

Universal health coverage reforms: implications for the distribution of the health workforce in low- and middle-income countries

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ABSTRACT

To achieve universal health coverage (UHC), a range of health-financing reforms, including removal of user fees and the expansion of social health insurance, have been implemented in many countries. While the focus of much research and discussion on UHC has been on the impact of health-financing reforms on population coverage, health-service utilization and out-of-pocket payments, the implications of such reforms for the distribution and performance of the health workforce have often been overlooked. Shortages and geographical imbalances in the distribution of skilled health workers persist in many low- and middle-income countries, posing a threat to achieving UHC. This paper suggests that there are risks associated with health-financing reforms, for the geographical distribution and performance of the health workforce. These risks require greater attention if poor and rural populations are to benefit from expanded financial protection.

Key words: health-care financing policies, health insurance schemes, human resources for health, geographical imbalances in the distribution of health workers, universal health coverage, user fees

INTRODUCTION

Over the past decade, there has been a growing momentum towards achieving universal health coverage (UHC) in low- and middle-income countries. With this aim, a range of health-financing reforms, including reduced reliance on user fees, increased tax-based funding, and social health insurance schemes, have been designed and implemented across different countries, with varying paces of development and degrees of success. The main objectives of these reforms have been to increase efficiency and equity in the utilization of health-care services by widening population coverage, particularly for the poor and vulnerable, while offering financial protection from out-of-pocket payments. The focus of much research and discussion has been on the impact of health-financing reforms on population coverage, health-service utilization and out-of-pocket payments. The implications for human resources for health have often been overlooked. Although financial barriers represent an important barrier to universal access to health-care services, the availability of an appropriate mix of the health workforce is equally fundamental, given that the health workforce is a crucial component of the functioning

of the health-delivery system. However, shortage of skilled health workers and geographical imbalances in the distribution of skilled workers persist in many low- and middle-income countries, and progress in implementing the 2008 Kampala Declaration has been slow,¹ posing an important barrier to achieving universal access to health-care services.

Many low- and middle-income countries fall short of the Joint Learning Initiative (JLI)–World Health Organization (WHO) benchmark of 2.28 health workers (doctors, nurses and midwives) per 1000 population.² For example, five out of the ten countries in the Association of Southeast Asian Nations experience shortages in their health workforce according to this benchmark.³ National averages often mask geographical imbalances that exist even among countries that are not classified as experiencing critical shortages. For example, in 2010, Thailand reported a national level of 2.55 doctors and nurses/midwives per 1000 population.⁴ However, the density of doctors and nurses/midwives in Bangkok, the capital, was seven times and two times higher, respectively, than the density in the north east, the poorest region. In Timor-Leste, approximately 85% of general medical practitioners were

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concentrated in urban areas in 2011.⁵ In 2006 the density of doctors in urban Java, Indonesia, was one per 3000 population but one per 22 000 population in rural Java.⁶

Similar geographical imbalances have been reported in other low- and middle-income countries, including countries in sub-Saharan Africa, where 36 out of 47 countries experience critical shortages in the health workforce.² For example, in 2009, the density of both public and private sector doctors, nurses and midwives per 1000 population in Ghana was over 2.28 in Greater Accra, while the corresponding density in the poorer northern region was only 0.67, almost four times lower.⁷

Several factors may explain geographical imbalances in the distribution of the health workforce. Lower demand for health workers (owing to lower ability to pay), more limited health-care infrastructure, unavailability of equipment and supplies, unfavourable job characteristics (such as longer working hours, higher workload and working in professional isolation), as well as lower standard of living in rural areas, all affect the supply of health workers to rural areas, the extent of which varies across country settings.⁸⁻¹⁰

Higher concentrations of skilled health workers in wealthier urban areas mean that increasing financial protection for the poor and populations in remote and rural areas will not improve outcomes in those areas without a concurrent strengthening of the health workforce. Therefore, in designing health-financing reforms, more attention needs to be directed towards understanding implications for incentive structures and distribution of the health workforce.

The aim of this paper is to highlight the implications of UHC reforms for geographical distribution of human resources for health and thus stimulate further debate and discussion. A systematic review was not viable, owing to the dearth of studies directly focusing on the impact of UHC reforms on the geographical distribution of the health workforce. Instead, a review of the literature was conducted to find evidence – both direct and indirect – on the effect of UHC reforms on the geographical distribution of human resources for health, often within papers whose primary purpose lay elsewhere. The rest of the paper is structured as follows: first, the study methodology is outlined. Second, a framework is provided for understanding geographical imbalances in the distribution of health workforce by adopting a labour market perspective. Finally, the paper discusses how UHC reforms (user-fee removal and expansion of social health insurance) can affect the flow of financial resources and, consequently, the distribution of the health workforce.

