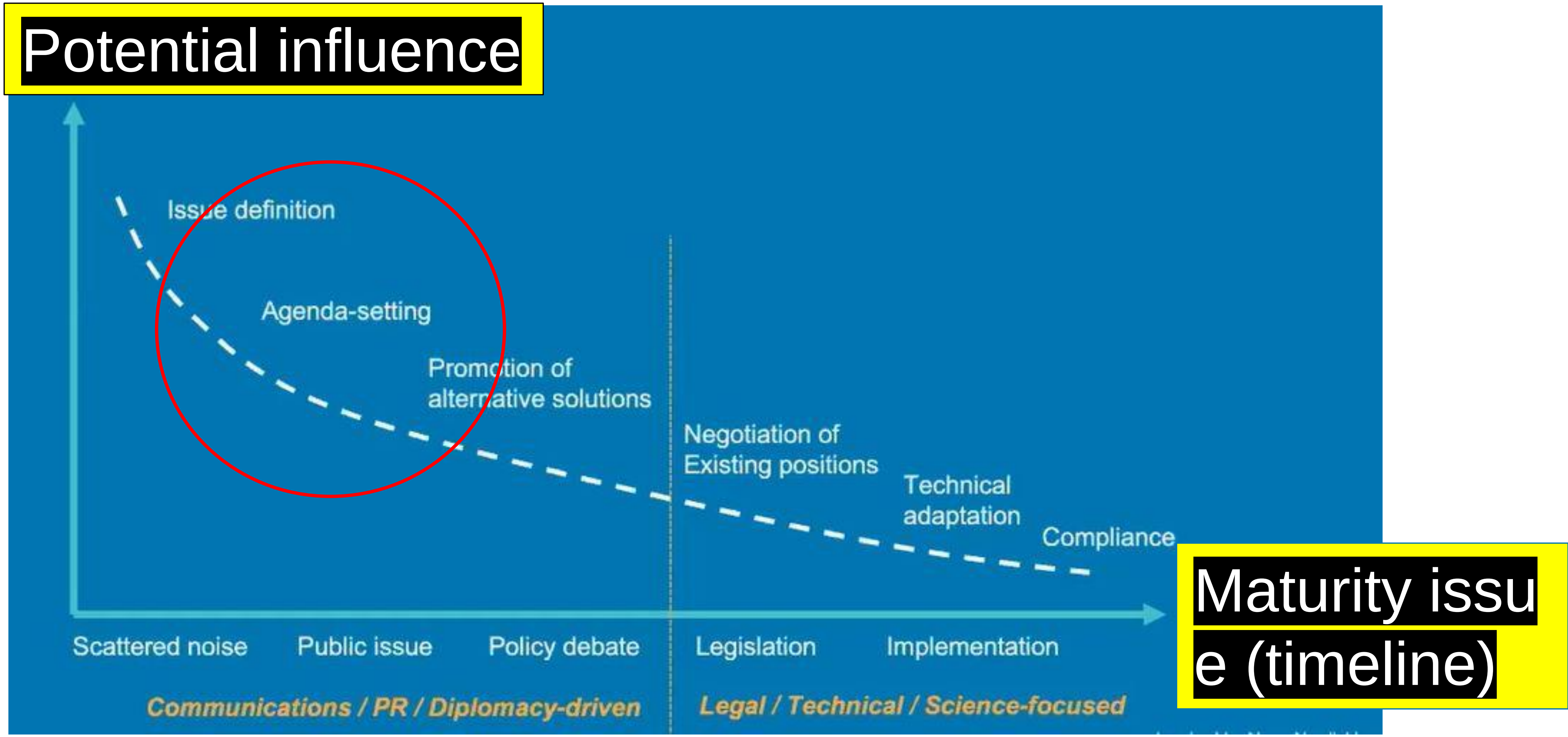
Why explicit policy choices?

- Care changes fundamentally (transformation): breakthrough technologies (AI, micro, sensor etc.) AND worker shortages, aging, limited resources
- Potential disruptive on current healthcare landscape
- During rapid flux, incremental policy making underpins consensus, but typically comes with substantial transaction costs
- Because of rapid aging and worsening public finances high transaction costs (the unanticipated policy effects) may be a problem. Align policies and ‘doing everything’ to create leverage and new equilibrium
- One fundamental question is the future of the community hospital and the nursing home. How to spend capital budgets?
- Three key topics: 1) which expensive tertiary care/technologies, 2) lower administrative expenses, and 3) connected care comorbidities
- Workable mechanism: professionals should be re-empowered and have better assistance from new technologies and improved work flow streams

Receptivity fundamental policy change



Main messages

- Care transformation is urgent (top-3 topic): costs, worker shortages, environmental pressure etc.
- Mechanisms successful policy: increase high value care, reduce low value care & reduce price.
- Substantial barriers: persistent system varieties and resistance through a political economy of healthcare.
- Higher labor productivity prerequisite to solve increasing labor shortages
- Better embeddedness diagnostic systems in broader health systems to gain more appropriate care
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Thank you for your attention!

