Research Article

Health Financing Trends and Universal Health Coverage

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Abstract

Introduction: About half of world's population still does not have full coverage of essential health services. All UN Member States have agreed to achieve universal health coverage (UHC) by 2030. UHC means that all individuals receive needed quality essential health services without financial hardship.

Aim and objectives: To assess global health financing trends from year 2000 to 2014 and its projections to 2040.

Material and Methods: Data collected on health spending and its projections from 1995 to 2040 were analyzed to find its trends and UHC.

Results: In 2000 to 2014 PEH grew more than income. Deterioration occurred in domestic public funds and prioritization of budget for health from MDGs to SDGs, especially in LICs. Less domestic public funds were spent for PHC. In 2016, UHC index ranged from 85·7 in Switzerland to 26·9% in Somalia. Per capita health spending in 2040 was expected to be 45·9 times larger in high- income than in low-income countries. Global health-related SDG index in 2017 was 59·4. No countries projected to meet NCD and suicide SDG targets for 2030. Political economy of UHC reforms hastened the achievement of UHC.

Discussion: Study 2000-2014 highlighted the role of domestic PEH. It drew attention to separate domestic public and external source expenditures. It proposed enhanced collaboration between Health policy makers, Ministries of Health and Finance; and to use domestic public funds in LMICs to help policy makers for budget allocation. Studies on health sector reforms showed the need to understand the political economy reforms. Health Ministers of all countries should incorporate health reforms in their governments.

Conclusion: In LMICs, per capita PEH from domestic sources should be enhanced. The domestic public funds should be mainly spent on PHC. Advocacy for health needs to be done to influence decisions within political, economic, and social systems.

Keywords: Health financing; PEH; PHC; Political economy; UHC

Abbreviations

CSMBS: Civil Servant Benefit Scheme; DAH: Development Assistance for Health; GBD: Global Burden of Disease; GDP: Gross Domestic Product; HIV: Human Immunodeficiency Virus; IHHP: International Health Policy Program; LICs: Low Income Countries; LMICs: Low and Middle Income Countries; MDGs: Millennium Development Goals; NCD: Non Communicable Diseases; NHSO: National health Security Office; PEH: Public Expenditure on Health; PHC: Primary Health Care; SDGs: Sustainable Development Goals; SHI: Social Health Security Scheme; UCS: Universal Health Scheme; UHC: Universal Health Coverage; UN: United Nations; USD: United States Dollar; WHO: World Health Organization

Introduction

At least half of the world's population still does not have full coverage of essential health services. About 100 million people are

still being pushed into extreme poverty (defined as living on 1.90 USD or less a day) because they have to pay for health care. Over 800 million people (almost 12% of the world's population) spent at least 10% of their household budgets to pay for health care. All UN Member States have agreed to try to achieve Universal Health Coverage (UHC) by 2030, as part of the Sustainable Development Goals.

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. UHC enables everyone to access the services that address the most significant causes of disease and death, and ensures that the quality of those services is good enough to improve the health of the people who receive them. Protecting people from the financial consequences of paying for health services out of their own pockets reduces the risk that people will be pushed into poverty. Primary health care is the most efficient and cost effective way to achieve universal health coverage around the world. UHC emphasizes not only what services are covered, but also how they are funded, managed, and delivered. A fundamental shift in service delivery is needed such that services are integrated and focused on the needs of people and communities. This includes reorienting health services to ensure that care is provided in the most appropriate setting, with the right balance between out-and in-patient care and strengthening the coordination of care. Health services, including traditional and complementary medicine services, organized around the comprehensive needs and expectations of people and communities will help empower them to take a more active role in their health and health system. To meet the health workforce requirements of the Sustainable Development Goals and universal health coverage targets, over 18 million additional health workers are needed by 2030. Gaps in the supply of and demand for health workers are concentrated in low- and lower-middle-income countries. The growing demand for health workers is projected to add an estimated 40 million health sector jobs to the global economy by 2030. Investments are needed from both public and private sectors in health worker education, as well as in the creation and filling of funded positions in the health sector and the health economy. There are many things that are not included in the scope of UHC: (i) UHC does not mean free coverage for all possible health interventions, regardless of the cost, as no country can provide all services free of charge on a sustainable basis. (ii) It is not just about health financing. It encompasses all components of the health system: health service delivery systems, the health workforce, health facilities and communications networks, health technologies, information systems, quality assurance mechanisms, and governance and legislation. (iii) It is not only about ensuring a minimum package of health services, but also about ensuring a progressive expansion of coverage of health services and financial protection as more resources become available. (iv) It is not only about individual treatment services, but also includes population-based services such as public health campaigns, adding fluoride to water, controlling mosquito breeding grounds, and so on. (v) It is comprised of much more than just health; taking steps towards UHC means steps towards equity, development priorities, and social inclusion and cohesion.

All countries can take actions to move more rapidly towards it, or to maintain the gains they have already made. In countries where health services have traditionally been accessible and affordable, governments are finding it increasingly difficult to respond to the ever-growing health needs of the populations and the increasing costs of health services. Moving towards UHC requires strengthening health systems in all countries. Robust financing structures are the key. When people have to pay most of the cost for health services out of their own pockets, the poor are often unable to obtain many of the services they need, and even the rich may be exposed to financial hardship in the event of severe or long-term illness. Pooling funds from compulsory funding sources (such as mandatory insurance contributions) can spread the financial risks of illness across a population. Improving health service coverage and health outcomes depends on the availability, accessibility, and capacity of health workers to deliver quality people-centred integrated care. Investments in quality primary health care will be the cornerstone for achieving UHC around the world. Investing in the primary health care workforce is the most cost-effective way to ensure access to essential health care. Good governance, sound systems of procurement and supply of medicines and health technologies and well-functioning health information systems are other critical elements (Figure 1).

Figure 1: Universal Health Coverage.

Primary health care is an approach to health and wellbeing centered on the needs and circumstances of individuals, families and communities. It addresses comprehensive and interrelated physical, mental and social health and wellbeing. It is about providing whole-person care for health needs throughout life and ensures people receive comprehensive care, ranging from promotion and prevention to treatment, rehabilitation and palliative care as close as feasible to people's every day environment. WHO has developed a cohesive definition of primary health care based on three components: (i) Ensuring people's health problems are addressed through comprehensive promotive, protective, preventive, curative, rehabilitative, and palliative care throughout the life course, strategically prioritizing key system functions aimed at individuals and families and the population as the central elements of integrated service delivery across all levels of care (ii) Systematically addressing the broader determinants of health (including social, economic, environmental, as well as people's characteristics and behaviours) through evidence- informed public policies and actions across all sectors (iii) Empowering individuals, families, and communities to optimize their health, as advocates for policies that promote and protect health and wellbeing, as co-developers of health and social services through their participation, and as self-cares and care-givers to others. Monitoring progress towards UHC should focus on 2 things: (i) The proportion of a population that can access essential quality health services. (ii) The proportion of the population that spends a large amount of household income on health. Together with the World Bank, WHO has developed a framework to track the progress of UHC by monitoring both categories, taking into account both the overall level and the extent to which UHC is equitable, offering service coverage and financial protection to all people within a population, such as the poor or those living in remote rural areas.

WHO uses 16 essential health services in 4 categories as indicators of the level and equity of coverage in countries: (i) Reproductive, maternal, newborn and child health i.e. family planning, delivery care, full child immunization and health-seeking behaviour for pneumonia (ii) Infectious diseases i.e. tuberculosis treatment, HIV antiretroviral treatment, Hepatitis treatment, use of insecticide-treated bed nets for malaria prevention and adequate sanitation. (iii) Noncommunicable diseases i.e. prevention and treatment of raised blood pressure, prevention, and treatment of raised blood glucose, cervical cancer screening and tobacco (non-) smoking. (iv) Service capacity and access i. e. basic hospital access, health worker density, access to essential medicines, health security: compliance with the International Health Regulations. Each country is unique, and each country may focus on different areas, or develop their own ways of measuring progress towards UHC. But there is also value in a global approach that uses standardized measures that are internationally recognized so that they are comparable across borders and over time. WHO

is supporting countries to develop their health systems to move towards and sustain UHC and to monitor progress. WHO works with many different partners in different situations and for different purposes to advance UHC around the world [1].

