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COMMENTARY

Methodological Critique from an Epidemiological Perspective on 'Transitions in Health Financing and Policies for Universal Health Coverage.'

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Abstract: Universal Health Coverage (UHC) is the single most policy priority agenda for many countries including India. The design and policy proposals of UHC have been mooted by the concept as well as findings of some initial research reports. This review does a methodological critique of one of such reports. The report is considered as a crucial guideline for the preparation of UHC framework by many Low and Middle Income countries. The critique is based on the epidemiological perspective to analyze its conceptualization, objectives, research questions and operational design. The analysis finds that the report is developed on the assumption of growth phenomenon and not on the reality of complex medical market. The epidemiological concerns are given less priority from design to findings. Selection of wrong indicators, limited research questions and weak assumptions dilute the advantage of having an ecological design to compare the data and analyze with exiting knowledge system. This report is unable to address the confusion currently UHC has over its design and application. UHC research is an epidemiological planning exercise, instead the report ponders over only with financing mechanisms.

'Universal (Health) coverage is the single most powerful concept that public health has to offer' (Margaret Chan, DG, WHO, 2012). The declaration of Director General, WHO (World Health Organization) to roll out UHC (Universal Health Coverage) is becoming the most priority

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public health topic for understanding and assessing in current time. Many researches are happening to understand the feasibility of achieving UHC for various countries. The report on 'Transitions in Health Financing and Policies for Universal Health Coverage: Final Report of the Transitions in Health Financing Project', hereafter the report, has been prepared under the aegis of the Result for Development Institute.[1] *It has been officially published on August 24, 2012, and since then it has become one of the central guiding documents for designing UHC in many countries. The aim of this critique is to critically appraise the report and contribute to the knowledge of UHC discussion. The report has been published in 2012 but it is still a valuable technical paper in UHC discourse. Critical assessment of this report would help in understanding the theory behind the financial structure of UHC and how the very theoretical structure shapes the country's health system for service provisioning purpose.*

UHC and the debate

UHC is a scheme to offer health services to everyone in the society irrespective of their financial status. The mechanism of UHC is under process and there is no structured definition from where the technicality of the system can be determined. However, a range of WHO documents, scholarly works and other critical assessment have given a common meaning to UHC, i.e., equity and access. The 2005 World Health Assembly resolution says that "*access to key promotive, preventive, curative and rehabilitative health interventions for all at an affordable cost, thereby achieving equity in accesses*". Going by this notion, it is apparent that health care services (as the resolution mentioned promotive, preventive…) are not adequately accessible because of either service constraint and/or financial restriction, so achieving access to service lead towards achieving equity too.[2]

The two contradictory ideological thoughts are continuously debating with each other over the issue of conceptualization and thus the feasibility of UHC in particular in the low and middle income countries. The pro-UHC supporter has great belief on the impact of UHC as envisaged that it would also include the people from marginalized societies without experiencing any financial obligation thus both equity and access are possible.[3] One the other side, the contesting thought is that without political and social relevance (both historically and contextually) how far it is possible to go for 'coverage' based medical centric approach, that too in a resource challenged countries. Hence, the contesting argument is that the model of global north can not be replicated in global south.[4] The report appears to be neutral in this debate by maintaining that it does not offer any particular design of health care system to

achieve 'efficiency and equity' (for UHC) instead giving a new perspective *"…….on today's health policies by setting them against long term trends in health financing and public policy*" (pp. 3). However, the report professes the trajectory of health financing transitions to achieve UHC. In this trajectory, the said perspective illustrates how the different approaches of health financing mechanisms and public policy measures in opposition to the conventional practice may change health policy decisions to achieve UHC. The report's perspective driven unconventional approaches knowingly or unknowingly set a standard guideline to achieve UHC.

The report at a glance

The report is an interesting review exercise under the context of above mentioned debate. This is a report of the project on transitions in health financing started in the year of 2009. The report acknowledges the transition phases of demography and epidemiology in various countries and argues that transitions in health financing are also much relevant in public health. The transitions in health care financing are generally marked by increase in health spending and rising of pooled financing as influenced under the economical (health spending), technological (medical advancement) and political (ideology, commitment) development. The literature review shows that the studies have been conducted on the areas of growth related health spending, pooled finance vs. out of pocket expenditure, rising income leads to improvement in health, but there is a dearth of need to analyze all theses relevant thematic areas together by reviewing the literatures, consulting the past trends, building the evidence to establish the relation between economics and health that mark down the transitions.

