



# Universal Health Coverage: The Holy Grail? 21st Annual Lecture

Professor Anne Mills

9 June 2014  
Royal College of Physicians  
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## **About the author**

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In 2006 she was awarded a CBE for services to medicine and elected a Foreign Associate of the US Institute of Medicine. In 2009 she was elected Fellow of the UK Academy of Medical Sciences and received the Prince Mahidol Award in the field of medicine. She was President of the International Health Economics Association (iHEA) for 2012–13 and elected a Fellow of the Royal Society in 2013. She also received a DCMG in the 2015 New Year's Honours.

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## 1. Introduction

Health services available to the whole population free of charge, and providing the best health advice and treatment, were the foundation stone for the creation of the UK National Health Service. The health systems of most other high-income countries similarly embody the ideal of universal health coverage. Yet low- and lower-middle-income countries have, in recent years, been on the receiving end of global policies that have emphasised highly selective goals, in contrast to the initial broad themes of the Primary Health Care movement founded in Alma Ata in 1975 and pursued through WHO's slogan *Health for All*. Recent policies have focused on controlling specific diseases such as HIV and malaria, and delivering specific interventions such as immunisation.

In the last few years, universal health coverage has attracted greater attention. It has been the subject of World Health Assembly and UN General Assembly resolutions, and is being strongly advocated for inclusion in the post-2015 Millennium Development Goals (MDGs). It is therefore an important time to consider what exactly universal health coverage should encompass, how it might be financed and organised, and what might be realistic goals in the short and medium terms.

## 2. Background

### 2.1. Neglect of system infrastructure

In recent years there has been a large increase in development assistance for health in real terms, as shown by data from the Institute of Health Metrics & Evaluation (2014). The data demonstrate the rapid rise in assistance from bilateral aid agencies; funding from the US in particular has increased significantly. New funding organisations have also emerged, such as the Global Fund for AIDS, TB and Malaria, and the GAVI Alliance which funds immunisation. Much of this increase in development assistance for health has focused on specific diseases, in particular HIV-AIDS; TB; malaria; and maternal, neonatal and child health. This increase in disease-specific funding to some extent reflects the MDGs which were agreed in 2000.

There is general agreement that this disease-specific focus has led to some adverse consequences, in particular the neglect of the health system infrastructure improvements needed to underpin the delivery of these interventions, with funding directed towards drugs, vaccines, mosquito nets and similar products rather than underpinning health systems. This has led to high competition for scarce health workers and managers, lack of general training for these workers, and a lack of support for cross-cutting systems issues such as primary care and district infrastructure that all programmes depend on. Many programmes have used their own drug-supply systems rather than building up a national system. Similarly, there has been limited attention paid to the long-term development of sustainable national financing arrangements.

### 2.2. Significant out-of-pocket payments

In low-income countries, per capita government health expenditure is around \$12 per year, whilst private health expenditure is about \$19 per capita, almost all of which (around \$15 per capita) comes

from out-of-pocket payments (WHO, 2014a). The picture is similar in lower-middle-income countries: \$44 per capita is spent in out-of-pocket payments compared with \$29 spent by government. There is a large volume of literature demonstrating the adverse consequences of these high levels of out-of-pocket payments. One example is provided for rural South Africa, a country where primary health care is provided publicly for free and there are hospital-fee exemptions for the poor (Goudge et al., 2009). A survey of 280 households demonstrated that, on average, households paying for health care spent 4.5 per cent of monthly household expenditure on health care, 20 per cent of households spent more than 10 per cent, and 15 per cent of households spent more than 15 per cent. This study also catalogued the consequences of this for household poverty and household coping strategies, and demonstrated the struggle faced by these households to cover their basic needs.

