

## Universal Health Coverage 3

# Moving towards universal health coverage: health insurance reforms in nine developing countries in Africa and Asia

Gina Lagomarsino, Alice Garabrant, Atikah Adyas, Richard Muga, Nathaniel Otoo

We analyse nine low-income and lower-middle-income countries in Africa and Asia that have implemented national health insurance reforms designed to move towards universal health coverage. Using the functions-of-health-systems framework, we describe these countries' approaches to raising prepaid revenues, pooling risk, and purchasing services. Then, using the coverage-box framework, we assess their progress across three dimensions of coverage: who, what services, and what proportion of health costs are covered. We identify some patterns in the structure of these countries' reforms, such as use of tax revenues to subsidise target populations, steps towards broader risk pools, and emphasis on purchasing services through demand-side financing mechanisms. However, none of the reforms purely conform to common health-system archetypes, nor are they identical to each other. We report some trends in these countries' progress towards universal coverage, such as increasing enrolment in government health insurance, a movement towards expanded benefits packages, and decreasing out-of-pocket spending accompanied by increasing government share of spending on health. Common, comparable indicators of progress towards universal coverage are needed to enable countries undergoing reforms to assess outcomes and make midcourse corrections in policy and implementation.

### Introduction

WHO Director General Margaret Chan's assertion that universal health coverage is "the single most powerful concept that public health has to offer",<sup>1</sup> attests to the increasing worldwide attention given to universal coverage—even for less affluent countries—as a way to reduce financial impoverishment caused by health spending and increase access to key health services. However, discussions at meetings such as the Prince Mahidol Award Conference in Thailand in January, 2012, and in published work suggests that there is little consensus about how low-income and lower-middle-income countries should structure reforms aimed at moving towards universal coverage.<sup>2-8</sup>

To explore how some developing countries are attempting to move towards universal coverage, we systematically examined the structure of national health insurance reforms in nine countries: five at intermediate stages of reform (Ghana, Indonesia, the Philippines, Rwanda, and Vietnam) and four at earlier stages (India, Kenya, Mali, and Nigeria). We selected countries in sub-Saharan Africa and Asia, since these regions have a large proportion of the world's low-income population and generally are in need of improvements in their population health outcomes. We chose to focus on countries classified as low-income or lower-middle income (based on the World Bank definition of a per-head income threshold of less than US\$4035), because these countries face substantial challenges in provision of coverage for all. Within these regions and income levels, we selected countries that, within the past decade, have launched ambitious national health insurance initiatives designed to move towards universal coverage, or have implemented incremental improvements to existing national insurance programmes.

Each of the nine countries has had strongly rising incomes, with per-head income increasing by between 15% and 82% between 2000 and 2010 (data from World Bank world development indicators database), which the evidence suggests ought to lead to demands for improved access to care and reductions in household out-of-pocket health-care costs.<sup>9</sup>

Although it is too early to assess the full effect of reforms still in process, or to make recommendations about which paths work best (especially in view of the specific contextual features of different countries), we have identified some patterns in implementation and provided some assessment of progress to date, with implications for policy makers in other countries.

Of course, national health insurance is not the only way that countries can work towards universal coverage. For example, some countries have pursued a simpler

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**Results for Development Institute, Washington, DC, USA** (G Lagomarsino MBA, A Garabrant AB); **National Institute of Human Resource Development, Ministry of Health, Jakarta, Indonesia** (A Adyas PhD); **Great Lakes University of Kisumu, Kisumu, Kenya** (Prof R Muga MD); and **National Health Insurance Authority, Accra, Ghana** (N Otoo MA)

Correspondence to: Gina Lagomarsino, Results for Development Institute, 1100 15th Street, NW Suite 400, Washington, DC 20005 [glagomarsino@resultsfordevelopment.org](mailto:glagomarsino@resultsfordevelopment.org)

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### Search strategy and selection criteria

