Achieving Universal Health Coverage through Public Health Expenditure: An analysis of trends in 187 countries between 2000 and 2021

P1-S2

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- There was a strong association between public health expenditure and progress in universal health coverage across all 187 countries, and among each World Bank income classification group.
- HICs and UMICs majorly relied on public health expenditure, while LMICs and LICs continued to rely significantly on external contributions for current health expenditure.
- Components of the UHC-SCI may need to be re-evaluated to engineer a shift towards inclusion of secondary and tertiary health services in addition to primary health care.

BACKGROUND

Universal health coverage (UHC) is a concept that includes-protection from financial risks for all.[1] Target 3.8 of Sustainable Development Goals (SDGs) involves achieving UHC.[2]

Between 2000 and 2021, the percentage of the population without access to essential health services dropped by approximately 15% and nearly 60% of the world's population - still lacked access to crucial health services in 2021.[3]

OBJECTIVES

To understand the trends and linkages between public health expenditure (PHE) and UHC.

MATERIALS AND METHODS

- A secondary data analysis was conducted to study the trends and associations between UHC and public health expenditure.
- We analyzed the trends in UHC and PHE between 2000-2021 in 187 countries. We further analyzed trends for the same countries between 2015 and 2021; to understand the patterns developing as progress in UHC coverage reportedly slowed down.[1]
- Multiple linear regression analysis was conducted to study the associations between UHC-SCI scores and different forms of health expenditure. A variance inflation factor (VIF) of ≥10 was considered for exclusion of variables, and a p-value of <0.05 was considered as significant.

Indicators	Definition	Data source
UHC-SCI	UHC Service coverage index - Composite measure of 14 indicators spanning reproductive, maternal, newborn and child health, infectious disease, non-communicable disease, service capacity and access.[3]	WHO Global Health Observatory (WHO-GHO)[4]
PHE-GDP	PHE as a % of country's Gross Domestic Product	The World Bank - Organization for Economic Cooperation and Development (OECD)[5]
CHE	Current Health Expenditure of a country – this includes all types and sources of expenditure on health.	OECD[5] and WHO GHO[4]
PHE-CHE	PHE as a % of a country's current health expenditure	OECD[5] and WHO GHO[4]
OOPE-CHE	Out-of-pocket expenditure as a % of a country's current health expenditure	OECD[5] and WHO GHO[4]
EXT-CHE	External contributions as a % of a country's current health expenditure	OECD[5] and WHO GHO[4]

RESULTS

- The mean UHC-SCI score of 187 countries, increased by 19.52 (SD=7.31) points, from 46.01 (range - 13.31-83.15) in 2000 to 65.54 (range - 29.4-91.04) in 2021.
- There was an overall increase of 1.12% (SD=1.82) in PHE-GDP, from 2.99% (range - 0.06-22.25%) in 2000 to 4.11% (range - 0.32-12.63%) in 2021.
- A strong positive correlation was detected between the trends in UHC-SCI scores and PHE-GDP, overall (r=0.845; p-value = 0.017).
- In LICs, there was an overall decrease of 4% in mean PHE-CHE from 29.06% in 2000 to 23.71% in 2021. In LMICs, an overall increase of 0.6% in mean PHE-CHE was noted, from 38.87% in 2000 to 39.43% in 2021.
- Strong and significant negative correlation between change in OOPE-CHE and UHC-SCI scores was observed among countries from all income groups. In case of external contributions to current health expenditure (EXT-CHE), the association was significant and strong for LICs and LMICs, but was not significant for UMICs and HICs.

Table 2: Mean change in UHC-SCI and PHE-GDP between 2000 and 2021 among various World Bank income group classifications (n=185)*

	Countries classified by income groups (N=185)	Mean UHC-SCI		Mean change (SD) in UHC-SCI	Mean PHE-GDP		Mean change (SD) in PHE-GDP	R (Correlation co-efficient)	p-value[a]
		2000	2021		2000	2021			
1.	LIC (n= 22)	19.86	41.14	21.28 (4.37)	1.20	1.42	0.22 (1.06)	0.420	0.030
2.	LMIC (n= 50)	31.92	54.45	22.52 (6.42)	1.82	2.44	0.62 (1.35)	0.853	<0.001
3.	UMIC (n= 51)	47.72	68.94	21.22 (6.41)	3.10	4.16	1.10 (2.44)	0.872	<0.001
4.	HIC (n= 62)	65.29	80.84	15.72 (7.16)	4.35	6.27	1.92 (1.49)	0.850	<0.001