UHC has emerged as both a global and national health priority, and progressive realization of UHC is viewed as a critical path for improving health outcomes and achieving greater equity in health across all populations. Globally, the importance of UHC is highlighted by its codification in the Sustainable Development Goals (SDGs) in 2015, although its thematic origins come from the Alma Ata Declaration of 1978 [2,3]. Numerous case studies have sought to identify key factors in achieving UHC and have posited several drivers, including sustained political will, clearly defined health service packages, and phased implementation to ensure that all populations are covered [4,5]. Achieving UHC for all populations requires the harmonization of political, social, economic, and health leadership, as well as mature health systems capable of ensuring efficiency and equity. Furthermore, health financing systems must be able to deliver a sufficient set of pooled resources for health [6,7] which requires sustaining sufficient supplies of resources to finance key health services at the country level. Pooled resources consist of prepaid revenues through government financing, social health insurance, private insurance or Development Assistance for Health (DAH), which help to mitigate individual-level financial risks across populations and thus fund care for more people. The cornerstones of UHC-providing access to essential health services for all populations and protection against catastrophic health spending-are best supported through the establishment of sufficient and stable supplies of pooled resources for health.

The UHC index provides a good approximation of the average coverage of essential health services across a wide range of priority health areas. To estimate the number of people covered by UHC health services, we assumed the UHC index to be a coverage measure and multiplied the UHC index by each location-year-specific population. This assumption allows the aggregation across individuals estimated to be covered with a subset of the high-quality services. We categorized potential drivers of change in UHC index performance into two distinct components, using the decomposition method described by Das Gupta: the change in UHC index performance associated with changes in pooled total health spending per capita and the change in performance associated with changing efficiency [8]. World Bank 2017, reported health spending and UHC index performance for each country, income group, and GBD super-regions [9,10]. It aggregated spending per capita or per GDP by calculating spending for the group relative to the total population or GDP. It reported all estimates up to 2040, and highlighted some of the projected figures for 2030.

During the early years of implementation of the UN's Sustainable Development Goals (SDGs), which were adopted in

2015 [2], various international efforts have sought to galvanise faster progress towards the SDGs' bold aims. A recent example includes WHO's 13[th]General Programme of Work (GPW13) for 2019-23, which involves an ambitious agenda of measurable goals and interconnected strategies to ensure healthy lives and wellbeing for people of all ages. The GPW13 has three strategic priorities that will be measured by existing, or composites of existing, SDG indicators: achieving Universal Health Coverage (UHC), addressing health emergencies, and promoting healthier populations [11]. The Global Burden of Diseases, Injuries, and Risk Factors Study (GBD) 2015 was the first GBD effort to measure the health- related SDGs, producing estimates for 33 health-related SDG indicators and generating an overall measure, the health-related SDG index, from 1990 to 2015 for 188 countries [12]. The Inter-agency and Expert Group on Sustainable Development Goal Indicators has requested that metadata be disaggregated by sex for 19 health-related SDG indicators [13] and more detailed data will need to be collected and monitored to assess progress, identify high-risk populations, and develop targeted approaches to prevention and treatment. Using past trends, we project global progress and analyse attainment of the health-related SDGs through 2030. These estimates will provide a benchmark against which the feasibility of attaining SDG targets by 2030 can be assessed on the basis of what countries have achieved in the past.

Studies on Political Economy Analysis into Health Financing Reform Efforts

A brief analysis of health financing reform experiences in Thailand, Turkey and Mexico highlighting the importance of political economy factors in shaping reform processes to achieve the UHC, are described below:

Thailand

Universal coverage scheme: The political economy of reforms Evidence, analysis, and observations in this section were drawn from the authors who were eyewitnesses in the reform processes and active members of the UHC team. The authors assessed stakeholders' roles and positions in relation to various decision options based on the conversations, deliberations, and discourses they publicly made. The reform team consisted of senior officials in the MOPH led by the Permanent Secretary, groups of academia and civil society organizations.

Key Stakeholders at the 2001-2002 Reform

This section analyses how the health reform team managed this tumultuous process and achieved a number of socially progressive, evidence-based reforms. UHC was the political manifesto of the January 2001 election campaign. The government had committed itself to generating an additional 30 billion Baht (1 billion USD) in order to cover 47 million UCS members

through general tax revenue rather than premiums and to adopt a comprehensive benefit package. It necessitated a cost containment model using closed-ended provider payment. To achieve this, stakeholders were grouped by their Political Characteristics, Responsibilities and Potential Consequences from UCS. These groups comprised of (i) The politicians (politician politics) (ii) The bureaucrats (bureaucratic and budgetary politics) (iii) The reformists, and their like-minded groups and alliances (leadership politics) (iv) The healthcare providers (interest grouppolitics).

Stakeholders' Different Positions on UCS Policies and Designs

Eye-witnesses' active members of the UHC reform team, analyzed and deliberated the political economy dimensions related to key policy and implementation questions. Some disputed issues reached and some issues did not reach consensus among stakeholders around 2001-2002 [14]. Four key areas of political tension were prioritized as follows: 1. Population coverage i.e.: (i) Thai citizen coverage (ii) Non-Thai population coverage II Financing, and budgeting i.e.: (i) Financing source (ii) Copayment policies (iii) Budgeting III. Strategic purchasing i. e. : (i) Benefit package (ii) Provider payment method (iii) Registration to PHC provider IV. UCS Governance i.e.: (i) Governing body of UCS. The conflicting positions and tensions among stakeholders who were supportive and not supportive of certain UCS designs and decisions were analyzed.

Budgetary Politics: A Major Shift from Program-based to per Capita Budget

The annual UCS per-capita budget process was a major shift from the traditional bilateral negotiation with the Bureau of Budget that the MOPH and all other ministries had previously used. Discretionary power can lead to corruption. A compelling formula was proposed by Klitgaard of "Corruption = Monopoly + Discretion - Accountability**"** [15,16].

To address the problems with the prior budget-setting process, reformists proposed an annual budget request based on utilization rates of different benefit packages and their related unit cost. The three parameters that are used to estimate the per-capita budget (use rate, unit cost, and target population) are peer reviewed and agreed based on consensus, by a multi-stakeholder Budgeting Sub-committee appointed by the National Health Security Board. This new process led to increased transparency and good governance. Civil Society Organizations have continued to monitor the budgeting processes and budget figures closely and have made it an issue in the public media when the budgetary gap was large.

Bureaucratic Politics: Purchaser-Provider Split and the Long-term Tension between MOPH and NHSO

There was a substantial political tension over the governance

of UCS. The purchaser-provider split is a governance model of the relationship between insurance funds and health facilities, in which third-party payers are kept organizationally separate from service providers. This arrangement is believed to lead to improvements in service delivery, such as improved cost containment, greater efficiency, organizational flexibility, better quality and improved responsiveness of services to patient needs. Prior to the introduction of UCS, the MOPH managed five program budgets through an annual budget allocation to its health facilities including the Provincial Health Services, District Health Services, Sub-district Health Services, Low Income Scheme and voluntary health insurance scheme. As part of the UCS reform, the NHSO was proposed to take over the purchasing function from the MOPH, a function that it already served for the CSMBS and SHI from 2002onwards.