We systematically examined the structure of national health insurance reforms in nine countries in Asia and sub-Saharan Africa that met our selection criteria of low income or lower-middle income, and the implementation or development of national health insurance programmes in the past decade. Our analysis relies on the Joint Learning Network for Universal Health Coverage (JLN) database, which compiles comparable information from published work, government documents, and interviews with policy makers about health coverage reforms in different countries. To supplement information in the JLN database, we searched JSTOR and Google Scholar for relevant books and articles using the terms "universal health coverage" or "universal coverage", and combinations of these terms with the names of each of the nine countries. When possible, we relied on peer-reviewed work, but because these reforms are recent and in-progress we have also cited some unpublished government documents, media reports, and personal communications with government officials.

### Key messages

- With low-income and lower-middle-income countries seeking to move towards universal health coverage, nine developing countries in Africa and Asia are implementing varied national health insurance models that do not conform to historical archetypes
- Despite large informal populations that present challenges for taxation and premium collection, most of these countries have expanded government spending as a percentage of total health expenditures, with increases between 5 and 11 percentage points in Ghana, Indonesia, Rwanda, and Vietnam, and between 1 and 3 percentage points in India, Kenya, Mali, and Nigeria
- Those countries that offer substantial subsidies to specific target populations (Ghana, India, Indonesia, the Philippines, and Vietnam) rely increasingly on tax revenues to fund coverage expansion, but some (Kenya, the Philippines, Nigeria, Rwanda, Ghana) continue to attempt to collect voluntary premiums from households, despite difficulties in collection limiting revenue yield
- Several of the countries (Ghana, the Philippines, Indonesia, Vietnam) have moved towards single-coverage programmes for the entire population, rather than separate programmes targeted at different subpopulations
- All nine countries have set up independent purchasing agencies that buy care from public, and, to varying degrees, private providers; however, all of these countries continue to maintain parallel supply-side budget allocations from the government to public providers
- Countries that originally covered only inpatient services are now moving to expand benefits to cover primary and preventive services (India, Kenya, the Philippines), in recognition of the fact that outpatient services can be expensive and have a larger effect on health outcomes
- Out-of-pocket spending as a percentage of total health expenditure has decreased by 3–6 percentage points in most of the countries at an intermediate stage in the reform process (Ghana, Indonesia, Rwanda, and Vietnam) since their reforms were launched, but household spending in all nine countries remains higher than WHO recommends to avoid impoverishment
- Developing country governments would benefit from common, comparable standards for measuring key outputs and outcomes of universal-coverage reforms, which could guide midcourse policy corrections and improve implementation

strategy of removing user fees for some publicly delivered health services.<sup>10</sup> Even several of our selected countries are pursuing other strategies simultaneously. For example, in the past decade India has launched both the *Rashtriya Swasthya Bima Yojna* (national health insurance programme; RSBY), which relies on private insurers and mainly private hospitals to deliver fully subsidised inpatient care to poor people (panel 1), and the National Rural Health Mission, which provides budget support to expand and improve free primary care in public clinics. However, we have chosen to focus on national insurance models, which typically require enrolment to access services and include a third-party purchasing agency. National insurance models are being pursued in varied forms in this diverse group of countries, and interest is growing in other countries at earlier stages of reform. These models thus warrant close examination.

Our analysis relies first on Murray and Frenk's functions-of-health-systems framework<sup>17</sup> to characterise the structures these countries are using to raise revenues,

### Panel 1: India's rapid innovation in targeting poor populations

Designed to provide free care for the population below the poverty line, India's *Rashtriya Swasthya Bima Yojna* (national health insurance programme; RSBY)<sup>11</sup> has rapidly expanded to cover inpatient benefits for more than 142 million people since its launch in 2008.<sup>12</sup> The government has extended the scheme to many categories of informal-sector workers such as beneficiaries of the Mahatma Gandhi National Rural Employment Guarantee Scheme, street vendors, domestic workers, and construction workers.