*2 countries were not classified by the World Bank

[a]estimated using linear regression analysis

Table 3: UHC and PHE Trends during 2015-2021 as compared to trends between 2000-2021

		UHC-SCI progress (%)	PHE-GDP change (%)
1.	**LIC (n = 22)**	**17.4%**	**113%**
2.	LMIC (n = 50)	11.7%	48.4%
3.	**UMIC (n = 51)**	**1.3%**	**51.8%**
4.	HIC (n = 62)	9.9%	56.8%

Figure 1: Scatterplot distribution for linear regression analysis between mean UHC-SCI scores and PHE-CHE (%) from 2000-2021 for (a) all 187 countries; (b) LICs (n=22); (c) LMICs (n=50); (d) UMICs (n=51); (e) HICs (n=62)

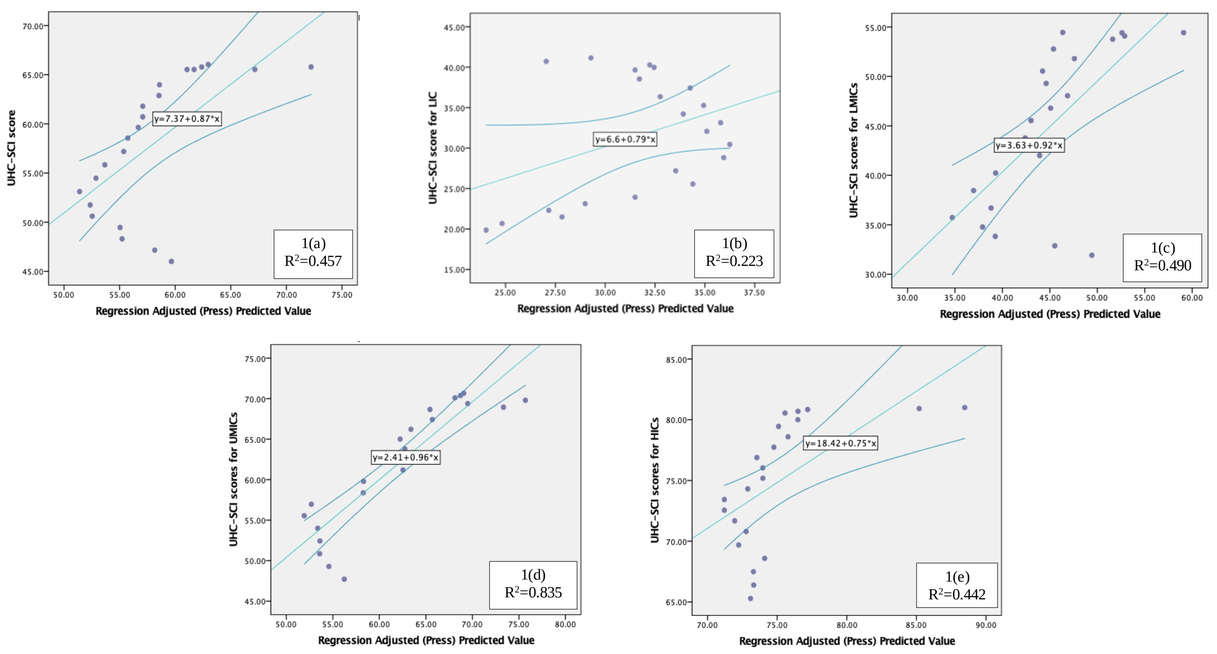
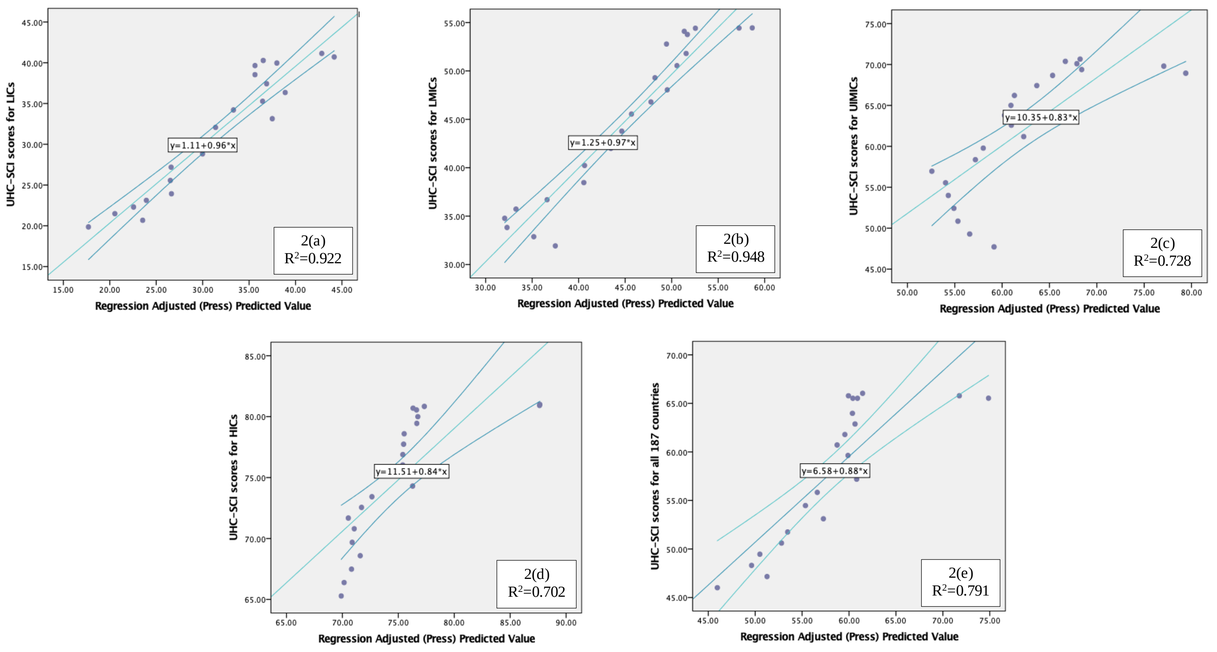