In 2002, the total estimated resource requirement for 47 million UCS members was 56.5 billion Baht. This amount was estimated from 1,202 Baht per capita budget multiplied by 47 million members. The existing was 26.5 billion Baht. The shortfall of 30 billion Baht was mobilized by the Prime Minister from other sectors. The supply side financing of five programs to the MOPH health facilities become zero in the fiscal year 2002 onward. The combined resources from the previously supply-side financing and the new fresh 30 billion Baht budget were managed by NHSO for UCS members. The MOPH only maintained service provision and other regulatory functions. Significantly more resources were made available to UCS than the previous targeting schemes managed by the MOPH. Health facilities had a significant gain from increased resources after UCS. Evidence is one of the many inputs for policy decisions, such as policy maker's values, interests, judgment, culture of using evidence, lobbying, pressure groups and pragmatism. It is important to note that there is no linear relationship between evidence and policy decisions [17].

It was the political party that adopted the UHC agenda at the 2001 election campaign and deliberately wanted to implement and honor political promises that set the initial agenda for reform and general goals of the UCS. Decisions on policy formulation and design at the operational level rested mostly on the technocrats led by the MOPH Permanent Secretary, in consultation with and approved by the Minister of Public Health. In the UCS design, the common types of evidence used for informed policy decisions were primary research related to CSMBS, SHI, social welfare schemes, prescription behavior under fee-for-service and capitation systems, systems efficiency and cost containment. A World Bank consultant's proposal in advocating fee-for-service, on the grounds that consumers should have free choice to any perceived quality service was rejected in the face of strong evidence of supplier-induced demand and excessive use of medical products in the CSMBS, which leads to high-cost inflation. It was determined that

deliberate efforts must be given to strengthen the quality of the PHC contractor network. Thai researchers stood firm against the advice of external experts, about the inherent value of competition. Three arguments used against the assertions were the following: there is no real competition in the light of healthcare market failure [18]; the better-off traveling to seek quality care while leaving the poor behind widens the inequity gap; and the equalization of quality of care across geographical areas is the government's legitimate responsibility that cannot be solved by market competition. Policy makers were convinced of these evidences and arguments that enabled the adoption of more path-efficient payment and governance reforms.

The permanent secretary at the 2002 UCS launch, Dr. Mongkol Na Songkhla led the process; he as a reformist who has a pro-poor ideology with long experience in district health services as a provincial chief medical officer in various provinces. He and his team worked closely with the Minister and Deputy Minister of Public Health. With the leadership of the Minister, Deputy Minister and the Permanent Secretary, and the political mandate to achieve UHC, decisions had to be made even when there was no consensus, so that immediate operational actions could be taken [19].

Turkey

Following the 2002 national elections, a new government came to power in Turkey to promote equitable access to health services, reduce disparities in health outcomes, and improve overall population health [20]. Compared with other countries at a similar income level, Turkey recorded high infant and maternal mortality rates, low satisfaction with health services in the public sector, and high impoverishment rates due to health expenditures [21-23]. Between 2002-2012, the government implemented a series of reforms known as the Transformation in Health Program (THP) that sought to expand the supply of health services, while overhauling financial arrangements to increase effective coverage, reduce fragmentation between various insurance schemes, and increase public revenues in the health sector [22]. The THP sought to unify diverse financing and social security plans under a single national insurance scheme providing comprehensive coverage for all Turkish citizens [24]. In early stages of the reform, supportive stakeholders included domestic national leadership and external actors: the Prime Minister and the political party in power, plus the World Bank, WHO, and other development partners that were committed to the success of the reform. The reform team used supportive leadership and external actor politics strategically to overcome opposition within the interest group, bureaucratic and beneficiary politics spheres, including from the Turkish Medical Association, the Ministry of Labor and Social Security, and the Ministry of Finance. The newly elected ruling party's political base included rural and low income households, which stood to

benefit the most from the reforms [25].

These political economy strategies were employed before attempting the contested merger of various pools to create a single national health insurance scheme. This merging took place at the end of the reform process in 2012, after benefits had been unified, provider pay had been increased, supply conditions had improved, general government revenues had increased, informal sector beneficiaries had been enrolled, and the Ministry of Health had accumulated additional political power from its successes [26]. This process demonstrates the importance of strategic sequencing to ensure technical systems and policies are in place, and that the largest political hurdles have been overcome.

Mexico

In 2000, Mexico's newly elected government began plans for a nation-wide health financing reform to expand financial protection and access to health services for the non-salaried population [27]. The public insurance program, known as Seguro Popular, was targeted at more than 45 million people, primarily in the informal sector and without social security, and the approximately three to four million people with high-cost health expenditures annually [28]. The new program was passed by the Mexican Congress in 2003 and implemented in 2004 to provide subsidized insurance for an explicit set of healthcare interventions and coverage for a limited set of high-cost illnesses [27]. The reform sought to create a purchaser-provider split and give state ministries of health more resources to improve the health system. The major source of funding was federal taxes, with complementary contributions from states, and individual premiums based on a progressive scale, with broad exemptions for the poor.

Minister of Health worked within the budget politics sphere to create an economic analysis unit inside the ministry. This unit provided technical analysis that helped convince the Ministry of Finance that the proposed increase in government health expenditure (one percent of gross domestic product) would be financially sustainable and was better than other options. Presidential support to the Minister of Health was crucial to convince the Ministry of Finance to support the reform. A National Commission for Social Protection of Health was established at the federal level, and agreements were reached with each of the 32 states to transfer resources from the federal to state level based on per capita enrolment. States were then each responsible for establishing the State Protection Regimes to pool federal and state funds and purchase services on behalf of enrolled populations. The Ministry of Health established a separate federal-level Fund for Protection against Catastrophic Expenses that provides coverage for an explicit package of tertiary, high-cost services. Implementation of Seguro Popular, however, encountered various problems related to state responsibilities and accountability [29]. In addition, while the plan required premium payments adjusted by income level, in practice almost no premiums were collected, because the enrollment process did not provide means testing and almost all enrollees declared they belonged to the lower income groups that were exempt from payment.

The Seguro Popular reform experience highlights the importance of strategic compromise and targeted negotiation to move reform processes forward. The existing social security system in Mexico served as a strong institutional constraint to the reforms as proposed initially. When the effort to create a single, unified national health insurance program failed, the PAN-led government decided to expand coverage to Mexico□s large informal sector separately by mobilizing support for the reform through several political parties and a decentralized, federal structure that included an array of stakeholders. That system is now being re-reformed by the government of President López Obrador elected in 2018 as it works to transform Seguro Popular and the broader national health system, seeking to centralize control over implementation at the federal level, constrain the discretionary power of the states, and contain corruption by cutting expenditures; the changes underway, however, are creating widespread confusion and reductions in service delivery throughout the Mexican health system [30,31].

This brief analysis of health financing reform experiences in Turkey and Mexico highlights the importance of political economy factors in shaping reform processes. Applying our approach retrospectively shows the relevance of political economy analysis for understanding reform experiences and its potential for helping decision makers to manage reform processes prospectively. Turkey achieved a single, unified national health insurance system, Mexico did not. This different outcome can in part be explained by political economy factors and related strategic compromises that were made to move reform policies forward. The differing institutional contexts-Mexico as a federal state and Turkey as a centralized state-played an important role in reform outcomes. First, in both cases, newly-appointed Ministers of Health used political economy analyses early on to pursue health financing reform. Party leadership in both countries had a vested interest in moving reform forward. As a result, health financing reform was not just as a health sector priority, but also as a national priority. The respective Ministers of Health were able to overcome particular points of opposition during the reform process [32,33].

Aim and Objectives

Aim: To assess global health financing for achieving UHC.

Objectives:

1. To assess global health financing trends from year 2000 to 2014 & its projections to 2040 for achieving UHC.
2. To examine the trends in public expenditure on health from domestic sources.

Materials and Methods

Historical data were collected from various sources and studies were conducted on: (1) Health spending which are as

follows: (a) Governmental (b) Prepaid private (c) Out-of-pocket (d) Pooled (e) External (2) UHC and SDG index in countries from 1995 to2040. In these different designs i.e. exploratory, descriptive and experimental had been adopted depending on the nature of the study.