METHODOLOGY

A search of peer-reviewed and grey literature was conducted in May 2013 using databases PubMed, Google Scholar, Science Direct and the Human Resources for Health Global Resource Centre. Publication date was restricted to between 2000 and 2013. Key terms used in the search (singly and in combination) were “health financing policies”, “health workforce distribution”, “human resources for health”, “universal health

coverage”, “health insurance schemes” and “user fees”. In addition, references cited within selected articles were accessed to obtain further information. Only articles published in English were retrieved and reviewed.

Abstracts were reviewed and articles were selected based on the following criteria: articles focusing on both health-financing policies and health workers’ motivation, performance and distribution; articles focusing on both health-financing policies and the utilization of health-care services; and articles focusing on health-financing policies, reimbursement mechanisms and the distribution of financial resources. Articles that focused solely on health-financing policies without a component of human resources for health, or without addressing the distributional impact on utilization and financial resources, were excluded. Overall, the 21 articles included in this review comprise original studies (that applied both quantitative and/or qualitative methods) and literature/systematic reviews conducted from the perspective of low- and middle-income countries.

GEOGRAPHICAL IMBALANCE IN THE DISTRIBUTION OF THE HEALTH WORKFORCE FROM A LABOUR MARKET PERSPECTIVE

Labour market theory provides a starting point for understanding the economic determinants of geographical imbalances in the distribution of health workers.¹⁰ In a perfect market, demand and supply tend towards an equilibrium, driven by market forces that move both prices (or wage rates) and quantities to an equilibrium. For example, in a well-functioning market, high demand for health workers (captured by higher willingness and ability to pay for health workers) will result in an increase in wage rate. This will, in turn, induce an increase in the supply of labour by health workers, until a new equilibrium is reached where demand matches supply. This presupposes that wage rates and quantities can readjust freely to achieve market equilibrium.

Disequilibrium implies shortages (when demand exceeds supply) or surpluses/unemployment (when supply exceeds demand). For example, barriers to entry into the health labour market due to training and regulatory (professional licensing) requirements constrain the ability of labour supply to respond to changes in demand. Furthermore, the centralization of wage-setting (in public-sector employment) results in local shortages and surpluses when wage rates fail to capture regional differences in job attributes and environmental conditions. Inflexibility of wage rates results in persistent shortages in rural regions, when wage rates fail to adjust upwards in response to low supply, in order to attract health workers into these regions. There is also an uneven competition between public and private sectors in the demand for the services of health professionals. The sectors are interdependent on both the demand and the supply side: patients “shop around”, looking for effective, affordable services at multiple locations in both sectors. Health professionals often hold multiple jobs and serve both sectors.

However, the dominant explanation of rural shortage of health workforce is likely to be insufficient effective demand relative to the need for services. Despite the set of measures taken by governments to subsidize demand in such areas, which include the attempt to provide free services and, in many cases, additional allowances for rural practice, the effective demand of richer users in urban areas often out-competes governments' efforts. Even in the presence of rural allowances, health professionals may still have higher earning capacity in urban areas, through more lucrative private-sector opportunities; and in both rural and urban areas, professionals may give insufficient attention to public-sector work, being drawn away by private-sector demand. Such incentives are exacerbated by weak regulation that fails to impose penalties for the neglect of public-sector work.^{11–14}

In this context, reducing financial barriers to accessing care will not resolve inequities in geographical access unless financial flows support growing effective demand for health services in those areas, and for those (poor populations) whose own purchasing power is limited. A labour market perspective suggests that growth in effective demand is the force that can attract the time and effort of health workers to provide care. This implies that removing fees or mandating social insurance coverage for such groups will not in itself improve access: the critical factor will be how the rules that govern resource flows operate to direct resources, or not, to those areas that lack endogenous purchasing power and have historically been deprived.

The ability to support effective demand in the public sector depends on a country's fiscal capacity. Under traditional public-sector rules, the wages of public-sector health workers are financed largely directly, through budgetary allocations to ministries of health, often constrained by fiscal capacity and macroeconomic targets.¹⁵ Public health workers' wages account for a high proportion of total government expenditure on health in many low- and middle-income countries,^{2,15,16} and since these countries face constraints in their overall fiscal space, increasing allocations to the health sector is challenging. Bossert and Ono suggest that the target of 2.28 health workers per 1000 population is unattainable, without an unrealistic allocation of resources to the health sector (more than 8% of gross domestic product) in 52 out of 166 countries for which they performed the calculation.¹⁷ However funds flow, Bossert and Ono's analysis suggests that more emphasis needs to be placed on improving efficiencies in the utilization of available resources, including improving the skill mix of health professionals and relying less on doctors and other high-cost health professionals.¹⁷