Overseen by the federal Ministry of Labour and implemented by states that work with contracted private insurers, RSBY is almost wholly funded through general government revenues. The programme's smartcard technology, which enables immediate enrolment of poor rural and urban families at enrolment camps and cashless provider reimbursements, has garnered substantial interest in other countries. The smartcard has addressed common administrative challenges related to patient verification and processing of claims.

Despite success in enrolment, this large, ambitious programme faces many challenges. The scheme is dependent on data provided by the government through means testing that is notoriously inconsistent, with many non-poor citizens receiving fully subsidised care. Possession of a smartcard does not guarantee that people are actually receiving care, or that the most cost-effective care is covered. Studies have shown that many people who are ostensibly covered might not be using services at all.<sup>13–15</sup> In some states, contracted private insurers seem to have high profit margins associated with little service use by enrollees, whereas in others insurers struggle to break even. Concerns about fraud and quality control are also emerging; the system consists of many fragmented private providers with little quality control. In response to these problems, the government has designed a quality management system that is in its first phase of implementation in five states.

The rapid expansion of RSBY to cover the population below the poverty line has generated debate about how to achieve universal coverage in India. A 2011 report<sup>16</sup> from a high-level expert group questions whether the model is appropriate for the entire population.

pool risk, and purchase health services. We then use the coverage-box framework described by Evans and colleagues<sup>18</sup> in the 2010 World Health Report to analyse progress across three dimensions of coverage: who is covered, what services are covered, and what proportion of costs is covered. We rely on a database of accumulating comparative information on country reforms compiled by the Joint Learning Network for Universal Health Coverage, an initiative launched in 2010 by policy makers and several development partners to share knowledge and experience of health financing strategies.

## Raising revenues, pooling risk, and purchasing services

### Health-system models

In past decades, high-income countries pursuing universal coverage have relied on various approaches.<sup>10,19</sup> Now, lower-income countries wishing to pursue coverage reforms have to make key decisions about how to generate resources, pool risk, and provide services.<sup>18</sup> In the early 20th century, two health-system models emerged that combined these functions in specific ways (and countries such as Japan, Canada, and France subsequently created variants). The UK's (Beveridge) National Health Service model relies on general taxes, one national risk pool, and publicly provided services available to all.<sup>19</sup> By contrast, Germany's (Bismarck) social health insurance model relies on household premiums and payroll taxes, many risk pools, and services purchased largely from private providers available to those who enrolled.<sup>20,21</sup> The nine developing countries we have analysed clearly are not adopting either of these models purely. Instead, they are creating hybrid systems.<sup>21</sup>

### Raising revenues

Some development partners initially recommended out-of-pocket contributions—also known as copayments, user fees, or point-of-service fees—in the 1980s to help to raise funds. Subsequent studies, however, have shown that even small point-of-service payments can dampen demand for necessary services and, if too high, can lead to catastrophic spending.<sup>5,10</sup> As such, many countries are seeking to move towards prepaid revenues.

However, low-income and lower-middle-income countries have to overcome hurdles to raise sufficient prepaid funds for expansion of health coverage. The percentage of the workforce in informal employment in these countries ranges from 7% to 84%. Large informal economies make automatic payroll or income tax deductions difficult to implement on a widespread basis.<sup>22,23</sup> Additionally, by definition, these countries have large populations of poor people who have few resources to contribute.<sup>24</sup> Despite these challenges, most of the nine selected countries have increased government spending as a percentage of total health expenditure since launching reforms. The increases are between 5 and 11 percentage points in Ghana, Rwanda, Vietnam, and Indonesia, and between 1 and 3 percentage points in India, Kenya, Mali, and Nigeria. Only in the Philippines did government spending as a percentage of the total decrease (data from WHO global health expenditure database). These countries have achieved increases in expenditure through a mix of prepayment mechanisms such as general taxes, earmarked taxes, payroll deductions, and (to a lesser extent) household premium contributions, and most have simultaneously reduced reliance on private household payments at the point of service (table 1).<sup>11,12,25–33</sup> Donor spending accounts for more than a quarter of funding only in Kenya (36%), Mali (27%), and Rwanda (47%).

