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Spending targets for health: no magic number

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SUMMARY

Key observations and policy messages:

- This paper provides evidence which supports the message that all countries can make progress towards UHC, including those with very low levels of public spending on health (<40 $ per capita).
- Levels of public spending are central to UHC progress; in terms of service coverage as levels of public spending increase we observe both systematic improvements in UHC performance within countries, as well as convergence across countries.
- Whilst financial protection also improves with public spending (especially >$200 per capita), progress remains highly variable across countries even at >$520 per capita (one of our spending quintile thresholds). Improving financial protection can be complex, requiring both the systematic development of policy, and the institutions that govern and manage health systems.

Motivation and objectives:

- A number of health expenditure targets exist and are widely referred to. These include targets based on absolute spending amounts, and those based on spending relative to a denominator such as GDP or total government spending; those based on detailed bottom-up costing and those without a clear evidence base; and some which clearly refer to public health spending, and others which imply total health spending.
- Targets send the message to countries that at lower spending levels little or no progress can be made in terms of service coverage and financial protection, which is clearly not the case given the considerable variability across countries with similar levels of public expenditure on health.

Methods, indicators and data:

- We use data envelopment analysis (DEA) to assess and compare performance on agreed indicators for **both service coverage and financial protection**, relative to a country's level of public spending on health in per capita terms.
- We measure performance using five service coverage indicators (DPT3, ART, TB, family planning, skilled attendance at birth), and one measure of financial protection using public expenditure on health as % total health expenditure as a proxy measure, given the lack of widespread data on our preferred indicators.
- The latest validated and published data (2012 or most recent) are analysed for 83 low and middle-income countries.

Key results:

- We observe high levels of variation across countries in terms of UHC performance at very low levels of public spending i.e. <PPP$ 40 per capita; some countries achieve a performance less than half of others with a similar levels of spending.
- UHC performance improves as countries increase public spending on health; convergence in performance between countries is also observed as spending increases. This convergence is driven primarily by improvements in service coverage, and occurs rapidly, once countries spend more than PPP$ 40 per capita.
- In terms of financial protection, significant improvement is observed across our sample of countries only once public spending is greater than PPP$ 200 per capita; convergence across countries is not observed, however. Even at higher levels of public spending there remains significant variation in how well countries translate greater public spending on health into financial protection for their citizens.

1. More money for health, more health for the money

a) Background

The World Health Report 2010 [1] put forward two central messages; first that countries need to ensure adequate spending on health to make progress on UHC and, secondly, that improving spending efficiency is central to the UHC agenda. This perspective has been reinforced by the adoption in 2015 of both the Sustainable Development Goals (SDGs), and the Addis Ababa Action Agenda on Financing for Development, which also recognise the need to explore the nature of the resources available for health systems, and the use to which they are put, rather than focusing solely on estimates of the level of resources required to make progress toward UHC. How public resources are used has a direct impact on both levels of service and financial coverage, as well as how equitably both are distributed [2].

This paper considers these issues in the context of low and middle-income countries. A number of estimates of how much countries should spend on health exist, are widely referred to in policy discussions, and in some cases can play a useful role in advocating for greater investment in the health sector. However, there is no single or simple answer to this question [3], and many benchmarks or spending estimates offer little in terms of useful guidance to country policy makers. Worse still, these estimates may divert policy focus away from improving the way existing money is being spent. In the analysis which follows we aim to provide insights for country policy makers by systematically analysing how performance varies across countries in terms of the two main dimensions of UHC (service coverage and financial protection), relative to levels of health spending.

b) Health spending targets

Health spending targets widely used in policy discussions concerning low and middle-income countries are summarised below. A more complete list is provided in Annex 1.

***Relative targets**:* The Abuja Declaration of 2001 recommended that governments allocate 15% of their budgets to the health sector, although the basis for this figure is not clear, with no explicit connection to achieving a certain level of health system performance. Whilst focused on the African Region, this target is widely referred to. In 2012 only 14% of governments in low and lower-middle income countries met the Abuja target; indeed, only 29% of upper-middle income and high-income countries reached this level[1]; as a result the target is rarely considered useful or relevant to country policy makers.

An indicator which is increasingly used, and which builds on the Abuja Declaration target, is the amount a country spends in terms of public spending on health as a %GDP. This indicator captures both the priority given to health in budget allocations, as well as the fiscal context i.e. how large government is relative to the economy, measured in terms of "total public spending as %GDP". The World Health Report 2010 noted that "*...it is 'difficult to get close to universal health coverage at less than 4–5% of GDP*'[2]".