The emphasis was laid on the following studies: (1) Overview of trends in PEH from 2000-2014 by WHO (2) GBD, 2016 study conducted on 188 countries from 1995 to 2015 to estimate future scenarios of health spending & pooled health spending to 2040 by using UHC index, based on 9 interventions & 32 causes amenable to health care (3) GBD 2017 study conducted on 195 countries from 1990 to 2017 to measure progress of health-related SDGs & its projection by 2030 (4) Some studies on political economy analysis into health financing reform efforts.

Results

Results of various studies conducted are as following:

Results of study 1 named overview of trends in PEH from 2000-2014 conducted by WHO are shown in figures 2 to 7 given below [34] and other findings are as follows: PEH grew more rapidly than income. LICs & WHO African region had indicated that 1% increase in per capita GDP lead to > 1% increase in per capita PEH. A deterioration in domestic public funds in financing health from MDGs to SDGs, especially in LICs & declining prioritization of budget for health sector. Priority of domestic budgets in health in LMICs had been negatively affected by external resources. Domestic public funds mainly spent on non-discretionary expenditures & high-end care than for PHC. Income had recognized effect on level of health spending (Figures 2-7).
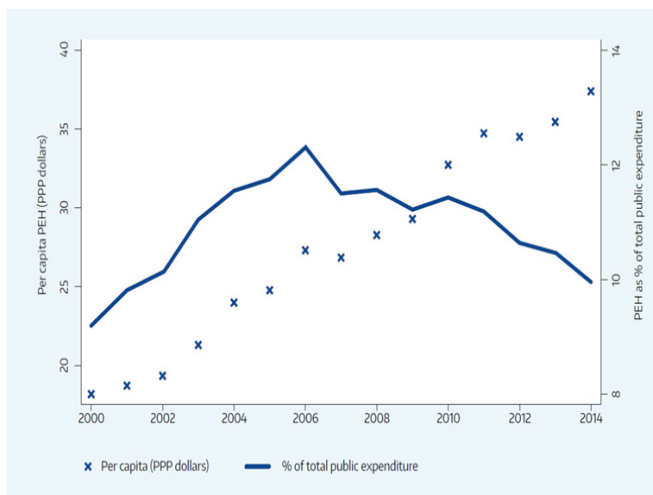

Figure 2: Change in per capita public expenditure on health from all sources and as percentage of total public expenditure in low income countries, 2000-2014.
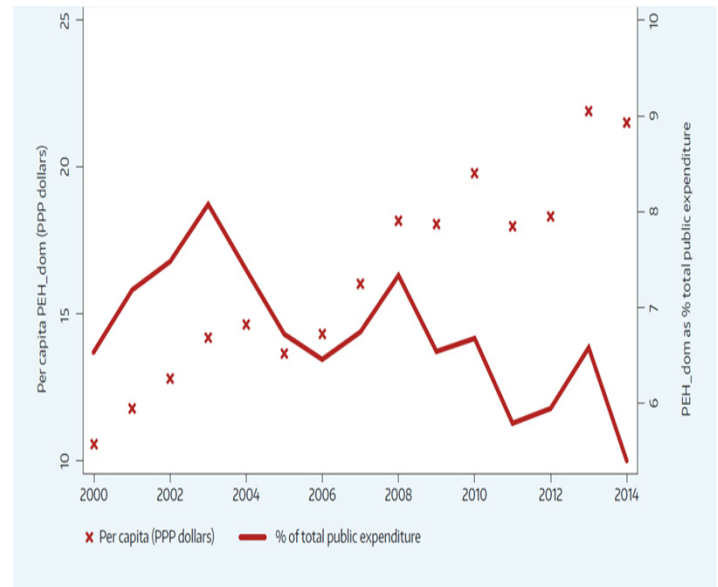

Figure 3: Change in per capita public expenditure on health from domestic sources only and as percentage of total public expenditure in low income countries, 2000-2014.
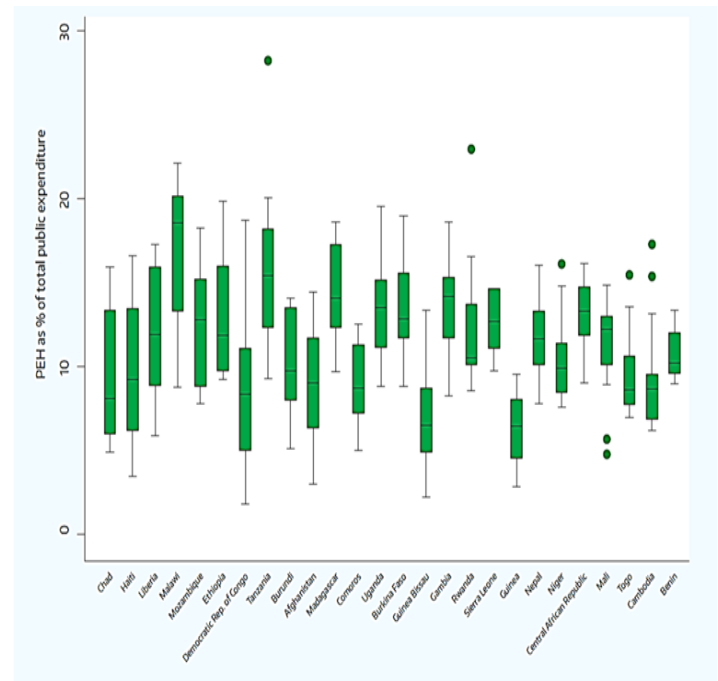