Despite tax-collection challenges, six of the nine selected countries (India, Indonesia, Ghana, Nigeria, Vietnam, and the Philippines) rely increasingly on tax revenues to fund coverage expansion. These six countries

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	Year of reform	Revenue generation (sources of revenue ordered by proportion of contribution)	Risk pooling		Service delivery		
			Single	Multiple	Primarily public	Mixed	Primarily private
<b>Intermediate-stage reform countries</b>							
Ghana (NHIS) <sup>25</sup>	2003	Value-added tax, investment income, formal-sector payroll contributions, household premiums	x				x
Indonesia* (BPJS) <sup>26</sup>	2004	General government revenues, formal-sector payroll contributions		x			x
Philippines (PhilHealth) <sup>27</sup>	1995	General government revenues, formal-sector payroll contributions, household premiums	x				x
Rwanda (Mutuelles) <sup>28</sup>	2000	Donor funding, general government revenues, household premiums, formal-sector payroll contributions		x	x		
Vietnam (VSS) <sup>29</sup>	2002	General government revenues, formal-sector payroll contributions	x		x		
<b>Early-stage reform countries</b>							
India* (RSBY) <sup>30</sup>	2008	General government revenues		x			x
Kenya* (NHIF) <sup>31</sup>	2002	Formal-sector payroll contributions, household premiums		x		x	
Mali* (Mutuelles) <sup>32</sup>	2009	General government revenues, household premiums		x	x		
Nigeria* (NHIS) <sup>33</sup>	2009	Formal-sector payroll contributions, general government revenues, household premiums, donor funding		x		x	

For purposes of this table, we focus on the main national-level schemes. NHIS=National Health Insurance Scheme. BPJS=Badan Penyelenggara Jaminan Sosial (social security administrative body). PhilHealth=Philippine Health Insurance Corporation scheme. Mutuelles=community-based health-insurance schemes. VSS=Vietnam Social Security. RSBY=Rashtriya Swasthya Bima Yojna (national health insurance programme). NHIF=National Hospital Insurance Fund. \*Countries that are working to expand existing pools to include new populations, or are merging existing pools to create one pool.

Table 1: Structure of health financing reforms in nine developing countries

offer subsidies to target populations such as poor people, pregnant women, and children.<sup>25-27,29,30,33</sup>

India, Indonesia, and Vietnam rely on general taxes to fund health coverage for poor people. Nigeria uses general revenues freed through debt relief to fund pilot coverage programmes for pregnant women and children.<sup>34</sup> Ghana's 2003 reform increased consumption taxes by 2.5% and earmarked the revenues for the National Health Insurance Scheme the revenue from this tax now provides 61% of the scheme's budget.<sup>35,36</sup> Ghanaian policy makers have noted that an earmarked tax was easier to sell politically, because it assured that new revenues would be spent on health.<sup>37</sup> Despite some concerns that consumption taxes can be regressive, there is evidence that Ghana's tax is actually progressive.<sup>2,25</sup> Leaders of Nigeria's National Health Insurance Scheme have also proposed an earmarked national tax on mobile telephone bills to fund health coverage.<sup>38</sup>

Mandatory payroll taxes are difficult to collect from informal workers, but seven of the nine countries do collect payroll taxes from civil servants or other formal populations. Although not a recent reform, the Kenya National Hospital Insurance Fund has successfully collected mandatory payroll deductions from formal sector employers for several decades (panel 2).