HEALTH-FINANCING POLICIES AND THE GEOGRAPHICAL DISTRIBUTION OF THE HEALTH WORKFORCE

As highlighted in the preceding section, wage rates and opportunities for salary top-ups are important financial factors, suggesting that health workers will be attracted to areas where there are higher financial returns. In addition, the availability of financial resources can facilitate the provision of other

non-financial incentives, such as improvement of the work environment, infrastructure and equipment – incentives that equally influence the location choices of health workers.^{9,10} Health-financing policies can affect health-worker distribution outcomes through both routes. They may also affect other non-financial determinants of recruitment and retention. For example, if they involve a more devolved budgetary process, or one more influenced by local performance, they increase the importance of local managers in the lives of health workers, and their perceptions of their managers' competence and fairness may come further to the fore. Financing policies are a powerful signaller of government priorities,¹⁸ and, as such, their impacts can reflect both on health workers' economic well-being and on their sense of being valued by the system. This section discusses recent financing reforms (user-fee removal and expansion of social health insurance) that have responded to UHC policies in a range of countries and reflects the limited evidence base on how health workers have been affected, with what implications for the distribution of human resources for health in terms of numbers and performance.

User-fee reforms

Following years of debate and discussion on user-fee policies, there now appears to be a general consensus on the need to shift to fairer means of financing health-care services. The focus of recent research has been on the impact of abolishing user fees on the utilization of health services and on population health outcomes, while the implications for the distribution and performance of the health workforce have received less attention. Out-of-pocket payments represent an important barrier to accessing health-care services.^{19–22} Therefore, the removal of user fees is likely to result in an increase in the demand for, and utilization of, health-care services, a trend that has now been reported widely across a range of low- and middle-income countries following changes in user-fee policies.^{23–26}

While being potentially important for population health, higher utilization of health-care services also imposes an extra burden on the health workforce, particularly in rural and remote areas.^{26–28} In several low- and middle-income countries, health-care workers have reported an increase in their workload and, as a consequence, a decline in motivation and an increase in the desire to resign from their positions.^{29–32} The decline in health workers' motivation is further exacerbated by the loss of supplementary income or bonuses previously provided by user-fee revenues, as well as the loss of locally managed funds that can be used to improve working conditions in other ways. Revenue generated through user fees contributes a significant proportion to total revenue, particularly for lower-level health facilities, and allows greater flexibility in the recruitment and remuneration of local support staff.^{30,33–35} Therefore, compared to the impact on higher-level health facilities, the abolition of user fees is likely to have a greater impact on lower-level health facilities, owing to their greater reliance on user-fee revenues to cover both salary and non-salary costs. Other studies report increases in the utilization of health-care services that are particularly strong in deprived and rural areas,²⁶ disproportionate loss of locally generated revenues in rural

areas compared to urban areas,³⁵ and resulting redundancies of support workers.³⁵

A range of mechanisms have been created to compensate health facilities for loss of user-fee revenue, as well as to cover costs for providing free health-care services. Health equity funds in Cambodia provide a budget that covers the fees of those exempted, so that the health facilities that are required to exempt larger proportions of patients are not disadvantaged.^{36,37} User-fee replacement grants were provided in Zambia and Uganda.^{26,33} Incentive payments related to the volume of service provision that is free of charge were provided in Nepal.³⁸ The experience of these mechanisms suggests that the incentives implied by the basis on which they are paid, and the management and control over the provided funds, are important in determining their implications. For example, reimbursement rules in Senegal provided higher levels of reimbursement at higher-level facilities, with implications for the attractiveness of higher and lower levels of the system as workplaces.³⁵

However, in five case studies (in Ghana, Nepal, Sierra Leone, Zambia and Zimbabwe) of the implication of removing user fees for the distribution of human resources for health, a number of expectations based on these ideas were confounded.³⁸ Utilization increases following user-fee removal were often not sustained. Multiple concomitant policy changes made assessment of user-fee removal alone difficult. Nevertheless, the logic that pro-poor increases in demand imply stresses on the health workforce and other supply components exactly where the poor rely most for health care, confirms that planning the supply-side response to demand-side intervention is critical in determining impacts for health-workforce situations and, in turn, for population health.

Health insurance schemes

Pooling funds through voluntary or compulsory health insurance schemes can improve equity in both the financing (distributing the financial burden according to ability to pay) and use of health care (improving access for the sick and poor). Social health insurance, organized on this principle, has been expanding across low- and middle-income countries.

