CIH3 background paper

Fragmentation and demographic changes: implications for domestic health financing

(work in progress, updated May 2024)

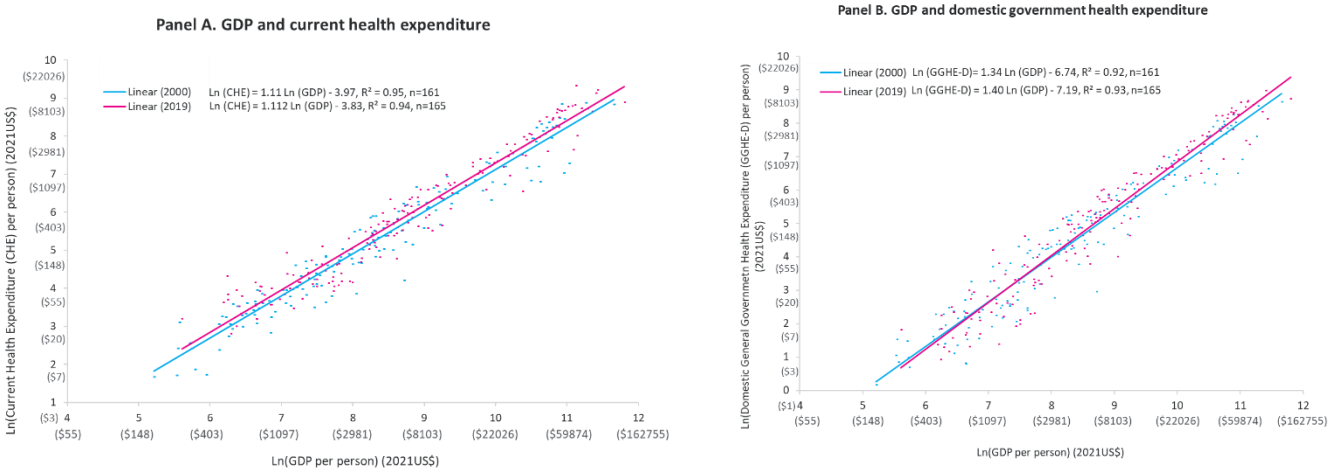
Mao et al

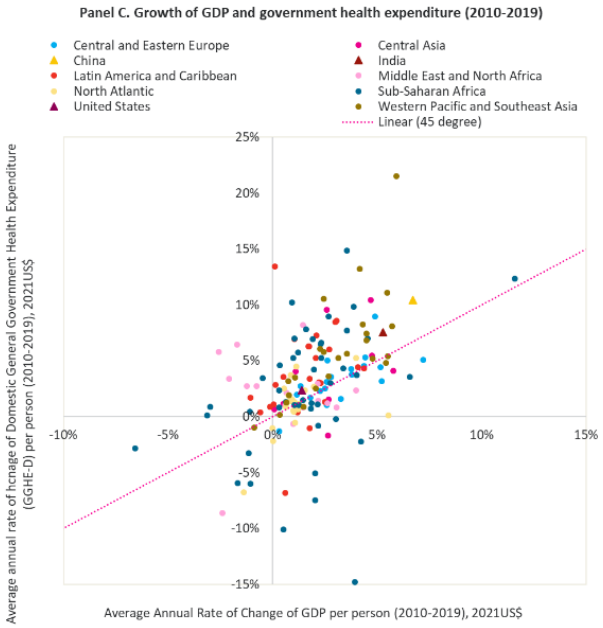
1. Overall domestic health financing trend