Despite the growing popularity of taxes as a key source of revenue for coverage programmes, six of the nine countries (Ghana, Kenya, Mali, Nigeria, the Philippines, and Rwanda) continue to attempt to collect voluntary premiums from informal-sector households from whom taxes can be difficult to collect.<sup>25,27,28,31-33</sup> Rwanda, Ghana,

and Mali have built on previously fragmented community-based health insurance schemes, which had histories of premium collection, to create national coverage systems. Rwanda's political structures allow compulsory premium collection from all but the poorest people.<sup>42</sup> Mali plans to rapidly scale up existing community insurance to collect contributions from informal-sector households, and to create both a compulsory formal-sector scheme and a non-contributory scheme for those who are unable to pay.<sup>43,44</sup> Ghana attempts to collect voluntary premiums from households through district-level insurance offices.<sup>25</sup>

However, national household premium collection programmes, especially those that are voluntary, have issues similar to those encountered by private insurance programmes worldwide. Household premiums are administratively costly to collect and have potential for regressive effects.<sup>2</sup> People resist paying upfront for services they might not need, and continuing re-enrolment—typically on an annual basis—is especially challenging.<sup>45</sup> Furthermore, identification of poor people who qualify for premium exemptions is difficult and costly.<sup>46</sup> For these reasons, voluntary household contributions are a fairly small percentage of overall revenues, even in those of the countries that continue to attempt to collect them. They represent less than 5% of Ghana's National Health Insurance Scheme's revenues<sup>36</sup> and only 6% of the Philippine Health Insurance Corporation's (PhilHealth) revenues.<sup>47</sup> Recognising the challenges of routine premium collection and the low revenues generated, the Ghanaian Government is considering moving to a single lifetime premium<sup>48</sup>—a step away from annual household premiums—and relying mainly on its consumption tax to generate the bulk of revenues (panel 3).

Despite mounting evidence for the limitations of household premiums, several of the selected countries continue innovative attempts to improve enrolment and premium collection in the informal sector, with creative applications of information technologies and partnerships with community groups. Kenya's National Hospital Insurance Fund has adopted the widespread M-Pesa mobile payment system to enable enrolment and premium collection through mobile telephones. PhilHealth has launched a similar programme for mobile payment.<sup>53</sup> Nigeria's National Health Insurance Scheme has created an online platform for enrolment, premium payment, and beneficiary information input.<sup>54</sup> Additionally, countries such as the Philippines have created incentives for microfinance institutions or community groups to enrol their populations.<sup>55,56</sup> However, the effect of partnerships with community organisations remains small, and mobile premium collection is too recent a development for its effectiveness to be assessed.

As countries mix revenue sources, many want wealthy people to pay their fair share while exempting poor people from payment, but accurate segmentation of the population can be a challenge. Health insurance

#### Panel 2: Incremental improvements against political roadblocks in Kenya

Kenya's National Hospital Insurance Fund is the oldest government health insurance programme in Africa. For four decades, it has relied on mandatory payroll contributions from formal-sector workers, which make up the bulk of its enrollees. Debates continue about how Kenya should finance its health system. Expansion of the insurance fund is one option, but many are in favour of direct investment in public delivery instead (the fund reimburses both public and private providers), citing the insurance scheme's perceived high administrative costs and traditional focus on restricted inpatient benefits.<sup>39,40</sup>

Absence of high-level political support has prevented progress on these issues. Despite the 2004 passage of a parliamentary bill and sessional policy paper to create a government-funded risk pool across all socioeconomic groups, the bill was never signed by the then president on the grounds that there was no clear strategy for sustainability.<sup>41</sup>

Following the 2011 publication of a review sponsored by the International Finance Corporation,<sup>39</sup> the insurance fund has focused on incremental reforms to increase enrolment in informal populations. A partnership with M-Pesa to collect premiums through mobile telephones is an innovative attempt to reach target populations. Additionally, separate government coverage programmes for civil servants, military personnel, and teachers are being consolidated into the fund. Fund administrators are exploring an outpatient benefits package for these groups and in March, 2012, the fund won a major court case that will allow increased premiums to pay for expansion to outpatient care. Administrators are also lobbying for subsidised coverage for extremely poor people to further expand the national risk pool and move closer to universal coverage.