Figure 4: Change in budget prioritization towards health from all sources in low-income countries, 2000-2014.
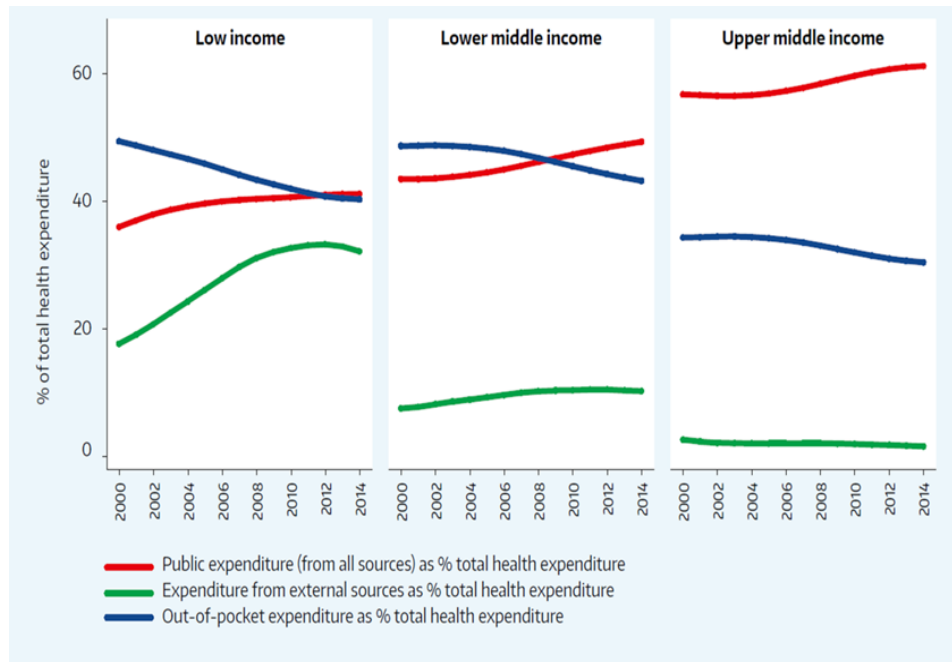
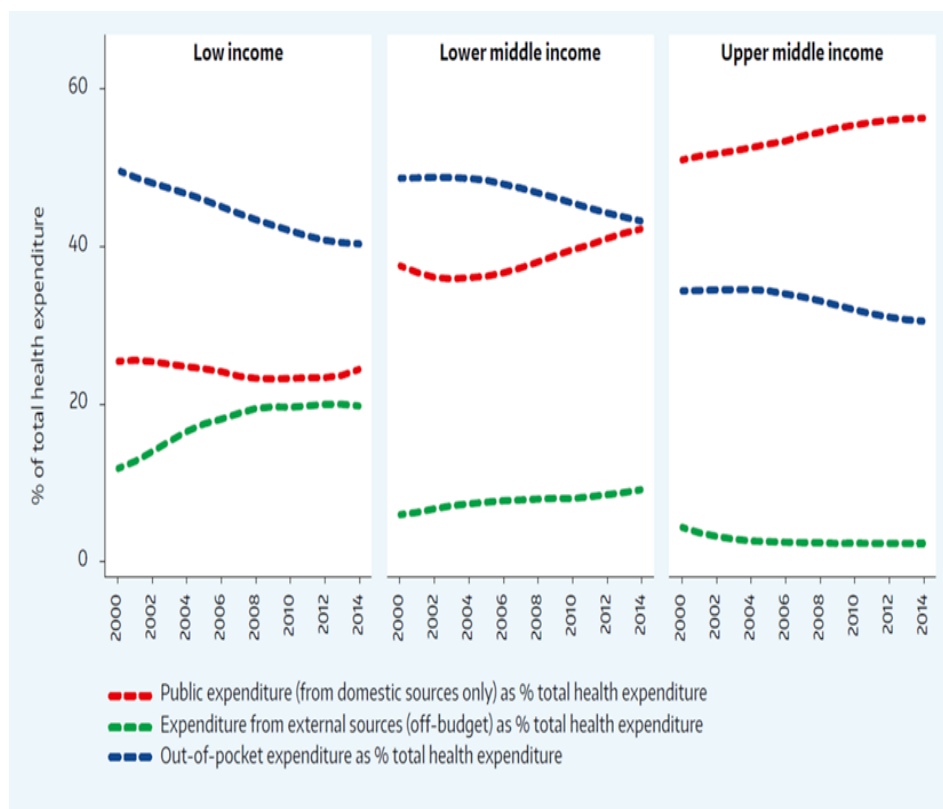**Figure 5:** Change in total health expenditure from all sources, 2000-2014, by income levels.

Figure 6: Change in total health expenditure from domestic sources, 2000-2014, by income levels.
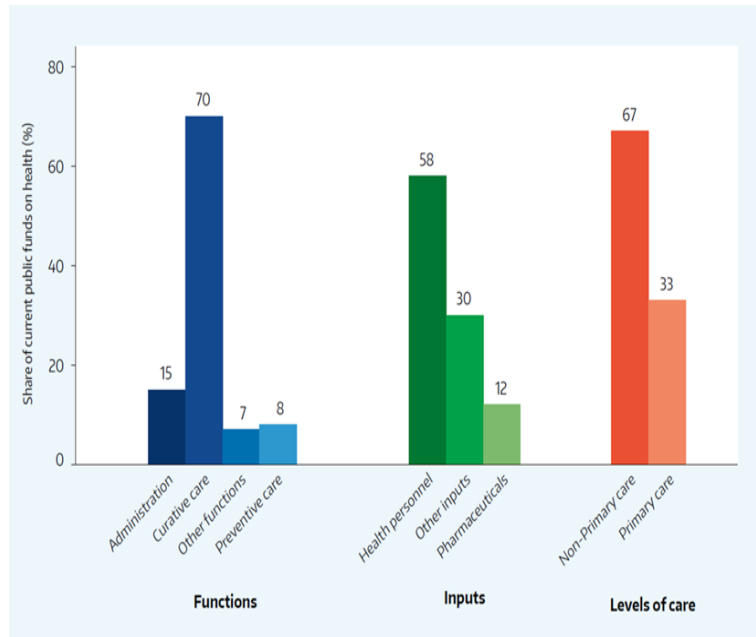
Figure 7: Distribution of domestic public funds on health by functions, inputs and levels of care in LMICs, sample median, as of 2014(n=37).

Results of study 2 named GBD, 2016 study, conducted on 188 countries from 1995 to 2015 to estimate future scenarios of health spending & pooled health spending to 2040 by using UHC index, based on 9 interventions & 32 causes amenable to health care are shown in tables 1 A to I C and 2 A to 2 C and figure 8. Other main findings of the study found by the authors are as following [35]: In 2016, UHC index ranged from 85.7 in Switzerland to 26.9% in Somalia. Globally in 2015, $10 trillion was spent on health & it was projected to reach $15 trillion in 2030 & $20 trillion in 2040. Per capita health spending was projected to increase fastest in upper-middle-income countries, at 4.2% per year, followed by lower-middle-income 4.0% and low-income countries 2.2%. Per capita health spending projected in 2040 was to range from $ 40 to $ 413 in low- income countries & from $ 140 to $1699 in lower-middle-income countries. Globally, health spending by pooled resources would range, from 19·8% in Nigeria to 97·9% in Seychelles. In 2040, health spending per capita had been expected to be 45·9 times larger in high-income than in low-income countries. Across the alternative scenarios, UHC was estimated reaching between 5·1 billion & 5·6 billion lives in 2030 (Tables 1A-2C), (Figure 8).

	2015	**2040**
Global	1332 (1325 to1343)	2318 (2099 to 2540)
World bank income group		
High income	1551 (5503 to 5605)	8666 (7430 to 9657)
Upper-middle income	949 (942 to 959)	2670 (2217 to 3302)
Lower-middle income	266 (263 to 268)	714 (638 to 801)
Low income	110 (108 to 111)	190 (166 to 2219)
GBD super-regions		
Central Europe, Eastern-Europe & Central Asia	1288 (1273 to 1300	2120 (1847 to 22427)
GBD high income	5839 (5785 to 5897)	9054 (7715 to 10101)
Latin America & Caribbean	1065 (1051 to 1077)	1550 (1356 to 1751)

North Africa & Middle east	888 (872 to 905)	1496 (12254 to 828)
South Asia	210 (663 to 682)	692 (587 to 828)
Southeast Asia, East Asia & Oceania	672 (663 to 682)	2632 (2015 to 3454)
Sub-Saharan Africa	202 (199 to 206)	289 (260 to 327) 16

Table 1A: Total health spending per capita in ($) in 2015 and 2040.

	Government spending	Pre-paid private spending	Out of pocket spending	Development assistance for health
Global	61.30%	13.50%	24.70%	0.50%
World bank income group				
High income	67.30%	19.20%	13.40%	0.00%
Upper-middle income	64.20%	6.90%	28.80%	0.10%
Lower-middle income	31.90%	8.40%	57.90%	1.80%
Low income	29.80%	11.80%	35.70%	22.70%
GBD super-regions				
Central Europe, Eastern- Europe & Central Asia	56.30%	3.30%	39.90%	0.50%
GBD high income	67.50%	19.60%	12.80%	0.00%
Latin America & Caribbean	51.20%	18.60%	29.90%	0.30%
North Africa & Middle east	56.90%	7.80%	34.90%	0.40%
South Asia	28.90%	9.90%	60.60%	0.60%
Southeast Asia, East Asia &Oceania	63.60%	5.30%	31.00%	0.10%
Sub-Saharan Africa	34.50%	11.00%	39.40%	15.1%

Total 1B: Health spending by source as a proportion of total in 2040.