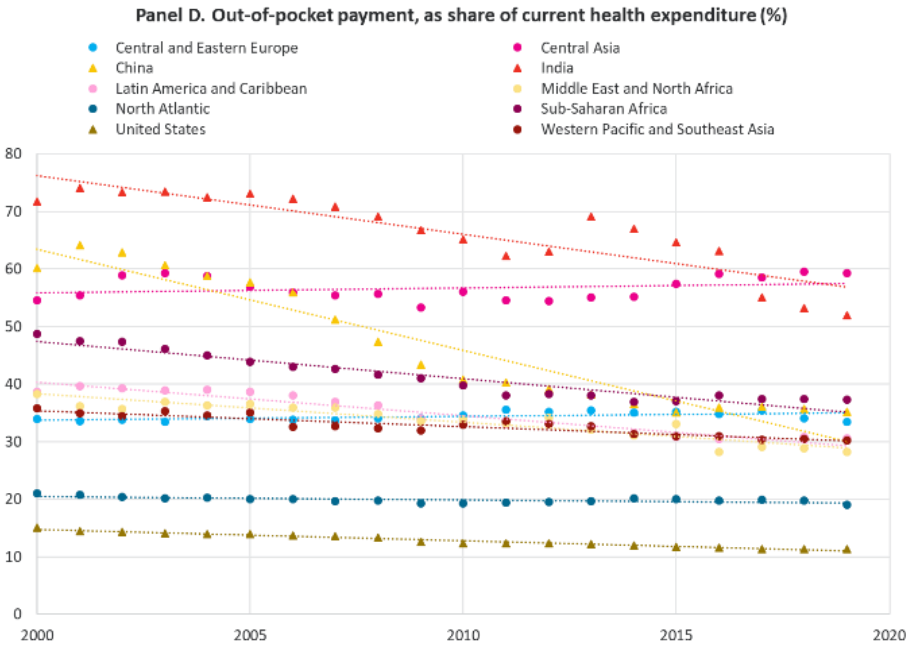
Total health expenditure increased over the past decades (fig 1 panel A) but limited progress has been made on increasing government spending on health (fig 1 panel B). Countries have not made equal progress on translating their economic growth into increased public finance for health (fig 1 panel C). Among the 30 most populous countries, public finance outpaced their GDP growth in Pakistan, China, Kenya, Tanzania and Indonesia, while public finances have not grown as their economies in Turkey, Ethiopia, Spain, and Vietnam.

Despite the progress, OOP spending has remained stubbornly high in most countries and regions (fig 1 panel D). Taken together, all these data show how many low- and middle-income country governments have made limited efforts since 2000 in ramping up health spending despite rapid economic growth and political commitment to universal health coverage (WHO and World Bank, 2023).