programmes that use general taxes to subsidise poor populations, such as India's RSBY, struggle to identify who is poor enough to qualify. Countries that require contributions from non-poor households, such as Ghana, struggle to identify who to exempt from payment.<sup>57</sup> Many have eliminated point-of-service user fees for all covered services; the national health insurance programmes in Ghana, Indonesia, and India do not require copayments.<sup>25,26,30</sup> User fees persist in some countries, however. Rwanda, Vietnam, and Mali require copayments for some types of care.<sup>28,29,32</sup> In the Philippines and Kenya, some providers are still allowed to practise balance billing or charge very high copayments larger than the government reimbursement.<sup>27,31</sup>

A goal of many health insurance leaders is to gain political support for sustainable tax revenues that can fund broad population coverage and subsidise premiums for poor populations, but not all countries have succeeded in raising the necessary political will. Kenya and Nigeria have both passed parliamentary legislation to increase general revenues allocated to health insurance, but neither bill was ultimately signed by the executive.<sup>41</sup> Attempts at voluntary premium collection could be viewed as interim or supplemental strategies.

### Pooling risk

Risk pooling spreads health costs across households with different health profiles to prevent catastrophic expenditures that come with unexpected health events or chronic diseases, and enables cross-subsidies from rich to poor populations. The major approaches to risk pooling used by countries making health insurance reforms are the incremental approach, which starts with different pools for different target populations and expands or combines them over time; and the single-pool approach, in which one risk pool is designed to cover all populations—rich and poor, formal and informal (table 2).<sup>11,12,26,29,31,33,44,47,58–60</sup>

India, Kenya, and Nigeria have adopted the incremental approach (table 2),<sup>30,31,33</sup> as has Indonesia in the past,<sup>26</sup> with health insurance programmes for specific target populations. Two early-stage countries (Kenya and Nigeria) started by offering coverage to formal sector populations. Both countries are piloting expansions of these programmes to poor people and informal sectors, and there are debates about whether to broadly expand the programmes to cover these populations.<sup>33</sup> Conversely, India is building coverage expansion around a programme targeted at poor people. The central Indian Government created RSBY to cover hospital services for the population below the poverty line. Now pilot schemes are underway to allow non-poor, informal populations, such as street vendors and construction workers, to buy into the programme. Indonesia, in the intermediate stage of reform, has developed a patchwork of government health insurance programmes that target different segments of the population. About four decades ago, the national government created employment-based health

### Panel 3: Ghana's ambitious approach to single pooling

With its new strategies for raising revenues and generous benefits package, Ghana has attracted attention with an ambitious implementation of national health insurance. Government resources as a percentage of total health expenditure have increased from 51% in 2003, to 59% in 2009, attributable to the 2.5% National Health Insurance Levy (data from WHO global health expenditure database). With the levy supplemented by other sources, Ghana has rapidly increased stable revenues for health. Studies have shown increased access to formal care and reduction in out-of-pocket expenditure for insurance scheme members.<sup>49</sup>

The scheme reached a turning point in 2010, however, with expenditure outpacing revenues for the first time because of rapidly increasing use and costs.<sup>36</sup> Improved strategic purchasing is needed to increase efficiency and prevent escalation of costs.<sup>49</sup> The scheme introduced a capitation pilot to manage cost escalation in 2011. Implementation has been challenging, with providers fearing reduced earnings and patients confused about changes to service delivery. The fragmented delivery system, including many small providers that cannot individually provide the full capitated package of benefits, has added further complexity to implementation.<sup>50</sup> Nevertheless, incremental improvements are being made to the payment system and the capitation pilot might be implemented nationwide in the near future.