The report has five major sections, starting with the conceptual framework of health financing transition, measures of health financing in respect to coverage and outcomes, phenomena of rising health spending, the reason behind the growth of pooled financing and the strategies adopted by the countries for achieving UHC.

Conceptualization, objectives and research questions:

Two transitions are common for every country or region i.e., demographic and epidemiologic. The demographic transition is based on the decline in mortality and subsequent reduction in fertility, and the epidemiologic transition is processed by the decline in communicable diseases and followed by the decline in non-communicable diseases. Both the transitions give a pathway

of population growth: reduce mortality from communicable disease, increase life expectancy and the growth of population, and the increase share of non-communicable diseases. According to the report, along with these two transitions there is another transition (health financing transition) also occurs as an implication of public health advancement. Health financing transition is characterized by increase both in health spending and share of pooled health expenditure. Like other two transitions, the health financing transition is also influenced by social processes and public policies. Though, it does not occur simultaneously as like the other two transitions.

Table: 1 : Types of financing

Finance Mechanism				
Pooled Finance			Non pooled Finance	
Tax Based Finance	Social Insurance	Voluntary Insurance (Private insurance)	OOP (out of pocket expenditure)	Medical Savings Account

The health financing transition describes the increase in pooled financing through subsidies provisions or insurance and its effect in expansion of health care services. Pooled financing is based on tax or insurance where most of the time govt. takes the responsibility to provide services to the people irrespective of their financial condition. This process is leading towards the minimization of OOP (out of pocket expenditure) which is by definition on the spot payment as per the service taken. The OOP is always a cause of concern for the state as it excludes the marginalized society from obtaining health services on financial ground. The pooled financing is a mechanism which gives protection to the citizen for health care need by collecting the money in advance and then mobilizing it as need be within the rich and poor as per the theory of risk pooling. So, the conceptualization is rooted in the shift of health care financing and institutional mechanism where poor (and all other sections) of any country is ideally to get health care services without any financial barriers (or comparatively less) unlike earlier era because of OOP, and that is possible because of the health financing transition. This conceptual framework has been finally designed as a project to explore the 'nexus' between economics and health that shapes the transition.

To understand the nexus, the project looks into the interrelationship between spending, expanded care and its impact on population health.

Two assumptions have been made

i) Growth in health spending is attributed to the rising level of income and advancement of medical technology.

ii) Increasing health spending is considered as a factor to expand the coverage area that further enhances the better health of the population.

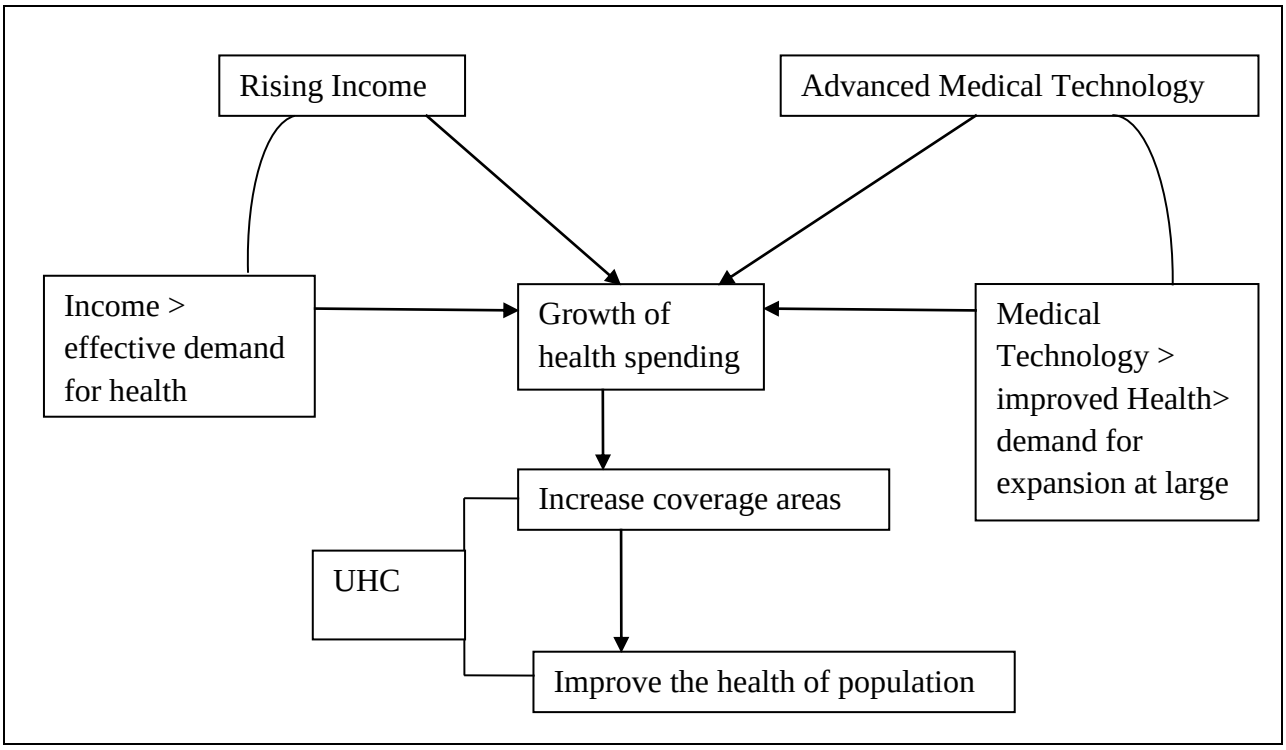
To explore these assumptions, the following research questions are posed:

1. What explains growth in health spending?
2. Why has the pooled share of health spending grown?
3. How are countries reforming health system today?

Operational design:

The design of the project is ecological that compare various countries over specific indicators to address the research questions. The project design has been made such a way so that it can build the causal pathway for UHC step by step. The health benefits of the population increase due to the expanded coverage and that coverage expansion is because of the health financing transition as processed by various social and political factors. The report makes the argument that the health financing transition is leading towards UHC. This chain of causality has been tried to establish in this report.

Causal framework



The entire report is in two parts, and these two parts altogether represent the five sections. The findings of the five sections are based on the different working papers as made by various research teams involved in the project.

The below table is the schematic representation of the report that links the parts with the sections as well as with the working papers.

Table-2: Schematic representation of the report

Part	Sections		Analyzed working papers on different thematic areas (detail references are given in the report)
To establish the phenomenon of health financing transition	I	The health financing transition	-The Health Financing Transition: A Conceptual Framework and Empirical Evidence
	II	Health financing, coverage and outcomes	-The Effects of Health Coverage on Population Outcomes: A Country level Panel Data Analysis -The Health Financing Transition: A Conceptual Framework and Empirical Evidence
The path of achieving UHC	III	What explains growth in health spending	-The Determinants of Health Expenditure: A country -Level Panel Data Analysis
	IV	Why has the pooled share of health spending grown	-The Determinants of Health Expenditure: A country -Level Panel Data Analysis -Achieving Universal Health Coverage: Learning from Chile, Japan, Malaysia and Sweden -The Health Financing Transition: A Conceptual Framework and Empirical Evidence
	V	How are countries reforming health systems today	- Universal Health Coverage Reforms: Patterns of Income, Spending and Coverage in Four Developing Countries (Colombia, Ghana, Philippines and Vietnam)

The findings of the various working papers in the report are analysed with the knowledge of existing literature. Data collected for selected indicators from secondary sources (mostly, WHO data base) and also literature review process have been used for analytical purpose. However, the detail analysis of the working papers is not available in the main report but can be obtained from the sources mentioned in the reference of the report.

Critical analysis of the report

The theoretical understanding of this report implies that the cause of health financing transition is the growth of high spending in health and the effect is the increase in pooled financing. From an epidemiological perspective, it is very crucial to know whether the relationship between

cause and effect has been ever addressed or not. The report has not even tried to address this relationship in any of the sections. The possible explanation of this cause and effect relation could be the ever escalating cost to health care makes many people impoverish and experience catastrophe as the financing is predominantly based on OOP and so the poor is left out from the market ruled health care services. Hence, the political forces create pressure for rights to health which is often delivered in the form of pooled financing mechanism in various countries. This possible explanation has never been tested either empirically or during theorization of the problem. Section III is about 'why has the pooled share of health spending grown' where the report has the opportunity to discuss this relationship, but it talks about the social changes and political struggle which brings pooled financing in reality among the studied countries without explaining the reason behind the struggle or changes (Box 6, pp. 17). This incomplete information weakens the conceptualization process.