Fig 1 Health financing trend





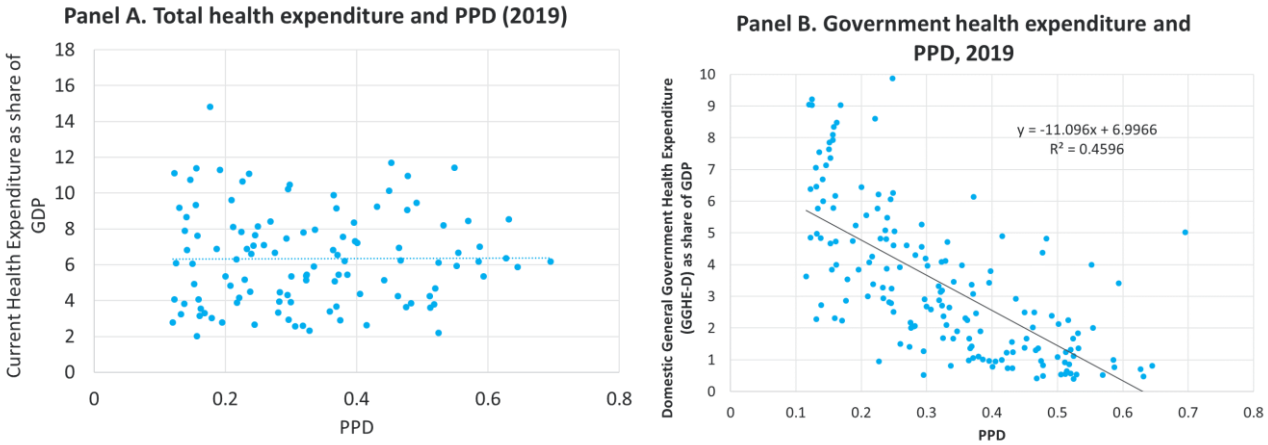


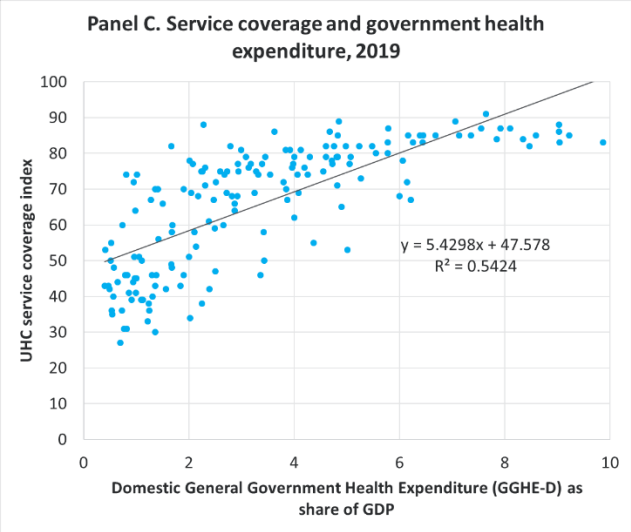
Data source: WHO GHED database, 2024

2. Role of domestic public financing

Total health expenditure (as share of GDP) is not associated with probability of pre-mature deaths (PPD). However, public finance (domestic general government health expenditure, GGHE-D) (as share of GDP) is associated with PPD (through service coverage)

Fig 2 Health financing, service coverage and outcomes





Data source: WHO GHED database, 2024

3. Demographic challenges

Changes in fertility and mortality rates have dramatically reshaped the demographic makeup of most countries. If UN Population Division projections for 2050 hold true, the world will experience 1.6 times more deaths in 2050 than in 2019, implying a surge in demand for healthcare driven by a growing older-age population (table 1). Meanwhile, there will be declines or only moderate growth in the working age populations that are the major contributors to the tax base and a critical source of government revenues for health. In some regions, including China, Central & Eastern Europe, and the North Atlantic, working age populations will decline over the coming decades (table 2). Globally, the old-age dependency ratio is projected to increase from 14% in 2019 to 20% in 2035 and to 26% by 2050. China and the North Atlantic are projected to have old age dependency ratios over 50%, followed by 45% and 39% in Central and Eastern Europe and the United States, respectively (table 2). In these regions, domestic resource mobilization through contributory taxes will likely fall short of what is needed to provide comprehensive services for aging populations.

While demographic shifts will put increasing pressures on public finances in the coming decades, many countries have the opportunity to improve revenue mobilisation and budget execution sooner and potentially mitigate some of these pressures by, for example, investing in preventive interventions and optimizing “lean” delivery systems to provide adequate health services for an aging population at a reasonable cost.

4. Fragmentations

While government spending appears essential for advancing much of the priority agenda, it is also true that government spending can and often does go towards interventions providing low value for money in improving health or reducing financial risk. One action that can improve spending efficiency and sustainability is the integration of risk pools to ensure a mix of old and young individuals and healthy and ill individuals. Effective risk pooling also translates into financial risk protection (Skinner et al, 2019).

Many countries are struggling to effectively pool funding and suffer from fragmented financing schemes. Fragmentation is a particular challenge in middle-income countries with nascent social health insurance systems that tend to serve relatively high socioeconomic status individuals (e.g., civil servants) and leave out the poor and vulnerable elderly (Jamal et al, 2022). For example, despite the successes of China's rural scheme, fragmentation persists, leading to disparities between urban and rural regions and among different population groups (table 2). In cases like these, greater health spending from general taxation and public sector service provision are needed. Additionally, even countries like China that have achieved relative success with financing reform face an increasing burden of NCDs and resulting pressures on their health systems (Yip et al, 2023), underscoring the need to prioritise interventions that efficiently respond to the growth in NCDs, including intersectoral action to address risk factors like smoking. In fragmented systems—that is, almost all systems—equity can be greatly enhanced by ensuring that populations receiving an enhanced benefits package pay for it themselves, e.g., by way of payroll taxes.

Analysis based on WHO's benefit package survey (to be added)

https://www.who.int/universal-health-coverage/compendium

https://www.who.int/teams/health-systems-governance-and-financing/economic-analysis/health-technology-assessment-and-benefit-package-design/survey-homepage

Case study of fragmented publicly financed schemes (to be expanded)