	Total	Government spending	Pre-paid private spending	Out of pocket spending	Development assistance for health	
Global	2.2%	2.3%	1.1%	2.6%	2.3%	
World bank income group						
High income	1.8%	2.0%	1.2%	1.6%		
Upper-middle income	4.2%	4.6%	2.6%	3.7%	1.6%	
Lower-middle income	4.0%	4.0%	4.5%	4.0%	1.8%	

Low income	2.2%	3.5%	4.1%	1.8%	1.0%	
GBD super-regions						
Central Europe, Eastern-Europe & Central Asia	2.0%	1.6%	2.4%	2.5%	4.1%	
GBD high income	1.8%	2.0%	1.1%	1.5%	40.0%	
Latin America & Caribbean	1.5%	1.6%	1.7%	1.2%	1.7%	
North Africa & Middle east	2.1%	1.9%	2.3%	2.3%	1.9%	
South Asia	4.9%	5.4%	5.8%	4.6%	0.0%	
Southeast Asia, East Asia &Oceania	5.6%	6.1%	3.5%	5.0%	1.7%	
Sub-Saharan Africa	1.4%	1.4%	0.0%	22.1%	1.3%	

Total 1C: Health spending by growth/capita annualized rate of change, 2015-40.

	2015 Observed	2030 Worse scenario	2030 Reference scenario	2030 Better scenario
Global	1036	989	1401	1917
World Bank Income Group				
High income	4768	4775	6213	8950
Upper-middle income	646	715	1251	1537
Lower-middle income	113	136	205	254
Low income	67	74	94	141
GBD super- regions				
Central Europe, Eastern Europe and Central Asia	839	918	1096	1677
GBD high income	5036	5015	6538	9403
Latin America and Caribbean	723	721	913	1442
North Africa and Middle east	597	639	823	1182
South Asia	74	94	167	175
Southeast Asia, East Asia, and Oceania	439	491	491	1143
Sub- Saharan Africa	134	131	131	258

Table 2A: Three scenarios of pooled health spending per capita ($) in 2030.

	2015 Observed	2030 Worse scenario	2030 Reference scenario	2030 Better scenario
Global	59·2	61·4	64·8	67·1
World Bank Income Group				
High income	76.8	77.8	79.9	84.5
Upper-middle income	65.6	67.1	72.4	74.3
Lower-middle income	50.3	55.2	58.2	59.9
Low income	42.7	47.5	48.7	51.5
GBD super-regions				
Central Europe, Eastern Europe and Central Asia	63.8	67.3	68.6	72.9
GBD high income	77	77.5	79.6	84.2
Latin America and Caribbean	60.7	62.5	64.3	68.3
North Africa and Middle east	59.5	63.5	65.3	68.8
South Asia	48.8	54.6	58.5	59.1
Southeast Asia, East Asia, and Oceania	63.8	65.1	71.7	72.5
Sub- Saharan Africa	45.1	49.4	50.3	53.7

Table 2B: Three scenarios of universal health coverage index in 2030.

	2015 Observed	2030 Worse scenario	2030 Reference scenario	2030 Better scenario
Global	4325	5109	5390	5586
World Bank Income Group				
High income	893	942	967	1023
Upper-middle income	1677	1788	1929	1982
Lower-middle income	1482	1912	2014	2074
Low income	273	467	479	507
GBD super-regions				
Central Europe, Eastern Europe and Central Asia	263	282	288	306
GBD high income	812	853	876	927
Latin America and Caribbean	344	403	415	441
North Africa and Middle east	336	447	460	485
South Asia	820	1021	1094	1105
Southeast Asia, East Asia & Oceania	1320	1382	1522	1539
Sub- Saharan Africa	430	720	734	783

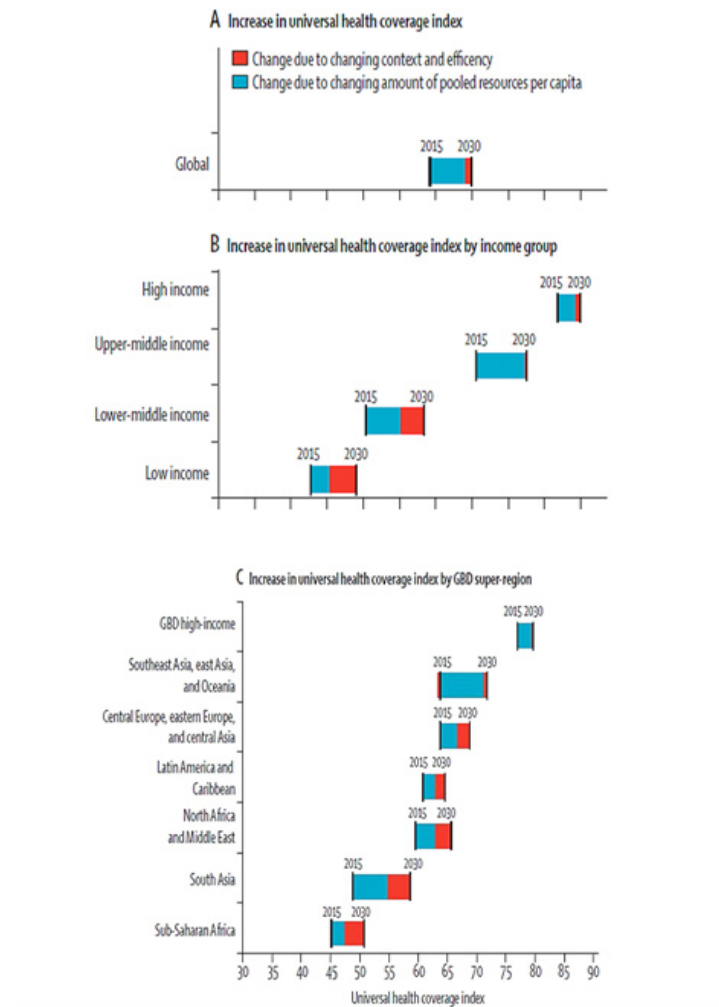**Table 2C:** Three scenarios of lives covered (millions) in 2030.

Figure 8: Increase in universal health coverage index from 2015 to 2030.

Study 3 from 1990 to 2017

Global median health-related SDG index in 2017 was 59·4. SDG index at sub-national level varied in China & India, but were more homogeneous in Japan & UK. Most countries projected to have a higher health-related SDG index in 2030 than in 2017. MMR, neonatal, <5 mortality & malaria indicators for most of countries will be attained at least for 95% targets by 2030. No countries projected to meet NCD & suicide mortality indicator SDG targets for 2030 [36].

Some Studies on Political Economy Analysis into Health Financing Reform Efforts

Thailand

Application of the Political Economy of UHC Reform Framework and the concept of path dependency studied the influence of these factors on the evolution of the UHC reform in Thailand. Thailand achieved full population coverage of financial protection for health care in 2002 with successful implementation of the Universal Coverage Scheme (UCS). The three public health insurance schemes covered 98.5% of the population by 2015. This showed high level of service coverage and financial risk protection and low level of unmet healthcare need. It influenced the evolution of the UHC reform in Thailand and highlighted two critical challenges i.e. (i) budgeting processes which minimized the discretionary power previously exerted by Bureau of Budget (ii) purchaser-provider split that created long-term tensions between the Ministry of Public Health and the National Health Security Office. These were managed well that generated adequate resources to, and good governance of, the UCS. The reform team was able to overcome certain

path inefficient institutions and adopt more evidence-based payment schemes in the UCS. It was concluded that path dependence exerted pressure to resist change but the reform team's capacity to generate and utilize evidence to guide policy decision-making process enabled the reform to be placed on a "good path." The success of this reform i.e. Major Shift from Program-based to per Capita Budget is a confirmation that evidence based participatory budgeting processes can be achieved, although the cabinet did not always approve the proposed annual budget in each fiscal year. Trends of Prevalence of Catastrophic Health Expenditure (>10% Total Consumption), Impoverishing Health Expenditure in 1990-2016 and UCS per capita budget; discrepancy between requested and approved between 2002 and 2019 are shown in figures 9-11 [19].
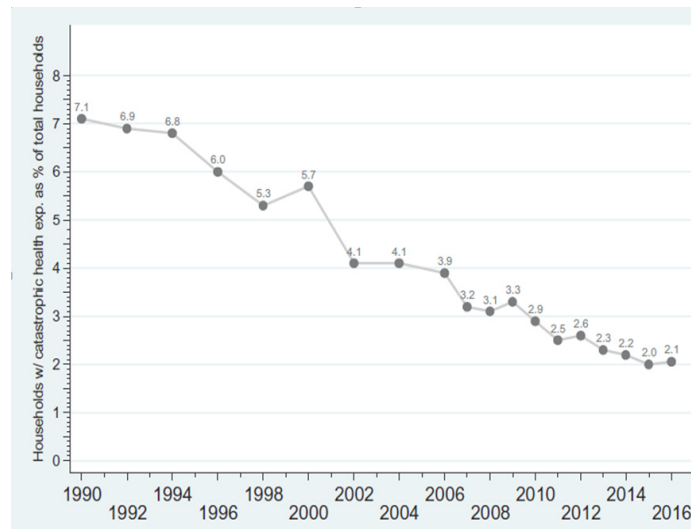