A 2010 study cited disparities in enrolment, with 52% of the wealthiest quintile enrolled and only 18% of the poorest.<sup>51</sup> Enrolment—and renewal—by informal-sector workers is more challenging, as formal-sector workers are automatically enrolled through their social security contributions, whereas informal workers need to proactively pay annual premiums. Recent data from a multiple-indicator cluster survey undertaken by Ghana Statistical Services, with support from USAID and UNICEF, suggest a more equitable distribution than did earlier research.<sup>52</sup> The possible move to a one-time premium would be partly intended to remove barriers to access faced by informal workers, and to improve efficiency.

insurance for civil servants and formal-sector workers, and more recently launched separate programmes for poor people and informal-sector workers, each with different sources of revenues, benefits, and delivery systems. In November, 2011, Indonesia passed an ambitious law that requires a merger of all five existing government risk pools into one universal programme, *Badan Penyelenggara Jaminan Sosial* (social security administrative body), to promote cross-subsidisation, decrease administrative costs, and reduce inequalities in benefits. Insurance scheme administrators are tackling the many operational challenges of this massive merger.

Ghana, the Philippines, and Vietnam have followed a single-pool approach (table 2). Each has created a health financing programme designed as one national risk pool with cross-subsidies between income groups. Ghana and Vietnam offer one national benefits package, whereas the Philippines offers more comprehensive benefits to poor people.

The incremental countries' attempts to expand existing programmes to different populations (Kenya, Nigeria, and India) or combine programmes (Indonesia), and the efforts of other countries (Ghana, the Philippines, and Vietnam) to create single pools that cover all population segments, suggest that these countries are moving in the direction of larger and fewer risk pools. Possible reasons

	Who is covered?		What is covered?		How much is covered?	
	Population(s) targeted by health insurance	Population enrolled (% of total)	Scope of services	Births attended by skilled health staff (% of total)*	Out-of-pocket expenditure as % of THE in 2010†	Decrease in out-of-pocket expenditure as % of THE since reform‡†
<b>Intermediate-stage reform countries</b>						
Ghana (NHIS) <sup>58</sup>	Entire population targeted	54%	Comprehensive	57%	27%	4%
Indonesia‡ (BPJS) <sup>26,59</sup>	Entire population targeted	63%	Comprehensive	75%	38%	2%
Philippines (PhilHealth) <sup>47</sup>	Entire population targeted	76%	Inpatient, with outpatient for poor people	62%	54%	-4%
Rwanda (Mutuelles, RAMA, MMI) <sup>60</sup>	Entire population targeted	92%	Comprehensive	52%	22%	3%
Vietnam (VSS) <sup>29</sup>	Entire population targeted	42%	Comprehensive	88%	58%	6%
<b>Early-stage reform countries</b>						
India§ (RSBY) <sup>11,12</sup>	People below the poverty line	8%	Inpatient (with pilot outpatient)	53%	61%	2%
Kenya (NHIF) <sup>31</sup>	Formal sector, expanding to informal sector	20%	Inpatient (with pilot outpatient)	44%	43%	2%
Mali‡ (Mutuelles, RAMED, AMO) <sup>44</sup>	Entire population targeted	3%	Comprehensive	49%	53%	-1%
Nigeria (NHIS) <sup>33</sup>	Civil servants, expanding to informal sector	3%	Comprehensive	39%	59%	3%

THE=total health expenditure. NHIS=National Health Insurance Scheme. BPJS=Badan Penyelenggara Jaminan Sosial (social security administrative body). PhilHealth=Philippine Health Insurance Corporation. Mutuelles=community-based health-insurance schemes. RAMA= La Rwandaise d'Assurance Maladie (Rwanda health insurance scheme). MMI=Military Medical Insurance. VSS=Vietnam Social Security. RSBY=Rashtriya Swasthya Bima Yojna (national health insurance programme). NHIF=National Hospital Insurance Fund. RAMED=Régime d'Assistance Médicale (non-contribution medical assistance system). AMO=Assurance Maladie Obligatoire (mandatory health insurance). \*Data retrieved from World Bank world development indicators database. †Data retrieved from WHO global health expenditure database. ‡Legislation to create the programmes in Indonesia and Mali has recently been passed and implementation is at an early stage. §For the purposes of this table, we use coverage of national-level health insurance schemes in India (RSBY and the civil servant scheme); there are several state-level schemes also providing coverage for poor people that are not included.