### **2.3. The goal of universal health coverage**

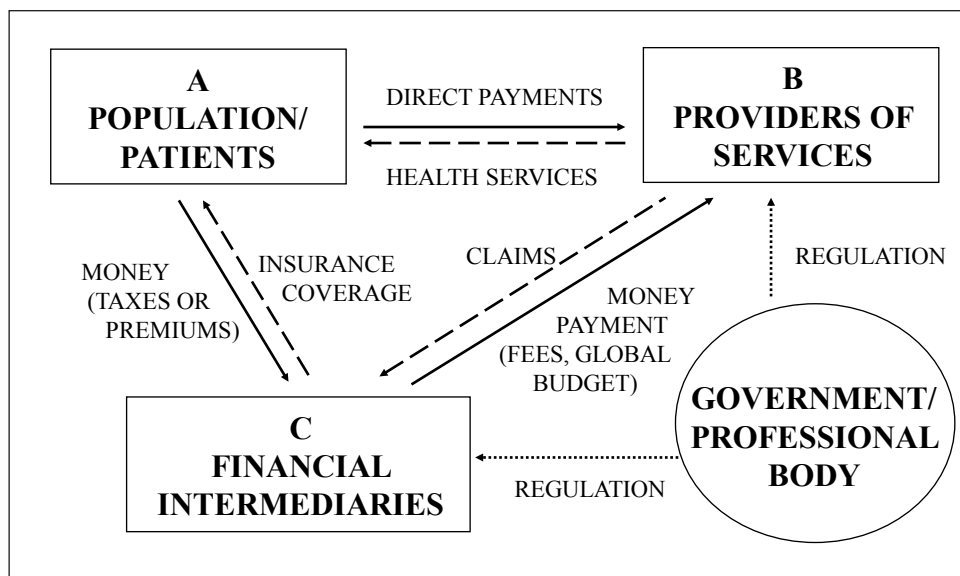
The concern around these two issues – the disease focus of development assistance for health and the lack of effective financial protection for health care costs in low- and middle-income countries – has encouraged a growing momentum behind universal coverage as a key global goal. This is also coinciding with the period when the future of the MDGs (whose original target was 2015) is being discussed, with lively debate on what should be the future goals and targets.

In 2010, WHO produced a World Health Report on universal coverage of health care (WHO, 2010), and in the same year a declaration of the World Health Assembly urged member states to “aim for affordable universal coverage and access for all citizens on the basis of equity and solidarity”. In 2012 there was a similar declaration by the UN General Assembly, and since then a strong lobby in favour of setting universal coverage as one of the future MDGs. Most recently this aspiration was endorsed by the Director General of the WHO at the 2014 World Health Assembly, where she suggested a target of “80 per cent effective coverage of all population groups within a country with key health services by 2030”.

However, such a goal has raised a number of concerns. Universal coverage is an unfamiliar term to many. Universal coverage of health care is thought to imply an emphasis on medical care rather than on the broader health system. Questions have also been raised regarding why it should be considered a goal, when it is more obviously a means to an end, that of better health. And given the difficulties of providing access to all that medical technology has to offer even in high-income countries, there are concerns about the affordability of universal coverage in lower-income settings.

What, then, might universal coverage mean in the context of lower- and middle-income countries? What can be learned from the experiences of countries tackling some of the key challenges in making progress towards universal coverage? And, finally, what are the priorities for countries on the path to universal coverage? Discussion of these issues is best framed around a conceptual map of a health system involving populations, providers, financial intermediaries and the government and professional bodies, and involving flows of services and funding between them (Figure 1). The following outlines the key aspects of universal health coverage and what we can learn from the experiences of others.

**Figure 1. Health system conceptual map**



Source: Adapted from Reinhardt, U.E., 1990. 'Respondent' in *Health Care Systems in Transition: The Search for Efficiency*. OECD Social Policy Studies (7). Paris: OECD.

### 3. Universal health coverage

According to WHO (2014b), universal health coverage is “ensuring that all people can use the promotive, preventive, curative, rehabilitative and palliative health services they need, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship”. This implies three related objectives: equity and access to health services, sufficient quality of health services, and financial risk protection.