Under these schemes, health providers are reimbursed for providing health-care services to the population, through a predetermined reimbursement mechanism. As highlighted in the previous subsection, variations in reimbursement mechanisms across different levels of health-care facilities can accentuate geographical imbalances in the distribution of the health workforce. However, even when uniform reimbursement rules are applied, facilities with more sophisticated infrastructures are likely to attract higher reimbursements for providing more sophisticated health-care services compared to lower-level facilities.³⁹ As a consequence, financial resources can be distributed disproportionately, favouring regions or areas with a higher concentration of high-level facilities and infrastructures.

For example, in Ghana, under the National Health Insurance Scheme (NHIS), health-care providers are reimbursed on a

pay-by-episode-of-care basis, according to disease groups (diagnosis-related groups or DRGs). Although revenue generated by health facilities through NHIS reimbursements has grown significantly since the inception of the NHIS in 2005, evidence suggests that this growth is unevenly distributed across different locations (urban versus rural) and different levels of health facilities, with hospitals attracting a larger proportion of NHIS reimbursements compared to lower-level health-care facilities.³⁹ This heightening of pro-urban bias in the distribution of financial resources, as an unintended consequence of the NHIS, may leave rural areas with less financial leverage to compete with higher-level facilities in attracting and retaining health workers.

Similar impacts of the expansion of social health insurance schemes in Asia have been noted. Obermann et al. identify the impact of expanding health insurance in the Philippines as early as 1969, with increasing emphases on urban, curative and higher-level care,⁴⁰ and Kondo and Shigeoka identify the same tendency from the early period of expansion of health insurance onwards, in Japan.⁴¹ In Thailand, Hughes et al. describe the problems that arose from the failure to identify the effects on incentives in the local health system of both lower payment levels and weaker incentives attached to funding mechanisms for preventative care, when insurance mechanisms replaced traditional public funding mechanisms for curative care.⁴² These examples show the failure to support effective demand for critical rural, preventative and lower-level care, which is likely to imply a decreasing ability to attract staff to those roles. Furthermore, Erlyana et al. show that individual demands are less stimulated by reducing financial barriers in rural rather than urban areas in Indonesia.⁴³ Demand in rural areas is far more influenced by distance than by price, suggesting a further bias in the financial, and consequently likely health workforce, impact.

Few examples can be cited of social health insurance schemes that have incorporated within their design features measures that are aimed at explicitly addressing rural–urban imbalances in the distribution of health workers. Thailand’s attempt to do so illustrates the difficulties.⁴² Under the reform, global budgetary allocations to provincial health authorities from the central ministry of health were replaced by capitation payment adjusted for population–age structure, and the rates were set so as to reallocate resources to lower levels of the system and rural areas, as a mechanism for securing redistribution of staff along the same lines. However, the proposed mechanism was not implemented, following pressure from powerful actors in the system whose interests were threatened.

CONCLUSION

Policies designed to achieve UHC have largely focused on reducing financial constraints to accessing health care, or on the “demand-side”. The principal mechanisms associated with UHC have been the removal of user charges, and the expansion of social health insurance. Measures to support a supply-side response that is sufficient to achieve UHC objectives have received less attention.

This paper has focused on the issues arising from health-financing reforms with UHC objectives, for the health workforce. Shortages and maldistribution of the health workforce are a critical constraint to the supply-side response to UHC policies. This paper suggests that lack of attention to this constraint is a common phenomenon that threatens the achievement of UHC. Furthermore, some elements of financial reforms may worsen rather than alleviate this constraint.

User-fee removal may increase workload, reduce opportunities for additional financial rewards for rural staff, and restrict the ability of local managers to alleviate resource constraints in enabling adequate working conditions and additional support staff. These problems are often particularly acute in rural areas. Social health insurance frequently applies payment mechanisms that preferentially allocate resources to urban, curative and higher levels of the health system. Attempts to avoid this in Thailand have proved difficult to implement in the face of political opposition.

Recognizing that the size of the health workforce and its distribution is the outcome of labour market processes implies that the impact of these changes may be to exacerbate workforce imbalance, and, ironically, to reduce access to care of poor and rural populations, in contrast to policy intentions. Further policy innovation is needed to find strategies that avoid this outcome, while containing political opposition. If, like Thailand, other countries also find that capitation mechanisms cannot secure redistribution of the health workforce, other possible strategies could involve earmarked funding for deprived areas and facilities that protect them against potential losses from new payment mechanisms; and protected vacancies in the most critical roles, funded at a level that makes those roles attractive. These policies may have the greatest chance of success if they earmark sources from additional funds for the health sector, which are often planned in the pursuit of UHC, rather than seeking to redistribute resources (financial or human) from well-resourced facilities and areas towards less well-resourced ones.

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