Questions and comments:
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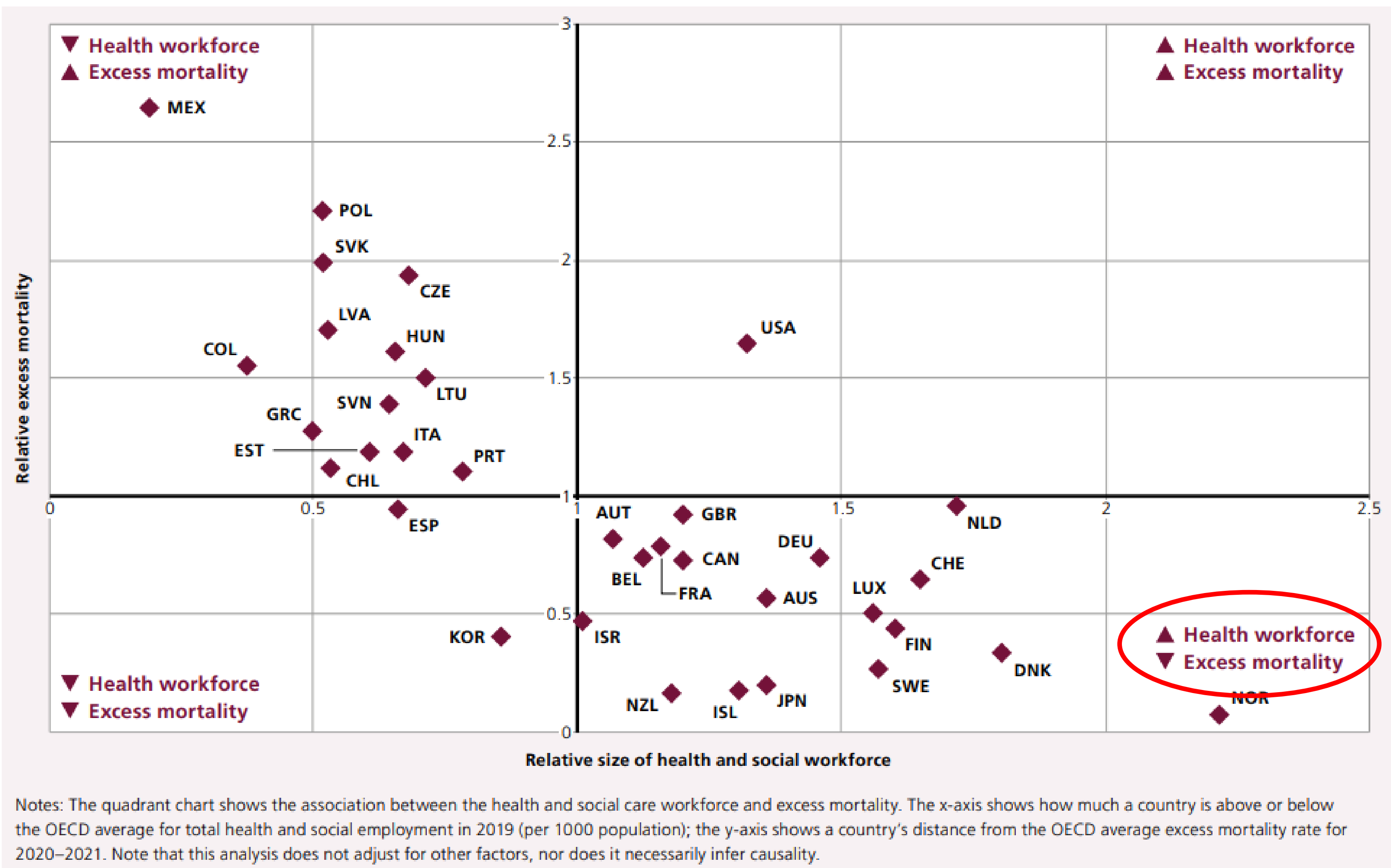
Resilience overlaps existing HSPA frameworks