There are three key components of a system of universal health coverage: sources of finance, financial intermediaries, and the service providers.

#### 3.1. Sources of finance

The debate around this topic tends to be polarised between those advocating particular sources of finance, yet most countries moving towards universal health coverage employ a mix. Most use a combination of general tax, payroll tax for a social insurance scheme, and other earmarked tax, e.g. value added tax (VAT). A very few countries, such as Singapore and China, add medical savings accounts to this mix. Whilst all countries have some degree of voluntary contributions and co-payments, in order to make any significant progress towards universal coverage it is generally accepted that countries require a core mandatory financing mechanism which needs to be either social health insurance or general tax revenues.

Examples of funding mechanisms from countries that are considered to represent good examples of universal health coverage – including high-income OECD member countries as well as middle-income countries such as Colombia, Costa Rica, Cuba and Thailand – demonstrate that mandatory pre-payments dominate the financing mix (McIntyre, 2012). Voluntary pre-payments represent a very small proportion of financing in these countries.

For those employed in the formal sector (both public and private), coverage is relatively straightforward, and most countries choose to use social health insurance as the mechanism for financing care to cover this population, not general tax. However, the use of social health insurance presents two main challenges. The first is how to cover low-income workers and the self-employed in the informal sector. This is particularly problematic in low- and middle-income countries, where this population represents a very significant share of the total labour force. Second, there is the problem of those outside the labour force: the young, the old, the disabled and the unemployed. None of these populations form part of the formal labour force and hence are not readily covered by social health insurance.

### *3.1.1. Extending financial protection to the informal sector*

One mechanism to extend financial protection to the informal sector is via the compulsory social health insurance scheme itself. Income to the scheme can be used to cross-subsidise low-income worker premiums, an approach which has been adopted in Mexico. Another option is to use general tax to subsidise compulsory health insurance premiums. In Thailand, for example, premiums of all workers in the social health insurance scheme receive a public subsidy, with a third of premiums coming from the government, a third from employers and a third from employees. In other countries like South Korea and Singapore, these public subsidies are targeted more specifically to lower-income workers. Another option is to keep premiums low by continuing some supply-side subsidies. In Colombia, for example, where there is an insurance scheme for low-income workers, the premium is kept relatively low by continuing supply-side subsidies to the services that they use.

An alternative way of extending financial protection to the informal sector is via voluntary and community-based insurance schemes. Since premiums can be costly, tax funding may be used to fully or partially subsidise premiums as an incentive to households to enrol. Rwanda and China have achieved remarkably high levels of voluntary insurance coverage – around 95 per cent of the target population. While subsidies from general tax reduce the premium considerably, these countries appear to have additional ways of encouraging a level of uptake that is unattainable in other countries with voluntary health insurance. In Ghana, for example, even though the insurance scheme for the rural population is in theory compulsory, in practice this cannot be enforced, and the scheme functions as a voluntary scheme, with partial coverage of the target population. The general experience of community-based insurance has also been relatively low enrolment levels: Ekman found in a systematic review that on average only 10 per cent of target populations received effective coverage (Ekman, 2004).

Finally, the other option to extend financial protection to the informal sector is to adopt the principle of universal entitlement and to use general tax funding to cover health service costs directly, rather than indirectly and selectively via subsidising the premiums of those who enrol in insurance schemes. This universal entitlement approach has been adopted by Thailand.

These different ways to cover the informal sector, whether by attempting voluntary insurance, community-based insurance or general tax funding, are an area of active international debate with arguments over their consequences for efficiency and equity.



### *3.1.2. Extending financial protection to the non-working population*

When the compulsory-funding approach is social health insurance, the second challenge is extending financial protection to the non-working population. Whilst it is desirable for social insurance schemes to cover dependants, such as children and the elderly, this is not always done in reality. For example in Thailand, the scheme covers only the worker. In some countries general tax is used to pay for an insurance card for the poorest, and sometimes for the elderly, as in Rwanda, Ghana and India. As for the informal sector, universal entitlement and general tax funding is the alternative approach to cover the non-working population.