5. Recommendations

Table 1 Demographic changes

	Number of deaths (thousands)	Deaths as a % of deaths in 2019		CDR per 1000	CDR as a % of CDR in 2019		Working age pop. (thousands)	Working age pop. as a % of 2019		Old age dependency ratio (%)	Working age pop. (thousands)	
	2019	2035	2050	2019	2035	2050	2019	2035	2050	2019	2035	2050
World	58,000	126	158	7	110	126	5,041,000	114	121	14	20	26
Central & Eastern Europe	4,000	101	103	12	107	117	221,000	91	78	25	33	45
Central Asia	2,000	130	170	7	99	105	207,000	141	178	7	9	11
China	10,000	135	173	7	137	187	991,000	94	77	17	34	51
India	9,000	125	158	7	110	130	926,000	117	121	10	15	22
Latin America & Caribbean	4,000	127	162	7	114	140	435,000	111	111	13	20	30
Middle East & North Africa	3,000	141	202	5	116	146	361,000	125	136	8	14	23
North Atlantic	4,000	115	132	9	113	131	296,000	95	89	31	45	53
Sub-Saharan Africa	10,000	126	162	9	86	83	612,000	158	224	6	6	8
United States	3,000	126	148	8	117	132	219,000	102	104	24	35	39
Western Pacific & Southeast Asia	8,000	130	160	7	118	141	773,000	108	108	15	22	30

Note: Working age is ages 15–64 years. Old age dependency ratio is defined as percentage of the total population that is over 64 divided by the percentage of the total population that is working age.

Data source: UN Population, World Population Prospects, 2022

Table 2 Multiple health benefit packages

	Beneficiary group	Target population	Population coverage (% of total)	Public finance (% of total)	Premiums & sources	OOP%*	Health expenditure (% of total)	Benefit package*	Infections and maternal health conditions	NCDI-7	Payment
(A)	China										
1.	National Essential Public Health Program	All	100%	2.4% (fully subsidized by government, 40CNY pc)	Not applicable	Not applicable		Limited prevention and health management services	TB services, routine immunization, and maternal and postnatal services	Management for hypertension and diabetes, severe mental health patients; screening for breast and cervical cancer	Free
2.	Urban and rural residents' insurance	Residents, students	73%	24% (~80% subsidized by government, 380CNY pc)	Individual premium - 100-1200CNY per person, varies by province/ county	40% (inpatient)		Outpatient (limited) + inpatient		Mostly curative services	Copayment; annual caps for reimburse-ment
3.	Urban employees' insurance	Employees, retirees	24%	36% (fully subsidized through payroll taxes)	Payroll tax- Individual 2% salary +employer 6-12% salary (vary by province)	24% (inpatient)		Outpatient + inpatient		Mostly curative services	Copayment; annual caps for reimburse-ment
4.	Supplement-ary insurance	Civil servants	4.5%	5.3% (fully subsidized by government)	0	Not available		Outpatient + inpatient (in addition to the urban		Mostly curative services	Copayment; annual caps for reimburse-ment

							employee program)			
5.	Medical financial assistance		6.3% enrollment; 5% reimburse-ment	1% (fully subsidized by government)	0	Not applicable	Premium for vulnerable population; additional reimburse-ment for catastrophic health expenditures		Mostly curative services	No copayment; annual caps for reimburse-ment
5.	Private health insurance			0	Individual and/or employer					
(B)	Norway									
1.	National Insurance Scheme (NIS, *Folketrygd*)	All residents (including EU residents); undocument-ed adult immigrants have access only to emergency acute care, while undocument-ed children receive the same care as citizens	100%	35%	Payroll tax-Individual 8.2% percent and the employer rate varied between 5.1% and 14.1%	15%	No defined benefit package except for new and costly treatments and technologies#	Certain communic-able diseases, including HIV/AIDS, receive free medical treatment for their conditions		Copayments for most types of outpatient care; no copayments for hospitali-zation including pharma-ceuticals; annual caps for OOP
2.	Voluntary private health insurance	~10%; quicker access to outpatient services and greater choice of private providers			Individual and employers					

Notes: * Only drugs, services, and diagnostics listed on the National Basic Health Insurance Reimbursable List are eligible for reimbursement. Commodities or services excluded on the reimbursable list are not included in the OOP%.

outpatient prescription drugs are included, if included on the national formulary

EU = European Union; OOP = Out-of-pocket; TB = Tuberculosis

Source – Panel A (China): Summarized by authors based on China National Statistics; China National Health Account; China National Basic Health Insurance and Healthcare Statistics; Panel B (Norway): https://www.commonwealthfund.org/international-health-policy-center/countries/norway