[1] Author calculations based on WHO Global Health Expenditure Database (GHED).
[2] See Table 5.2 on p98.

Subsequent analysis [4] makes a similar assertion saying that "*Ensuring financial protection at an adequate level generally requires GHE[3]/GDP of at least 5 per cent. For example, such a ratio is generally required for limiting the proportion of out-of-pocket payments to 20 per cent of THE, which in turn is generally needed for achieving low rates of catastrophic and impoverishing health expenditure.*" The explicit link between this spending indicator and financial protection, a fundamental objective of UHC, is more useful, and refers to previous analysis [5] which looks at the correlation between a health systems reliance on direct out-of-pocket payments and levels of catastrophic and impoverishing spending.

Absolute targets: the World Health Report 2010 also presents estimates of required health spending prepared by the High-Level Taskforce on Innovative International Financing for Health Systems [6]. The report concluded that low-income countries would need to spend on average US$60 per capita by 2015 in order to deliver a set of essential health interventions[4], with the caveat that for some countries the figure would be less than US$40 per capita, and in others more than US$80 per capita. Subsequently, these estimates were independently updated to 2012 US dollar terms (from 2005) resulting in an average figure of $86 per capita [4], which was clearer in explicitly referring to the required level of government or public health expenditure.

Estimates are not always explicit in referring to public rather than total spending on health, which is problematic given that public and private revenue sources impact very differently on how well countries perform in terms of UHC [7]. In 2012, whilst all governments in high and upper-middle income countries spent at least $86 per capita on health, only 33 or 72% of lower-middle income countries, and just two low-income countries (Kyrgyzstan[5] and Rwanda)[6], reached this level.

c) Variation in UHC performance

One downside of these estimates of health spending requirements is that they hide wide variation in performance across countries. In some cases, policy makers may consider that unless they reach, or are close to reaching these levels of health spending, they will be seriously limited in the progress they can make towards UHC. Clearly this is not necessarily the case; for example public spending on health as %GDP in Thailand today is significantly less than 4%, and stood at around 2.2% when the Universal Coverage Scheme was introduced in 2004. Whilst variation across countries spending at similar levels will be due to a wide range of factors, including many beyond the health system, the way in which health systems are organised is likely to at least partially explain performance variation [8].

[3] In the report the authors use GHE to refer to government health expenditure, equivalent to public spending on health, and referred elsewhere in this paper as GGHE (general government health expenditure) in line with NHA terminology. THE refers to total health expenditure.

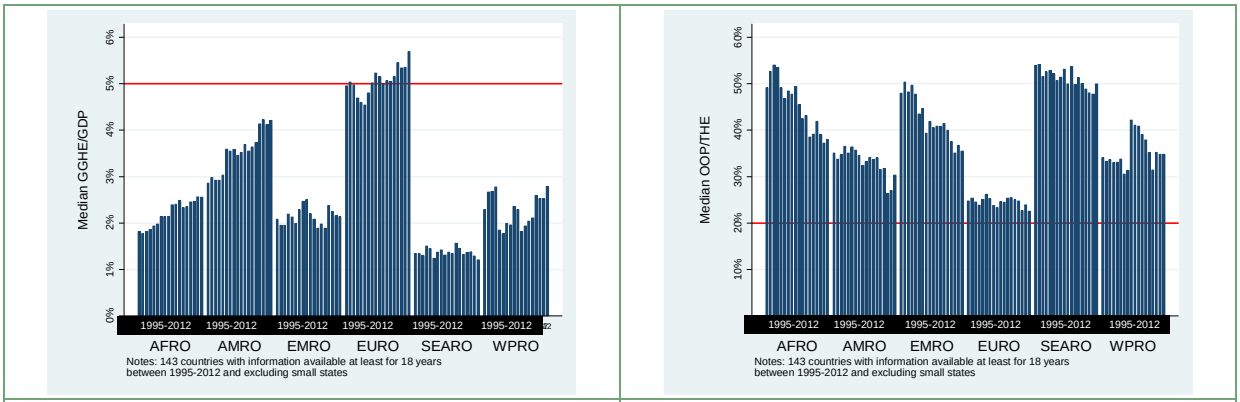
[4] Defined as those services required to increase coverage on MDGs 1, 4, 5, 6, and 8e to 50%. Costs related to health systems activities or inputs shared across programmes were also estimated.