### *3.1.3. The role of co-payments*

Co-payments (user fees) have for long been a controversial issue in international health policy relating to low- and middle-income countries, with many policy advisers and researchers advocating their removal. In reality, countries can rely heavily on them, for multiple reasons. One reason is that co-payments can permit the premium to be set at a level that is considered affordable or acceptable, for example as in South Korea and the Philippines. Co-payments may also be justified on the grounds that they can help to constrain demand in the early or later years of the extension of coverage. Countries are often concerned that removing payment at the point of service use will greatly increase demand for care, and therefore expenditure on health care. Alternatively, co-payments may be seen as a symbol of family responsibility, as, for example in South Korea and Singapore, where contribution from the family is expected. However, it is clear that, in general, co-payments are regressive, weighing most heavily on the poorer groups and discouraging use.

### *3.1.4. Incidence of financing sources*

While there is good evidence on the incidence of direct payments for health care, there is much more limited evidence on the incidence of other financing sources, or on the extent to which the overall burden of financing universal health coverage weighs more heavily on the poor, or whether there is sufficient cross-subsidy across different income groups. A study that considered who pays and who benefits in the health systems of South Africa, Ghana and Tanzania showed that in all three countries direct payments, as expected, are regressive (Mills et al., 2012). Direct taxes are progressive, particularly in Tanzania. Indirect taxes were shown to be somewhat progressive in two of the three countries (Tanzania and Ghana); this was unexpected as it is often thought that indirect taxes are levied especially on the goods used more by the poorer groups. However, in both Tanzania and Ghana, the poorest did not spend a significant share of their income on goods subject to VAT. In South Africa, however, indirect tax was regressive because of a tax on fuel that was purchased more by lower-income groups. For voluntary and private insurance the picture was mixed. Voluntary health insurance was regressive in both Tanzania and Ghana, who are encouraging rural health insurance; this was the case because the premiums were being levied on the poorer sections of the population. In South Africa the opposite picture prevailed, since private insurance benefits richer groups who are enrolled in employer schemes.

Studies of this kind are limited in number; further research is required into the incidence of various financing sources to inform these discussions and help ensure an equitable financing mix for universal coverage.

### **3.2. Financial intermediaries**

Financial intermediaries are the bodies that connect the sources of finance and the providers. They may be public or private insurance funds, or government ministries. Many countries have a historical legacy of segmented funds, for example with separate arrangements for the army, the navy, the civil service, the private-sector labour force (social health insurance) and some rural populations (community-based health insurance), as well as ministry of health-funded arrangements for those who can access publicly funded care. One key question is whether the aim should be a single-payer system, as exists in many countries in the developed world, or whether it is better to accept the existence of multiple funds which may have different benefit packages and different levels of service provision. South Korea has chosen to merge its funds, whilst Thailand maintains three funds. Decisions in this area often derive from a mixture of politics, the ease of merging funds, and managerial capacity. In Laos, for example, where there is discussion of merging funds, capacity to manage a single fund is likely to be extremely limited (Ahmed et al., 2013).

The second key question surrounding financial intermediaries is whether they should be public or private agencies. Historically, in low- and middle-income countries, social health insurance has usually been managed by a public (often autonomous) agency under the ministry of labour, but some interesting alternative models have recently emerged. In Colombia, for example, the government regulates competing private insurers within social health insurance arrangements, with households choosing which of the competing private insurers to enrol with.