The further question comes on the explanation of growth in health expenditure (the cause); rising income and advancement in medical technology. Rising income indicates the increase in income capacity, but is the income capacity increases among all the sections/countries? The rising health care cost is because of rising income, as the effective demand for services has increased, but again only the effective demand for health care is sufficient to explain growing cost of health care (section III, pp. 18). Attributing only income growth to increase in health spending means leaving other factors (role of market, govt. intervention etc.) out. This point further can be explained from the information given in the report (Fig. 2, pp. 6) itself regarding the total health spending (per person) for Japan ($171 to $ 2690) and USA ($148 to $7668) for the year of 1960 – 2008. The difference in the growth of health spending in the 48 years between Japan and USA is huge. The report also suggests that rising income leads to growth in health spending because of effective demand among the population and that growing health expenditure enhances the health benefits of the population. So according to the proposition given in the report, the effective demand must be less in Japan and high in USA which suggests much better health for the population in USA, but in reality USA has very poor health outcome compared to Japan. Japan has already achieved UHC and USA is far away from the same, so the justification of rising income and growing health expenditure (and better health) needs further introspection with relevance to the context of each country. To support this point, the findings of one of the working papers (The Determinants of Health Expenditure: A country -

Level Panel Data Analysis) can be used that shares the health spending could be much lower (than national income) if income is the only factor but many other factors too influences significantly the health spending (Box 5, pp. 12 in the report). The universalization of any factor and subsequently drawing relation with others may not give adequate clarity for conceptualization. Further, section III shows that high income countries are usually spend more on health, and health expenditure varies across the countries with respect to GDP (Fig. 4, pp. 13and Box 5, pp. 12). So, the high income country's characteristics have been generalized with all other income groups and considered under the conceptual framework.

As per the report, another factor is the advancement of medical technology which is responsible for growing health expenditure. Technological advancement makes improvement of an individual health and that stimulates its demand in larger population which is in turn increases the spending. The inherent meaning is that the health spending grows because of improvements in the health of the population and that improvement occurs because of the technological advancement. The oversimplification of this analogy makes this association as mono-causal and excluding many other crucial causal factors. The over medicalization of the service, private corporation's monopoly, ignoring the prevention at primordial and primary level and subsequent cost increase at tertiary level are also possible causal factors behind the health care cost intensification. This ignorance of multi causality and importance of mono causality is posing question whether it is the advancement or prioritization of medical technology that enhances the growth in health spending.

The above pointers are made on the basis of the theoretical proposition and the conceptual framework of the report. The issues raised above are indicating that the report did not give enough importance to the problem framework. The problem is growing health care cost (and inaccessible health care services) which it is trying to avoid or solve through UHC.

The limitations in the conceptualization lead towards many more deviations in project design and so to the findings. The holistic epidemiology perspective is not followed, rather a very much reductionist approach is central to the design of the research. The assumption that rising income and medical technology are the only factors responsible for the growth of health spending is wrong as discussed above. Further, the second assumption is also under question

which profoundly mentions that health spending increases the coverage and so the health benefit of the population (section II). Going by that assumption, USA should have much more healthy population since its health spending (as % of GDP) in relation to the population size is highest in the world. USA's above average performance of the health indicators at population level once again show the complexity of the association of health care services with health financing.

The flawed conceptual understanding limits the boundary of assumptions and research questions. For example, section III has dealt with causes of growth in health spending. This section should have reviewed the real causes of health spending which are responsible for exclusivity in the health services and thus the demand for UHC to cater all, but failed to do the same because of prior assumption that health care cost increases due to rising income and medical technological advancement.

The second research question (why the pooled share of health spending has grown, section IV) has great potentiality to find and analyze the reason behind the actual growth (or demand) for pooled financing. This section is limited to the importance of political and social processes to bring pooled financing. There is no doubt that without the overall social consciousness and political struggle, the pooled financing (govt. regulated) is almost impossible to establish. However, the reason for social and political mobilization is also worth to investigate which may give more clarity regarding the structure of the market ruled health care industry followed by the destitute like situation of many people.

The research questions are incomplete considering the scenario of the health financing transition described in the project. The research should consider the following scope of information, like what are the prevailing factors that population encounters negatively in availing health care services, who are going to be improved from this transition and how, what leads the political and social process to demand for pooled financing, what type of institutional mechanism is best for pooled financing (Tax based, social insurance, voluntary insurance) and so on.

The two section wise (II and V) reviews are further done below where findings and interpretation are discussed with regards to the respective methodology.

Section II (Health financing, coverage and outcomes):

The health financing transition means the decline of OOP and service expansion. Service expansion should deliver the desired health benefits as a primary objective of UHC. It is being measured by the efficiency of health system over input (health spending) and output (access to health care).