[5] Note that since 2013 following a reclassification of GNI by the World Bank, Kyrgyzstan is now categorised as a lower-middle income country.

[6] Based on the World Bank's income classification of countries for 2012.

Figure 1 further illustrates this point by showing two trends, one for the median level of GGHE as % of GDP (see left panel) and the other for the median level of OOP as % of THE (right panel) across the period 1995 to 2012[7]. In both panels selected targets are included as horizontal lines; 5% GGHE/GDP, and 20% OOP/THE. A focus on the median allow us to show the performance for half of the countries in each year, whereas the average or mean score can be skewed by one or two countries[8]. In the left panel, the median GGHE/GDP increased in almost all WHO regions (high-income countries are excluded) by almost one percentage point but still remains significantly below 5%; in other words half of the countries increased public spending on health relative to the size of their economies, except in the Eastern Mediterranean and South-East Asia regions.

Figure 1: Trends in public spending on health as %GDP, and direct household contributions relative to total health spending (1995-2012)[9]



Median government health expenditure relative to GDP	Median out-of-pocket spending relative to total health spending

Nb[1]: Both charts excludes high-income countries

Most importantly, the right-hand side figure shows that the median OOP/THE ratio has decreased in all regions since 1995 except in the WHO European, even in regions where GGHE/GDP has not increased. Three points are worth making based on these findings:

- first, in most regions 50% of countries reduced their reliance on direct payments by households despite being far from spending 5% GGHE/GDP
- secondly, there appears to be scope to reduce reliance on private out-of-pocket payments in the absence of significantly more money for health, as illustrated by the EMRO and SEARO regions
- thirdly, macro analysis of health expenditures has serious limitations, not least understanding simultaneous changes in levels of utilization of health services, something we address in this paper

[7] Henceforth referred to as GGHE/GDP and OOP/THE.

[8] A focus on the mean could be influenced by a country outperforming others over a number of years, for example in the case of prolonged economic downturn; whilst interesting in terms of how this affects a country's commitment to health, it is not the focus of this paper.

[9] Only countries with information available for at least 18 of the 19 years between 1995 and 2012 are included. Countries excluded are Afghanistan (only 12 years of data); Dem. Rep. Congo (11 years); Iraq (11 years); Liberia (11 years); Somalia (7 years); South Soudan (5 years); Timor Leste (14 years). *Small countries are also excluded, i.e. 13 countries in Africa; 15 countries in the Americas; 1 country in the Eastern Mediterranean region; 3 countries in South East Asia and 10 countries in the Western Pacific;* WHO regional classification is adopted.

d) The critical role of public revenue sources for progress towards UHC

Evidence shows that for countries to make progress towards UHC their health system needs to rely predominantly on public revenue sources [7]. By public, we mean those revenue sources which are prepaid, mandatory and pooled; this includes for example both government budgetary allocations as well as mandatory contributions to health insurance schemes, typically in the form of payroll taxes. Recent evidence confirms the importance of fully and systematically executing public resources. Budget allocations to health reflect political commitment, but effectively spending those funds the strength of the health system. In many countries, governments do not fully execute budget allocations for a variety of reasons, including deficiencies in public financial management [2].

Voluntary or private revenue sources tend to contribute little in terms of helping countries move their health systems towards UHC, in particular cash payments at the point of service use, the focus of much political attention in recent years [1, 9]. Voluntary health insurance schemes, whether commercial for-profit or non-profit community-based schemes, do play a role in risk-sharing but tend to reach only a small percentage of a country's population [10]; furthermore, given the nature of these schemes they struggle to maintain financial stability when faced with a population with high levels of unmet needs, and typically exclude either those who need care the most, or relatively expensive health services.

2. Indicators, data and methodology

Given the critical role of public revenues for progress on UHC, our analysis focuses exclusively on the relationship between a country's level of public spending on health and its progress in terms of both service coverage and financial protection. We draw on indicators agreed in the joint UHC monitoring framework [11].

a) Public spending on health

Table 1 shows descriptive statistics for low, middle and high-income countries, for both absolute and relative levels of public spending on health. GGHE/GDP was 3.66% on average between 1995-2012 with a standard deviation of 2.2 percentage points; variance across countries was three times greater than the variance observed within[10] countries over this period. In contrast public spending on health per capita was an average of $691 with a