Under a scheme in India – Rashtriya Swasthya Bima Yojna (RSBY) – the government contracts insurance companies to manage the scheme, which targets families below the poverty line. A maximum premium of Rs 750 (£7.50) per family is shared between central (75 per cent) and local (25 per cent) government, with the beneficiary family paying a modest Rs 30 per annum for registration. Insurance companies bid for contracts to insure families in each district, bidding for the premium, with the option to bid lower in order to win the contract. Hospitalisation benefits are capped at Rs 30,000 per family per annum, with a maximum of five beneficiaries per family. The insurance company contracts a third-party administrator to manage the smart-card system and provide a card to each household enrolling. After a rapid scale-up of this system over just a few years, there are currently 31 million active smart cards.

The scheme has been controversial for a number of reasons. The first is the use of insurance companies as intermediaries. Another controversial issue is the access that is provided to private as well as public hospitals, and the channelling of a significant share of public funding to private hospitals. Given the very limited evaluation data yet available on the number and rate of claims, health care received, fraud and other issues, it is difficult to draw conclusions about the success of the scheme. But it may offer an interesting model for countries that have experienced difficulty in managing the arrangements for enrolling large numbers of families and reimbursing providers.

### **3.3. Service providers**

As with financial intermediaries, a key question is whether access to health services should be provided within the public sector only, or whether there should be a mix of public and private

provision. Increasingly, families are being allowed to choose between public and private providers. The private health sector often has substantial resources of facilities and hospitals in low- and middle-income countries, and in order to give people physical access to services it is often necessary to make use of the resources of the private sector. Thailand's social health insurance scheme, for example, allows employees to choose between a public and a private service provider; in India, the majority of the beneficiaries of the RSBY scheme use the private sector.

Another issue is the benefit package, which is particularly problematic in resource-constrained settings. The approach of some schemes, such as India's RSBY, is to provide a long list of hospitalisation procedures that are included in the benefit package. Thailand, on the other hand, simply lists the conditions that are excluded from the scheme.

Ensuring a continuum of service across primary and hospital care levels has been a particularly problematic issue in low- and middle-income country settings. In terms of financial access to health services, it is generally considered that hospital care poses the most substantial affordability problem, leading to countries such as India choosing in their RSBY scheme to cover hospital-based care only. However, this incentivises the use of hospitals, increasing their income, creating a divide between hospital and primary care, and leaving unaddressed the problem of often very poor-quality primary care. There have been a few countries, however, that have sought to strengthen the role of primary health care: South Korea with a primary-care gatekeeper; Thailand with bypass fees and a primary-care budget holder.

One of the key concerns around declaring universal coverage as a goal has been that richer groups will benefit first, and that the equity of service access will be made even worse. One of the important approaches is to extend services to poorer areas first. This has been the approach of the Brazil Family Health Programme, a programme that has been very successful in improving access to care and health outcomes, by initially prioritising poorer municipalities. Indeed, it is critical for financial protection not to move ahead of service provision; financial access without geographical access is futile, yet many countries experience this problem.

Thailand provides a good example of the phasing of expansion of service provision and financial coverage (Balabanova, McKee and Mills, 2011). Over a succession of economic and social development plans, Thailand developed the health service infrastructure through mechanisms such as mandatory rural service for doctors, training village health volunteers, extending the district hospitals, and introducing technical nurse cadres. In parallel, financial protection mechanisms were developed that targeted particular population groups, such as the low-income and voluntary health card schemes. By the time Thailand introduced a universal coverage scheme for the whole population, in 2001, geographical access was no longer the main barrier to accessing care; the levels of utilisation were very similar between urban and rural areas. This is a critical issue for countries to keep in mind moving forwards.

### *3.3.1. Universal health coverage arrangements in Thailand*

Indeed, Thailand is often held up as a model country, since it introduced universal health coverage at a relatively low level of income, with arrangements which are instructive for other countries (see

Evans et al., 2012, for an evaluation of the first 10 years). Thailand implemented universal coverage in 2001 via three schemes. The social health insurance scheme for formal-sector employees, and the non-contributory scheme for civil servants, were maintained, with a “universal coverage” scheme added to cover the rest of the population (roughly 40 million of the 60 million population) and funded by general taxes. Since then, there has been gradual progress in harmonising the benefit package, payment methods and service provision arrangements across the schemes. Whilst variation remains amongst schemes, performance of the universal coverage scheme has been relatively equitable, with benefits increasing relatively more for the poor, finances becoming less regressive, and a reduction in catastrophic payments.