Another Working paper, The Effects of Health Coverage on Population Outcomes: A Country level Panel Data Analysis, (box 4, table 2; pp. 10 in the report) conducts a country level panel study for 153 countries from 1995 to 2008. Health system coverage is measured by the indicators of pre-paid (pooled) public and private health expenditure and immunization rates to measure the effective access to the required care and financial protection. Further, population health is measured by the under five, adult (both male and female) mortality rate. Result shows that greater coverage improves the health of general population and also high spending is related to the lower under five and adult mortality rates. The result is more positively significant for LMICs. An analytical view of these findings may bring some points. Like, the mortality declination is only for greater coverage and service efficiency or also for the improvement in education, public hygiene especially under the context of LMIC, and if so then how the service efficacy of the actual health care have been measured. To address this question, the study exercises the same data set after 10% increase in the per capita health spending under various finance mechanisms. The observation informs that 10% increase only in govt. health spending without changing any other factors decrease the under five mortality by 7.9 per 1000 children and also decrease mortality by 1.6 and 1.3 per 1000 population respectively for adult female and male. Further, the interpretation does not mention that 10% increase in immunization coverage does not make any change for under five mortality as given in table 2. It again raises question on the impact of service efficacy even after service expansion. Besides, it raises question on the logic of taking immunization coverage as the health system coverage indicator which already shows limited effect in influencing the health status. The selection of indicator may not be appropriate and logically constituted. Like, Number / % of completed ANC services could be better indicator which actually can give the accuracy on the presence and activeness of grass root health workers and so its impact on

maternal mortality. The biggest limitation of this section is not go for any provider specific service efficacy analysis. The pooled financing (publicly financed) is the ideal way for finance mechanism. But to measure the effectiveness (cost) and efficiency of the proper finance mechanism in relation to the service provision, the service efficacy of various types of service provisions (public/private/publicly subsidized private/others) need to be measured differently. The report does not deal with the complications involved in the divisions of service providers (public-private mix/only public/only private) under public finance where the UHC debate surely requires more informed discussion.

Section V (How are countries reforming health systems today):

This section is about the current situation and practices regarding UHC across the globe. It acknowledges the difficulty of LMICs in achieving the UHC due to slow demographic transition (especially in Asia and Africa) and double burden of diseases. Comparative analyses between Colombia, Ghana, Vietnam and Philippines have been done to elaborate the financing reform. All four countries are following social insurance reforms to achieve UHC. Social insurance is generally based on the copayments from both employee and employer. The analytical portion of this section is very weak. The information are given but without answering the why question. All the countries have similar socio-economic characteristics and belong to the LMIC category. One of the characteristics of social insurance is to provide care only to the insured persons who are generally the working class. This limitation has left many sections of the population outside the insurance coverage (like, Ghana). The report praises Colombia as the most successful country and then Ghana for progressing towards UHC. Ghana has serious flaw in this insurance scheme as it is leaving out almost 75% of country's population from the insurance protection. Vietnam and Philippines have recorded very poor performance. Report records that Philippines have increased the insurance coverage very slowly from 1995 (30%) to 2008 (42%) whereas Ghana has achieved 34.5% insurance coverage within three years (2005 to 2008). This difference in time gap is unexplored in the report. The report also rates Colombia as model country but recent empirical data have given caution to the existing system. In Latin America, Costa Rica and Colombia (apart from Cuba) are the countries having high public spending and low OOP. Though within these two countries, the difference is striking. The households facing catastrophic health expenditure is much higher in Colombia (6.26%) than Costa Rica (0.12%). Existing literature explain this

difference by reporting that Costa Rica's health system strictly follows the public finance and public provisions. In contrary, Colombia has several private provisions and mix of public and private provision options under public financing.[5] The report did not analyze the status of splitting in financing and provisioning among these countries. This introspection could have given the possible explanation of high OOP and delay in low coverage of insurance in Vietnam and Philippines. This section should have more detailed analysis of each country with holistic perspective and not limited to only insurance coverage or percentage of health expenditure.

Conclusion:

This report is considered as a crucial guideline for the preparation of UHC framework by many LMICs. Many of the working papers have worked in collaboration with the WHO. However, the analysis of this report from an epidemiological perspective is showing that the report is based on the assumption of growth 'phenomenon' and not on the reality of complex medical market. From design to findings, the epidemiological concerns are given less priority and as a result many areas remain untouched by the research. From an outer look, the report has a logical coherence across the sections but that very coherence is made, as it appears to comply with the assumptions which have been built on a wrong conceptual framework of causality. Selecting ecological design gives the study a good scope to compare the data and analyze with existing knowledge system, but wrong selection of indicators, limited research questions and weak assumptions make the report a non epidemiological research.

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