Figure 9: Trend of Prevalence of Catastrophic Health Expenditure (>10% Total Consumption), 1990-2016.
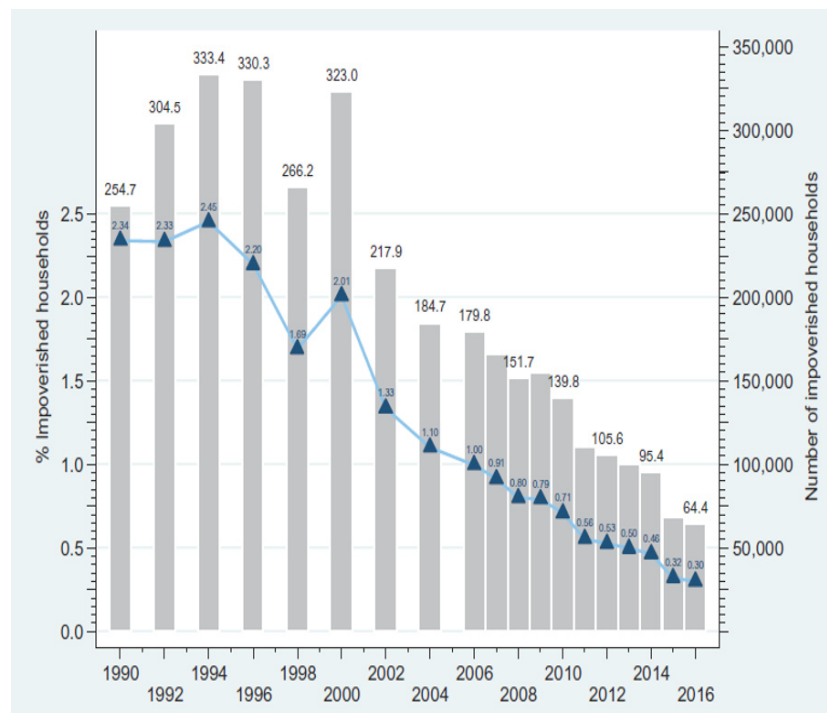

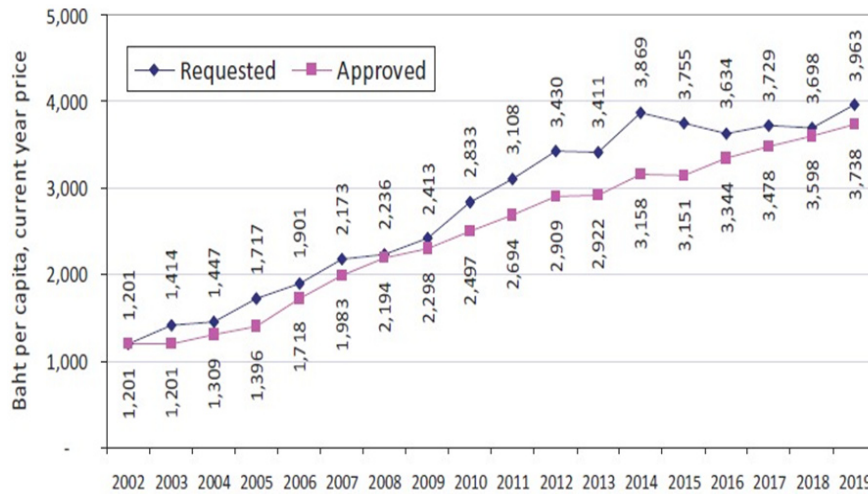**Figure 10:** Trend of Impoverishing Health Expenditure, 1990-2016.

Figure 11: UCS per capita budget, discrepancy between requested and approved.

Studies of Turkey and Mexico

Studies of Turkey and Mexico showed an approach to incorporate political economy analysis and related strategies into the design, adoption and implementation of health financing reforms that move countries towards UHC. Political economy analysis emerge for teams working to advance health financing reform. These studies had shown that the political and the technical wings should be closely intertwined to achieve the success for UHC. Politicians need to understand the technical implications of policy choices and technical experts need to address the political implications of reform policies. Analysis of interests and points of contestation relevant to key stakeholder groupings served to highlight the political economy factors relevant to specific policy objectives. Political economy analysis for health financing reforms, require strong leadership to create comprehensive reform teams to move countries towards UHC. Strategic approach to health financing reform is a way to enable successful design, adoption and implementation of policy changes that move countries towards UHC.

Discussion

Study from 2000-2014 highlighted (i) The role of domestic PEH, what the past researches didn't. The study also highlighted key researches across LMICs, that were not observed in past i. e. (i) Higher external health aid & debt service reduced budget prioritization for health (ii) Favorable fiscal conditions not always lead to greater budget prioritization for health. Attention is drawn towards to issues: (i) Separate domestic public expenditure & external sources (ii) Monitor changes in contribution of PEH in

absolute & relative terms. Future research is proposed to focus on enhanced collaboration between Health policy makers, and Ministries of Health; and Finance. It highlighted a rationale for comprehensive monitoring systems of PEH to combine relative & absolute measures at all levels. It has proposed the use of domestic public funds by type & level of care in LMICs which helps policy makers for budget allocation.

Study on trends in future health spending & UHC from 2016-40 had shown that change since adoption of MDGs to 2014 call for research in PEH. Projections in study from 1990 to 2017 showed that many health-related SDG indicators like NCDs require a change towards policy action to achieve SDG aims. Studies on health sector reforms showed that understanding the political economy dimensions of reform, the power and position of different actors, the culture of using evidence for decisions and leadership are enabling factors for successful reforms. The Ministers of Health of all the countries should incorporate health reforms as an integral part of the political platform of their governments so that it may be considered as a national priority to achieve the UHC. Advocacy for health needs to be done to influence decisions within political, economic, and social systems and institutions. It includes activities and publications to influence public policy, laws and budgets by using facts, their relationships, the media, and messaging to educate government officials and the public. It further needs be infused into the minds of the people at all levels that health is the most basic requirement of the people; and physically, mentally and socially healthy and disease free people will strengthen the families, communities, society, nations and humanity locally and worldwide [32].

An Example of Relatively Good/fair Health Care System for a Country

Thailand can be considered as an example of a country having good/fair health care system. Thailand achieved full population coverage of financial protection for health care in 2002 with successful implementation of the Universal Coverage Scheme (UCS). The three public health insurance schemes covered 98.5% of the population by 2015. This showed high level of service coverage and financial risk protection as measured by low levels of household out-of-pocket payment for health at 11.8% of current health expenditure in 2015. Likewise, the prevalence of catastrophic health expenditure, measured by more than 10% of household expenditure, reduced from 7.1% in 1990 to 2.1% in 2016; and low level of unmet healthcare need.