A particular strength of the Thai experience with social health insurance and the universal coverage scheme is the good cost containment demonstrated, which has been achieved largely through using a combination of capitation and case-based payment within a global budget. A firm cap on total costs has been implemented, and although the total cost has increased over time, Thailand has had much less inflation in health care costs than other countries introducing universal health coverage in Asia.

The evidence of the impact of universal health coverage implementation in Thailand has been positive. Service use has increased, and equity in service use has improved (Evans et al., 2012). Health service provision closer to patients such as in health centres and district hospitals has become more pro-poor. The fear that richer groups might take more advantage of free care has not been realised; indeed not all the service demands of richer groups have needed to be publicly funded since richer groups have a higher probability than poorer groups of choosing not to use their entitlement. There has been a dramatic reduction in catastrophic health expenditure by wealth quintile since the introduction of universal health coverage.

#### **4. Performance concerns with universal health coverage**

Despite successes, there are still concerns in Thailand and other countries regarding the performance of universal health coverage. There are the concerns of rising costs, of increased utilisation and of demands for expansion of the benefit package which are very difficult to resist. It is likely that, in the current global debate, ministries of health are far keener on a global goal of universal health coverage than are ministries of finance, particularly given somewhat weak evidence on the link between increased coverage and health outcomes. This relationship might be visible over the longer term (Balabanova, McKee and Mills, 2011), but in the short term when countries are challenged “What have been the health benefits of expanded coverage?” these can prove difficult to identify. There is also a lack of evidence on the relationship between performance and the numerous design options for universal coverage, which leaves countries unsure which combinations of sources of finance are best, or how they should structure their financial intermediaries. Moreover, the question of the best way to make progress in low-income countries, where resources are so limited, remains largely unanswered.

In the literature there is a strong focus on technical design aspects and options for universal health coverage, which can be evaluated according to performance criteria such as efficiency, equity of finance and access, catastrophic payments, and responsiveness. However, it is also important to

consider a country's institutional framework, and to assess what political, economic, social and cultural institutions best enable governments to pursue and make progress towards universal health coverage. This has received less attention, and in conclusion I suggest a few issues below based on my own experience.

## **5. Key institutional aspects**

The first important institutional aspect is the existence of a civil service which has sufficient capability to implement health programmes and policies. Some degree of government capacity is necessary in order to make progress towards universal coverage. This means some degree of merit-based recruitment, tenure in office that is not linked to personal or political patron, and hierarchical management structures which are able to apply rules. Such capacity is more available in some countries than in others.

Second, if universal coverage is to be a reality, there must be institutions which allow the voice of the less well-off to be expressed in policy debates and decisions. This was one of the key factors in Thailand, where the universal coverage policy was the legacy of a populist government.

Third, there is the issue of the relative importance of the exercise of "voice" and "exit" as an influence on performance. In particular, can the rich be kept within the system as countries grow wealthier, helping to encourage system improvements through being active "consumers", or is a formal separation between health care financing and provision arrangements for the rich and the rest of the population inevitable? If it is inevitable, what are the consequences for the performance of the system for the latter? This issue will become more and more important and difficult to resolve as countries grow richer.

Finally, there is the question whether there is the social solidarity needed for the merger of funds and universalist approaches. In the study of South Africa, Ghana and Tanzania, for example, there was a greater willingness of richer groups to cross-subsidise the health care of poorer groups in Tanzania and Ghana than there was in South Africa, demonstrating the difficulties faced by South Africa and countries with similarly siloed systems in introducing a universal system with cross-subsidies between different income groups (Goudge et al., 2012).