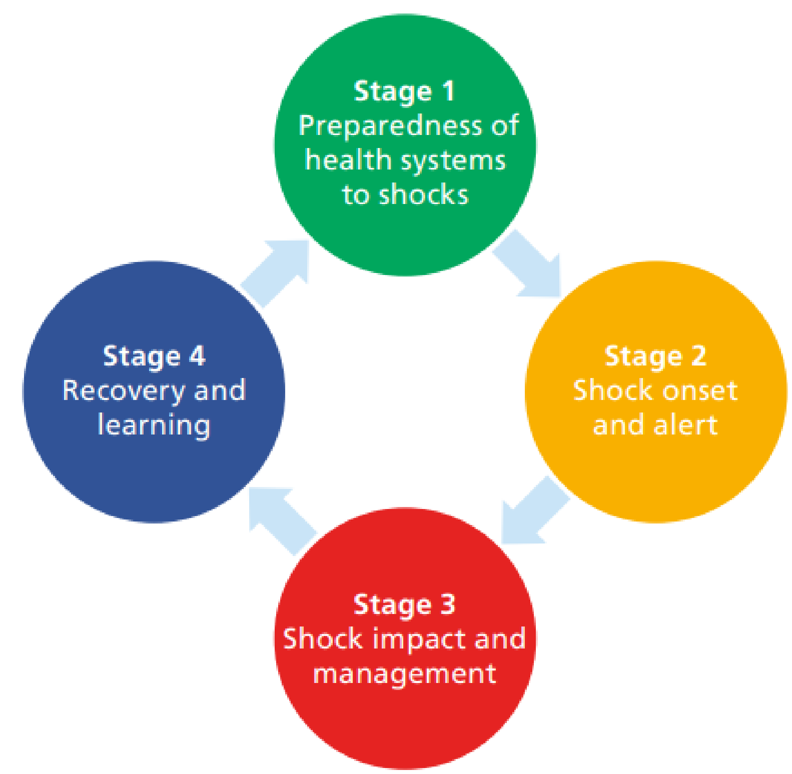
Covid excess mortality correlates with less health workforce



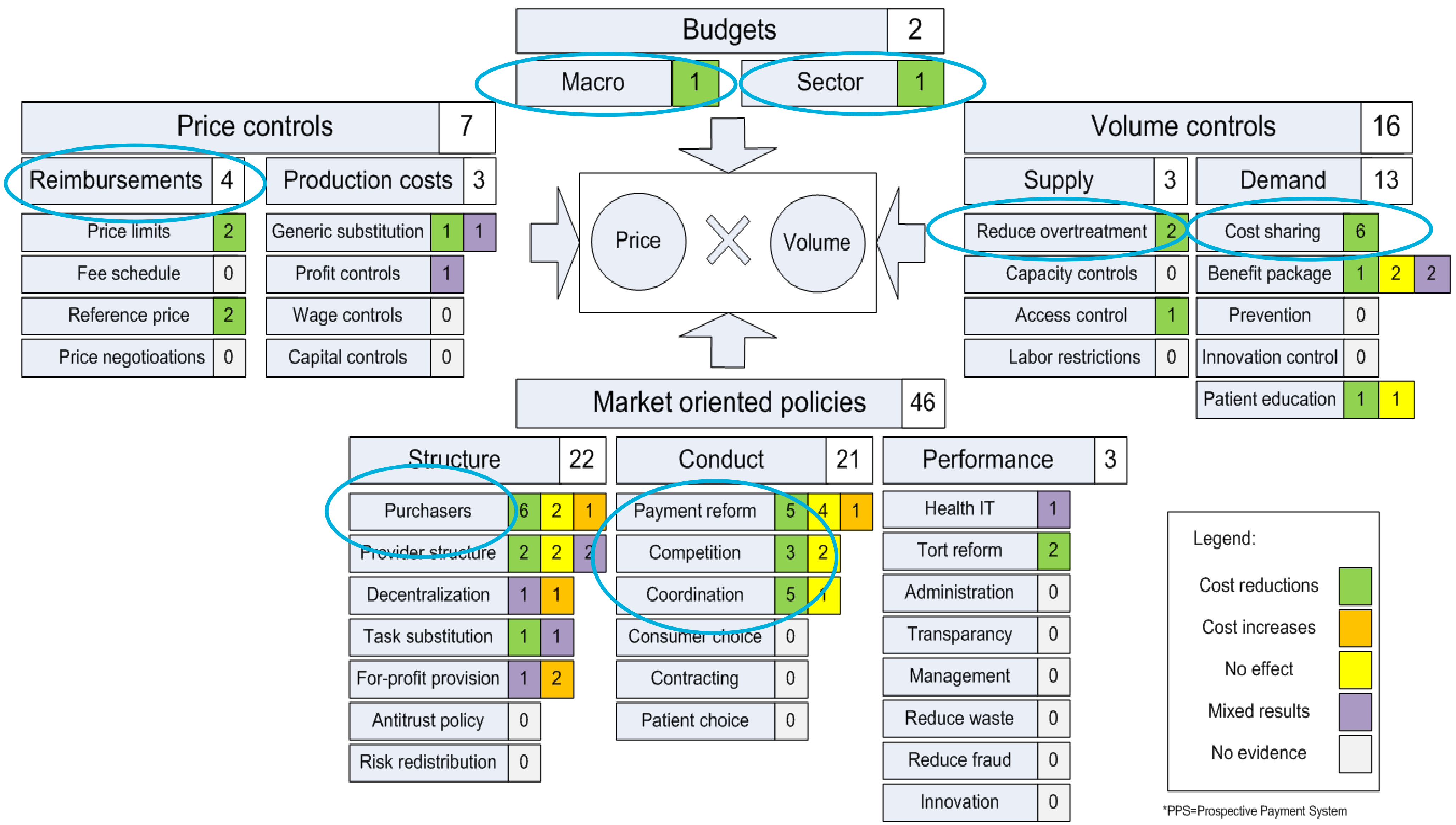
Notes: The quadrant chart shows the association between the health and social care workforce and excess mortality. The x-axis shows how much a country is above or below the OECD average for total health and social employment in 2019 (per 1000 population); the y-axis shows a country's distance from the OECD average excess mortality rate for 2020–2021. Note that this analysis does not adjust for other factors, nor does it necessarily infer causality.