Discussion about the Design, Financial Merits and Possible Potential Pitfalls to be Avoided

Exploratory research design has been used by the authors of the study to find the hidden things which were not clearly visible regarding the political economy related to UHC aspects of the country. The study provided the insights into the issues of health financing trends and achievement of universal coverage. Literature research and projective techniques had been used in the studies. The study was conducted to clarify the concepts, to know the trends of universal health coverage and the evidence was created for further actions to achieve the universal health coverage.

After the creation of evidence regarding the potential pitfalls, experimental design was used and interventions were made at different times to avoid the potential pitfalls and achieve the universal health coverage. Political economy of UHC reform framework and the concept of path dependency were applied to review, how these factors influenced the evolution of the UHC reform in Thailand. The study highlighted two critical political economy challenges that could hamper reform, if not managed well, regarding (i) The budgeting processes, which minimized the discretionary power previously exerted by Bureau of Budget (ii) The purchaser-provider split that created long-term tensions between the Ministry of Public Health and the National Health Security Office. These two changes though resisted, were found to be the keys for generating adequate resources for good governance of the UCS.

Conclusion

In LMICs, PEH from domestic sources & budget priority for health should be enhanced. Quality of budgeting systems needs to be improved in the health sector to support the effective implementation of health financing reforms towards UHC. The progress towards UHC relies on government spending; hence robust public budgeting is a necessary precondition to facilitate this progress. Per capita PEH should be increased especially for LMICs and the domestic public funds should be mainly spent on Primary Health Care. Ensure all countries to have a stable & sufficient supply of pooled resources for health. Monitoring & evaluation strategies should be refined to provide accurate & comprehensive picture of PEH. Several targets, to be met by 2030, demand a pace of progress that no country has achieved in the recent past. Achieving the goals of UHC, requires effective strategies coordinated across many functions of the health system including governance, regulation, and the organization of service delivery. Hence develop strategies to change the political feasibility of desired reforms keeping in view demographic, epidemiological, and socioeconomic factors as well as cultural, historical, and political economy considerations of different countries. Reforms like revenue raising, equity in distribution, pooling of resources and benefit designs for health to expand effective coverage and improve health system outcomes should be adopted. Like Thailand, Turkey and Mexico Political Economy of UHC Reform Framework should be developed to deal with political economy challenges.

References

1. WHO (2019) Fact sheet on universal health coverage (UHC): key facts, what is UHC, achieving UHC is one of the targets the nations of the world.

2. United Nations (2015) Transforming our world: the 2030 agenda for sustainable development. New York: United Nations.

3. WHO (1978) International Conference on Primary Health Care, Alma-Ata, USSR, 6-12 September 1978.

4. World Bank. Universal health coverage study series. (UNICO).

5. Lagomarsino G, Garabrant A, Adyas A, Muga R, Otoo N (2012) Moving towards universal health coverage: health insurance reforms in nine developing countries in Africa and Asia. Lancet 380: 933-943.

6. Savedoff WD, Ferranti D de, Smith AL, Fan V (2012) Political and economic aspects of the transition to universal health coverage. Lancet 380: 924-932.

7. Reeves A, Gourtsoyannis Y, Basu S, McCoy D, McKee M, Stuckler D (2015) Financing universal health coverage effects of alternative tax structures on public health systems: cross-national modelling in 89 low-income and middle-income countries. Lancet 386: 274-280.

8. Das Gupta P (1993) Standardization and decomposition of rates: a user's manual. DC: Bureau of the Census, 1993. Washington.

9. World Bank. World Bank Country and Lending Groups.

10. GBD 2016 Risk Factors Collaborators. (2017) Global, regional, and national comparative risk assessment of 84 behavioural, environmental and occupational, and metabolic risks or clusters of risks, 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016. Lancet 390: 1345-1422.

11. World Health Organisation (2018) Thirteenth General Programme of Work, 2019-23. Geneva: World Health Organization.

12. GBD 2015 SDG Collaborators (2016) Measuring the health-related Sustainable Development Goals in 188 countries: a baseline analysis from the Global Burden of Disease Study 2015. Lancet 388: 1813-1850.

13. United Nations (2018) Data availability of minimum disaggregation: disaggregation required by metadata. New York.

14. Towse A, Mills A, Tangcharoensathien V (2004) Learning from Thailand's health reforms. BMJ 328: 103-105.

15. Klitgaard R (1988) Controlling Corruption. By Robert Klitgaard. Berkeley: University of California.

16. Klitgaard R (2011). Fighting corruption. Econstor 9: 31-35.

17. Sutcliffe S, Court J (2005) Evidence-based policymaking: what is it? How does it work? What relevance for developing countries? United Kingdom: Overseas Development Institute.

18. Iszaid I, Hafizan AH, Juni Muhamad (2018) Market Failure in Health Care: A Review. International Journal of Public Health and Clinical Sciences. 5: 1625.

19. Tangcharoensathien V, Patcharanarumol W, Kulthanmanusorn A, Saengruang N, Kosiyaporn H (2019) The Political Economy of UHC Reform in Thailand: Lessons for Low- and Middle-Income Countries. Health Systems & Reform 5: 195-208.

20. Barış E, Mollahaliloglu S, Aydın S (2011) Healthcare in Turkey: from laggard to leader. BMJ 342: c7456.

21. Ministry of Health of the Republic of Turkey (2011) Health Statistics Yearbook 2009. Turkey: Government of Turkey.

22. Organization for Economic Cooperation and Development, World Health Organization, World Bank. OECD reviews of health systems: Turkey (2008). Paris, France: OECD.

23. World Bank Group (2013) Turkey - performance based contracting scheme in family medicine: design and achievements. Washington : World Bank.

24. Ministry of Health of the Republic of Turkey (2003) Transformation in health. Ankara, Turkey: Government of Turkey.

25. Sparkes S, Bump J, Reich M (2015) Political strategies for health reform in Turkey: extending veto point theory. Health Sys Reform 1: 263-275.

26. World Health Organization Europe (2012) Successful health systems reforms: the case of Turkey. Copenhagen, Denmark.

27. Frenk J, Gonzalez-Pier E, Gomez-Dantes O, Lezana MA, Knaul FM (2006) Comprehensice reform to improve health system performance in Mexico. The Lancet 368: 1524-1534.

28. Frenk J, Gómez-Dantés O, Knaul FM (2009) The democratization of health in Mexico: financial innovations for universal coverage. Bull World Health Organ 87: 542-548.

29. Nigenda G, Wirtz VJ, González-Robledo LM, Reich MR (2015) Evaluating the implementation of Mexico☐s Health Reform: the Case of Seguro Popular. Health Sys Reform 1: 217-218.

30. Frenk J, Gómez-Dantés O, Knaul FM (2019) A dark day for universal health coverage. The Lancet 393: 301-303.

31. Agren D (2019) AMLO's Mexico leads to drastic cuts to health system. The Lancet 393: 2289-2290.

32. Sparkes SP, Bump JB, Ozcelik EA, Kutzin J, Reich MR (2019) Political economy analysis for health financing reform. Health Systems and Reform. 5: 183-194.

33. https://images.app.goo.gl/PKfhYCSCShsZvg5G7; https://images.app.goo.gl/Kd5UHViqTtepjKWJA

34. Barroy H, Vaughan K, Tapsoba Y, Dale E, Maele NV (Towards universal health coverage: thinking public: Overview of trends in public expenditure on health (2000-2014).World Health Organizaton.

35. Dieleman, JL Trends in future health financing and coverage: future health spending and universal health coverage in 188 countries, 2016-40. The Lancet 391: 1783-1798.

36. Rafael L, Fullman N, Abate D, Abay SM, Abbafati C (2019) Measuring progress from 1990 to 2017 and projecting attainment to 2030 of the health-related Sustainable Development Goals for 195 countries and territories: a systematic analysis for the Global Burden of Disease Study 2017. The Lancet 392: 2091-2138.