Figure 2: Scatterplot distribution for a multiple linear regression analysis model consisting of PHE-GDP (%) and EXT-CHE (%) to predict the variability in UHC-SCI mean scores in (a) LICs (n=22); (b) LMICs (n=50); (c) UMICs (n=51); (d) HICs (n=62),; (e) all 187 countries



CONCLUSIONS

- There is a need to advocate for increased public health spending in LICs and LMICs, with optimal allocation of resources and reduced reliance on external sources to focus on sovereign priorities.
- Components of the UHC-SCI may need to be re-evaluated to engineer a shift towards inclusion of secondary and tertiary health services in addition to primary health care – to effectively monitor progress in coverage after a certain level of UHC attainment as seen in UMICs and HICs.
- There is a need to ensure implementation of cost-effective policies so that the allocated public health funds are efficiently used for maximum effect.
- Continued research into improving efficiency of health investments, especially in UMICs and HICs is necessary to ensure a sustained improvement in UHC.

References

1. World Health Organisation. Universal Health Coverage. Fact Sheet. WHO. Geneva. 2023. [Last accessed on 25 July 2024]. Available at https://www.who.int/news-room/fact-sheets/detail/universal-health-coverage-(uhc).
2. World Health Organization. The World Health Report: Health Systems Financing, the Path to Universal Coverage. Geneva; 2010.
3. Tracking universal health coverage: 2023 global monitoring report. Geneva: World Health Organization and International Bank for Reconstruction and Development. The World Bank; 2023. Licence: CC BY-NC-SA 3.0 IGO.
4. World Health Organisation. The Global Health Observatory. WHO. Geneva. 2024. [Last accessed on 28 July 2024] Available at https://www.who.int/data/gho.
5. Organisation for Economic Co-operation and Development. OECD Stat. 2022. [Internet]. Available at https://nextjournal.com/fiona-spooner/government-health-expenditure.

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