How to be prepared?

- Risk analysis / scenario forecasts
- Training for the unforeseen
- Excellent capital infrastructure (excess capacity)
- Well-trained and motivated workforce
- Get your (excess) inputs right

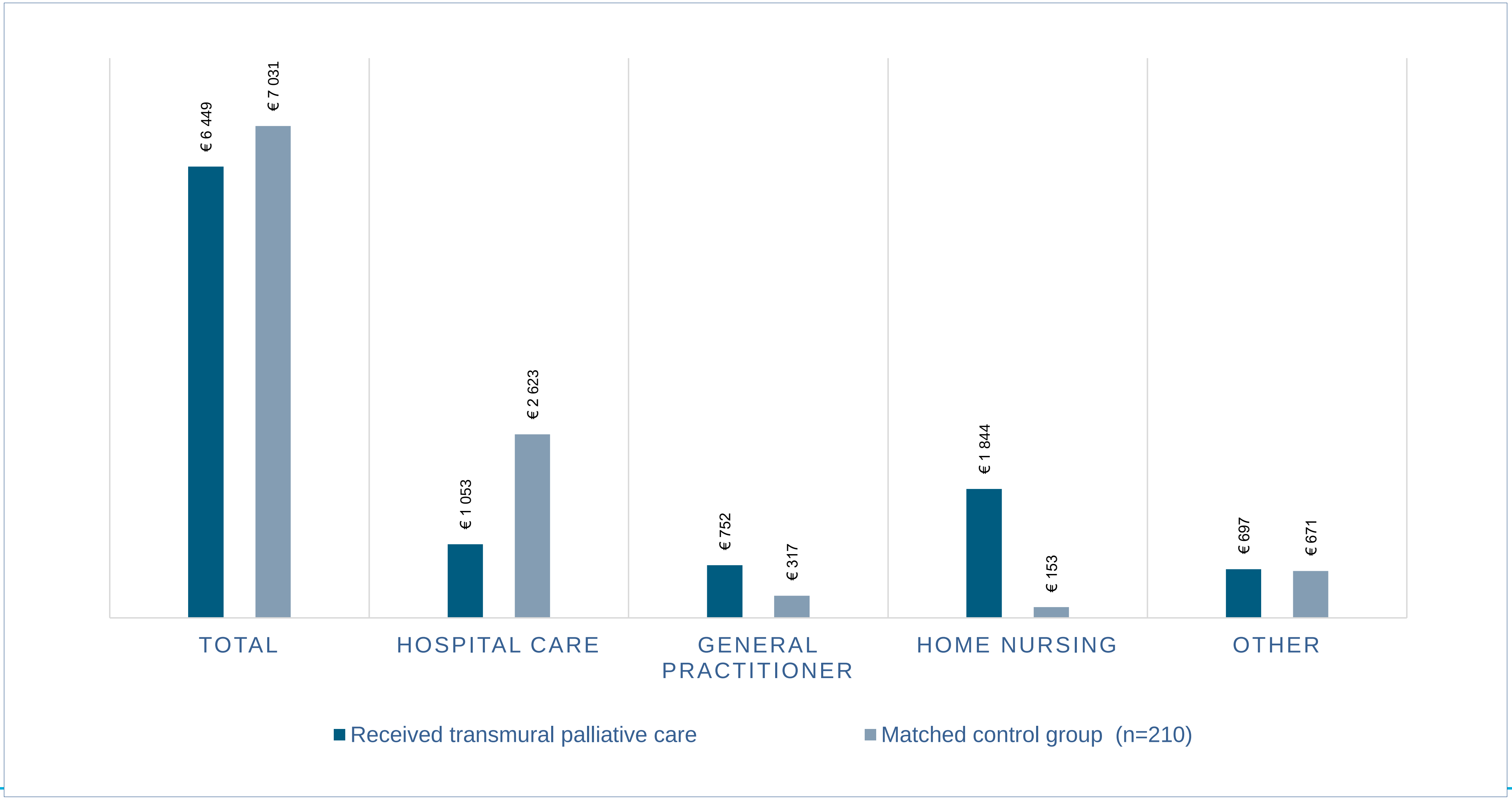


Seventy-one policy strategies to contain health system costs (1970 – 2018): limited success and limited evidence