## **6. Trajectory and priorities**

Universal coverage is a process, not a fixed point that can eventually be achieved. It is important to consider the trajectory of universal coverage over time. It is especially critical to put in place early the necessary elements, if only because of the political economy of trying to introduce more universal arrangements once there are many adherents to separate arrangements within a country. These elements include the appropriate combination of financing sources, putting in place a strong purchasing role encompassing both public and private providers and including emphasis on health promotion and prevention, payment systems with appropriate incentives for cost containment and quality of care, and strong primary-care and "district-" (local-) level infrastructure with good

geographical access. In the absence of this strong local infrastructure, universal coverage will not sufficiently benefit the poorer groups in a population. As the whole purpose of universal health coverage is to cover the entire population with a good degree of equity, giving initial priority to improving access to a local infrastructure of services is critical.

## 7. References

- Ahmed, S., Annear, P.L., Phonvisay, B., Phommavong, C., de Oliveira Cruz, V. and Jacobs, B., 2013. Institutional design and organizational practice for universal coverage in lesser-developed countries: Challenges facing the Lao PDR. *Social Science and Medicine*, 96, pp.250–257.
- Balabanova, D., McKee, M. and Mills, A. eds., 2011. *'Good health at low cost' 25 years on: What makes a successful health system?* London: London School of Hygiene & Tropical Medicine.
- Ekman, B., 2004. Community-based health insurance in low-income countries: A systematic review of the evidence. *Health Policy and Planning*, 19(5), pp.249–270.
- Evans, T.G., Chowdhury, A.M.R., Evans, D.B., Fidler, A.H., Lindelow, M., Mills, A. and Scheil-Adlung, X., 2012. *Thailand's universal coverage scheme: Achievements and challenges. An independent assessment of the first 10 years (2001–2010)*. Nonthaburi, Thailand: Health Insurance System Research Office.
- Goudge, J., Akazili, J., Ataguba, J., Kuwawenaruwa, A, Borghi, J., Harris, B. and Mills, A., 2012. Social solidarity and willingness to tolerate risk- and income-related cross-subsidies within health insurance: Experiences from Ghana, Tanzania and South Africa. *Health Policy and Planning*, 27, Suppl. 1, pp.i55–i63.
- Goudge, J., Gilson, L., Russell, S., Gumede, T., and Mills, A., 2009. The household costs of health care in rural South Africa with free public primary care and hospital exemptions for the poor. *Tropical Medicine & International Health*, 14(4), pp.458–467.
- Institute of Health Metrics & Evaluation., 2014. *Financing global health 2013: Transition in an age of austerity*. Seattle: Institute of Health Metrics & Evaluation. Available at <http://www.healthdata.org/policy-report/financing-global-health-2013transition-age-austerity> [Accessed 24 January 2014].
- McIntyre, D., 2012. What healthcare financing changes are needed to reach universal coverage in South Africa. *South African Medical Journal*, 102(6), pp.489–490.
- Mills, A., Ataquba, J.E., Akazili, J., Borghi, J., Garshong, B., Makawia, S., Mtei, G., Harris, B., Macha, J., Meheus, F., McIntyre, D., 2012. Equity in financing and use of health care in Ghana, South Africa, and Tanzania: Implications for paths to universal coverage. *The Lancet*, 380, pp.126–133.
- WHO., 2010. *Health systems financing: The path to universal coverage*. Geneva: World Health Organization.
- WHO., 2014a. *Global health expenditure atlas*. Geneva: World Health Organization. Available at: <http://www.who.int/health-accounts/ghed/en> [Accessed 24 January 2014].
- WHO., 2014b. *Health financing for universal coverage*. Geneva: World Health Organization. Available at: [http://www.who.int/health\\_financing/en](http://www.who.int/health_financing/en) [Accessed 24 January 2014].





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