Source: Stadhouders et al, 2019, Health Policy

Mediane zorgkosten laatste 30 dagen leven: transmurale palliatieve zorg (n=210) versus matched controle groep



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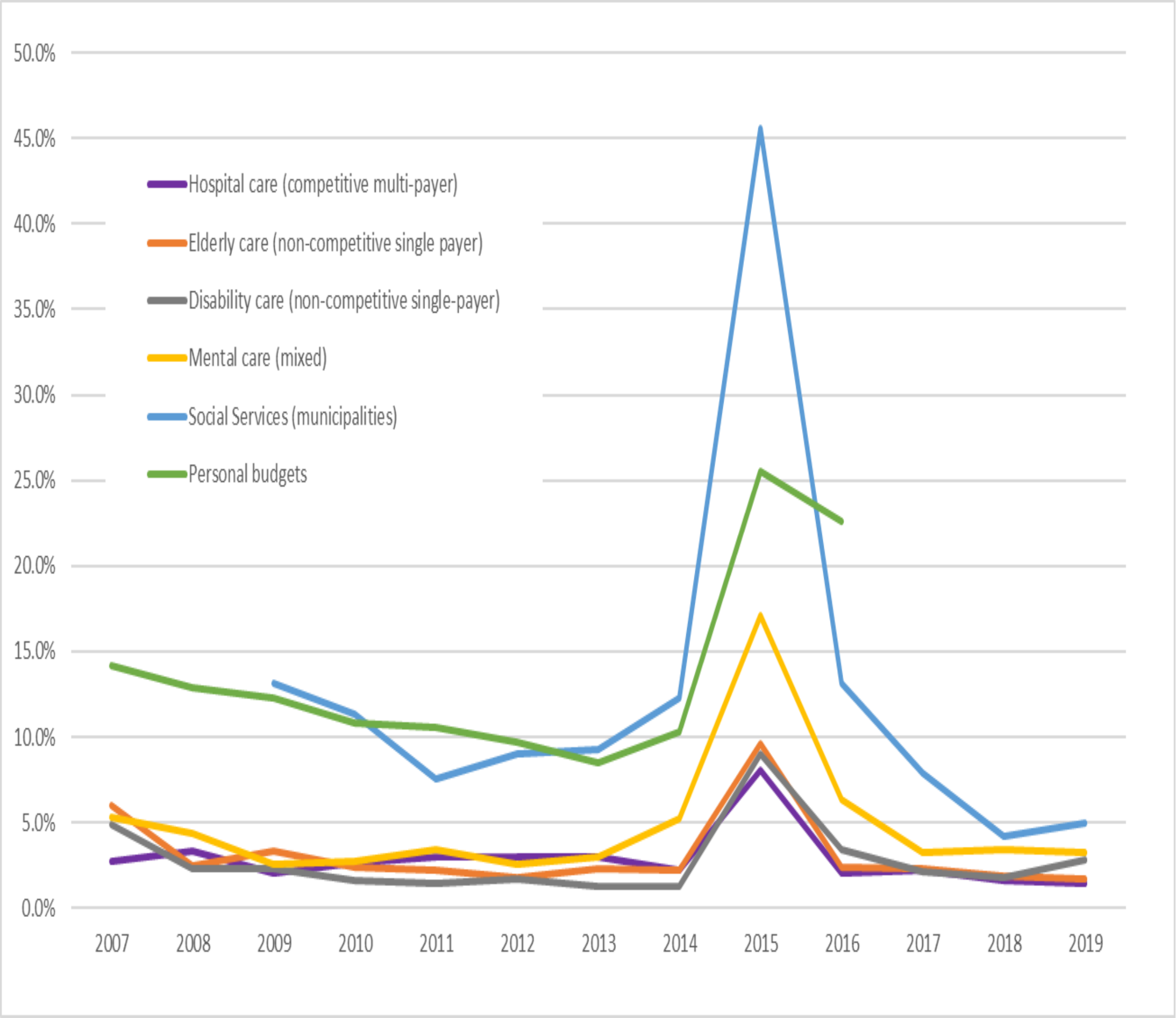
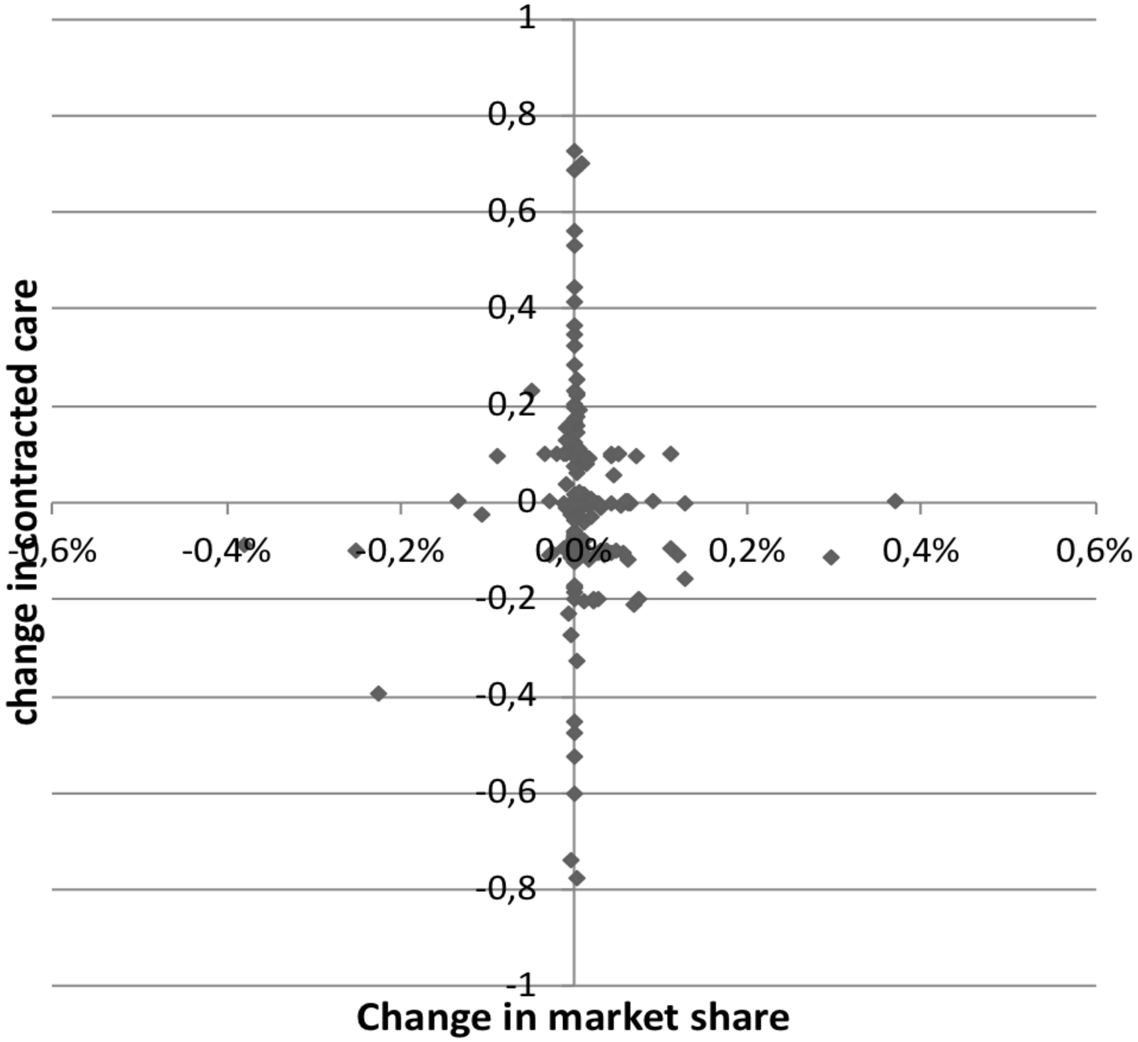
Weinig verschuivingen marktaandeel zorgaanbieders





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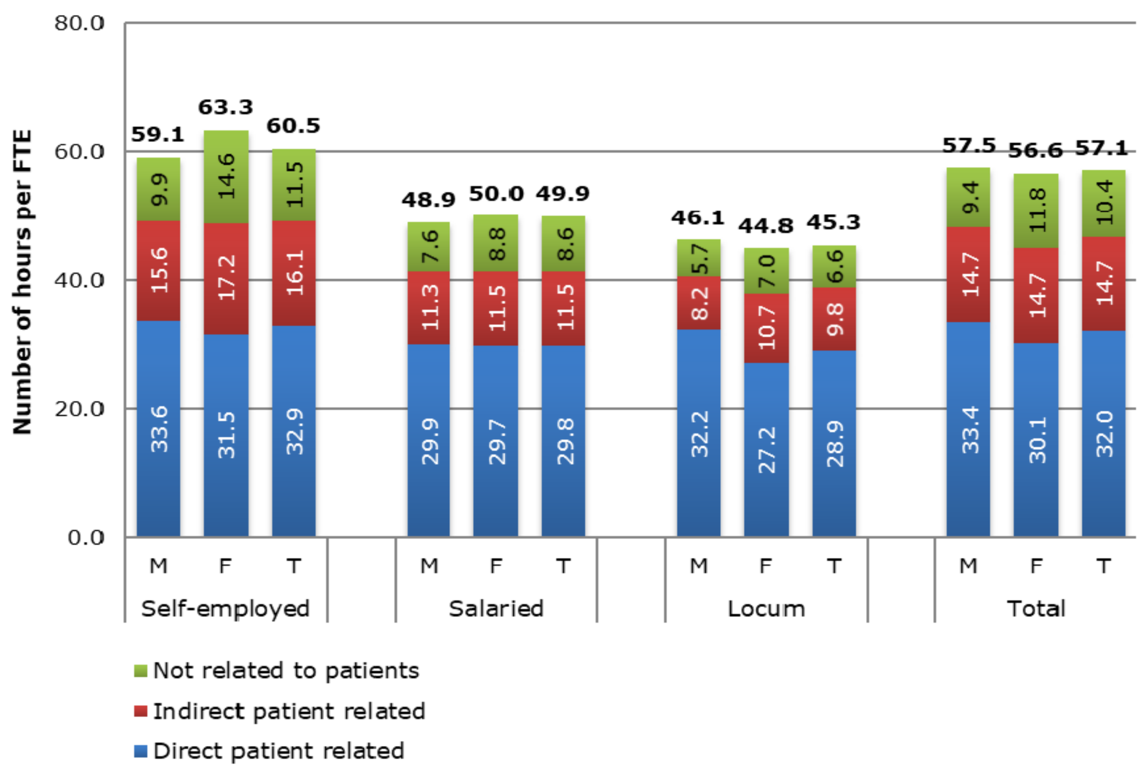
Betere kwaliteit zorg leidt vaak niet tot meer marktaandeel (ziekenhuizen)

Relation between quality and market share reallocations (hospitals)		
	Static allocation (CSE)	Dynamic allocation (CSE)
HSMR	0.0048 (0.0046)	0.0001 (0.0002)
Hospitals	65 (N=224)	65 (N=224)
Outcome indicators z-score	-0.9239 (0.3921)	0.0176 (0.0111)
Hospitals	128 (N=731)	125 (N=715)
Process of care z-scores	-0.0861 (0.246)	0.0031 (0.0037)
Hospitals	189 (N=970)	178 (N=921)
Structural quality z-scores	1.8907*** (0.3493)	-0.0449*** (0.0069)
Hospitals	209 (N=1034)	192 (N=970)
Note: clustered standard errors are in parentheses; sign. *<5%;<1%;***<0.1%**		

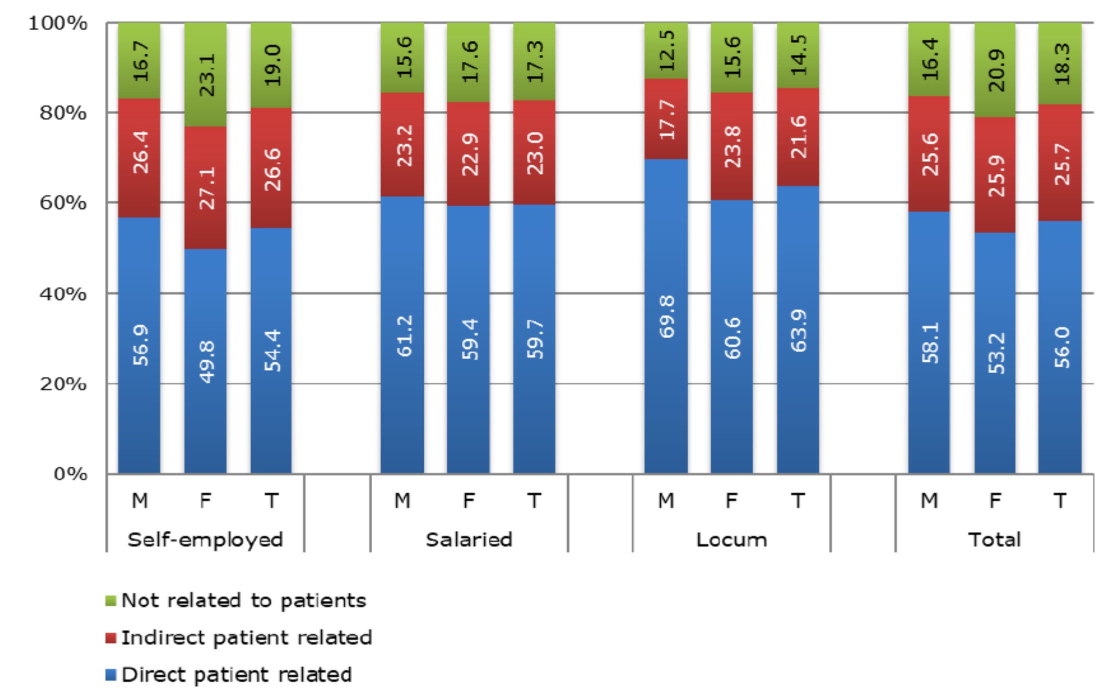
Huisarts als spil in netwerk?

Figure 4.1. *The number of hours per FTE spent on working as a GP based on the SMS measurements, per type of activity by employment position and gender*[1, 2, 3]



[1] N = 61,320 measurements, 1,095 SMS weeks of measurement, 1,051 GPs. The sum of the hours per type of activity could deviate from the total hours as a result of rounding up or down. The results are weighted on the bases of population numbers by employment position, gender and age.
[2] Based on the average FTE GPs indicated in the survey prior to the weeks of measurement.
[3] M=male, F=female, T=total.

Figure 4.2. *The percentage of the working hours spent on working as a GP based on the SMS measurements, per type of activity by employment position and gender*[1, 2]

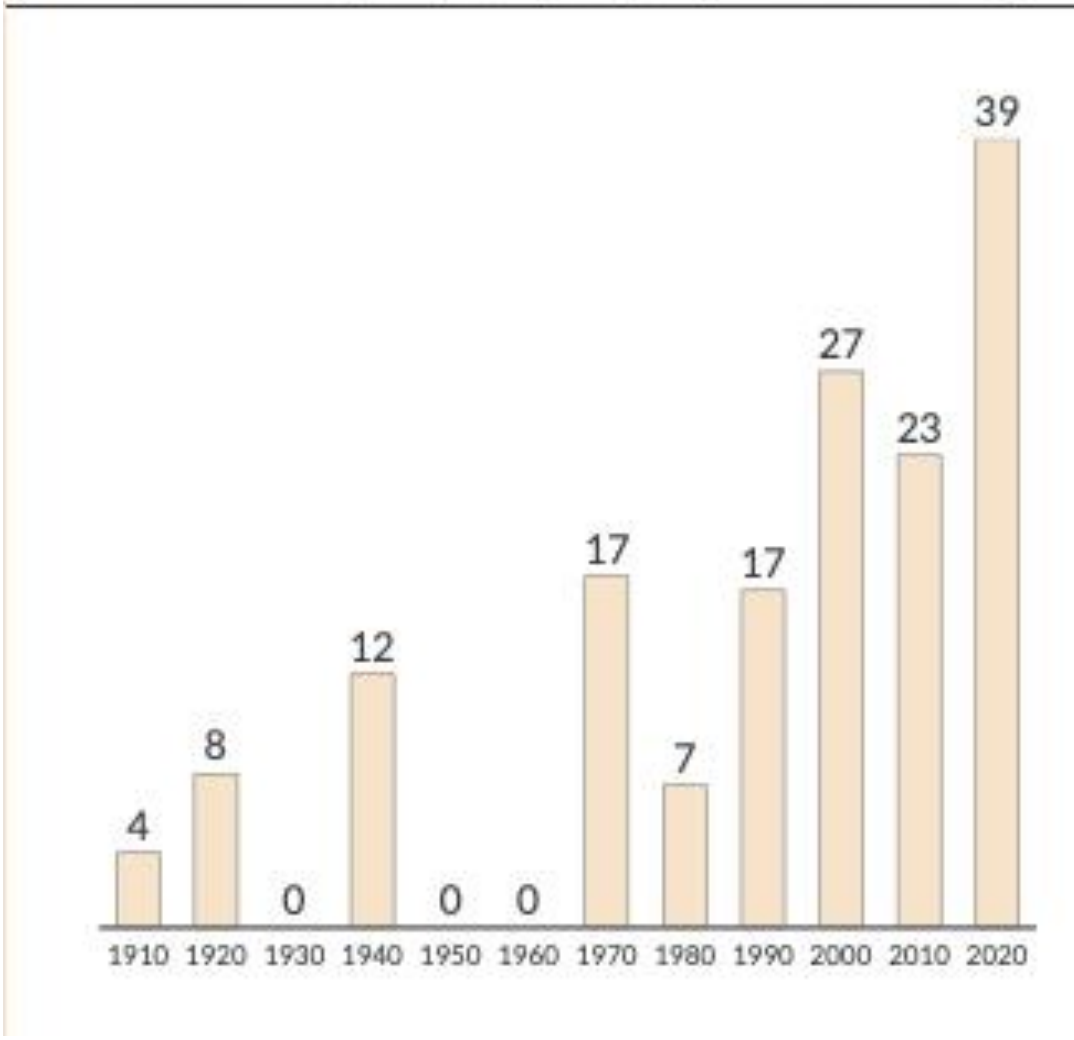


[1] N = 61,320 measurements, 1,095 SMS weeks of measurement, 1,051 GPs. The sum of the percentages per type of activity could deviate from the total hours as a result of rounding up or down. The results are weighted on the bases of population numbers by employment position, gender and age.
[2] M=male, F=female, T=total.

Source: Van Hassel D, Working hours of general practitioners, 2020

Climate change

Hittegolven per decennium
[Gemiddeld hittegolfgetal per jaar per decennium]



Relatieve overlijdensrisico's (RR) bij verschillende temperaturen en leeftijdsklassen in Nederland