**Table 2: Three dimensions of coverage in nine developing-country health insurance reforms**

for this development are that larger, fewer risk pools are administratively less complex, allow maximum cross-subsidisation and pooling of risk across all populations, and can promote more long-term fiscal sustainability because rich and poor people are invested in the success of the same system.

### Purchasing services

Once governments have raised sufficient revenues and decided how to pool risk, they use the resources in these fund pools to finance the delivery of services—ideally working to ensure those services are high quality, effective, and accessible. Generally, they can either channel resources through the demand side, in which payments are made when patients seek care or enrol with a facility, or they can pursue supply-side funding by direct allocation of government health budgets to providers. Demand-side purchasing models usually require that individuals enrol in insurance schemes to have their services covered, and often offer patients a choice of public and private providers. Supply-side funding models typically do not require enrolment, and provide coverage mainly for public providers operated by the ministry of health.

All nine of our selected countries seem to be moving towards demand-side purchasing for at least some types of care and some populations, with the creation or strengthening of separate purchasing agencies to channel a portion of government expenditure to pay for care. Kenya, the Philippines, and Indonesia have had substantial purchasing mechanisms for four decades,

but have with the past 10–20 years moved to expand and strengthen them.

The nine countries vary, however, in the mix of public and private providers that receive purchasing-agency resources. Rwanda and Vietnam rely mainly on public providers.<sup>28,29</sup> Ghana, Indonesia, the Philippines, Kenya, and Nigeria purchase from both public and private providers, and India's RSBY scheme purchases mainly from private providers.<sup>25–27,30,31,33</sup> These countries also vary in the extent of patient choice of provider and resulting provider competition.

Governments cite several rationales for moving towards purchasing. One advantage is that money follows the patient, which might expand responsiveness to the needs of service users. Purchasing can also make the services of private providers affordable to poor populations, in the recognition that private providers are already widely used and that they can supplement public-sector capacity. Exclusion of private providers can lead to two-tiered systems, in which poor people go to public facilities perceived to be of lower quality and those who can pay use private care.<sup>61–63</sup> Policy makers increasingly recognise that government purchasing can increase regulatory effectiveness that can improve quality, since facilities that rely on government payments have an incentive to be responsive.<sup>64</sup>

Meanwhile, some advocates argue that public budgets should be used to fund public facilities, with a focus on removal of user fees for poor people.<sup>65</sup> Common criticisms of purchasing include that it will not be strategic enough to increase quality or lower costs, that

its complexity could drive up administrative costs, and that inclusion of private providers could skim resources away from public facilities.<sup>66</sup> A strategic review of Kenya's National Hospital Insurance Fund reported that administrative costs accounted for 45% of total revenues in 2010, although the proportion spent on administrative costs has been decreasing.<sup>44</sup> By contrast, Ghana's National Health Insurance Scheme reports substantially reduced administrative costs (9%).<sup>67</sup>

Before launching health insurance reforms, six of the nine selected countries (Ghana, Rwanda, Vietnam, Mali, India, and Nigeria) mainly used government health funds to directly support public providers, with households spending substantial amounts out of pocket to see private providers or for copayments to public providers. All of these countries, as well as Indonesia and the Philippines, which have had health insurance programmes for decades, continue to maintain supply-side allocations to public providers alongside demand-side purchasing of care through national insurance programmes, so public facilities can receive both supply-side budgets and demand-side insurance reimbursements. Two countries (India and Kenya) rely on supply-side strategies for primary care, but on purchasing of inpatient services for some populations. Whether these countries will ultimately adopt purchasing for all populations and levels of care, or whether they will continue to use a mix of delivery strategies, remains to be seen.

As countries adopt purchasing for some types of care, policy makers in several of the nine countries are developing new provider-payment systems to contain cost, mitigate fraud, and create incentives for quality.<sup>66</sup> Ghana and Vietnam both began their schemes with fee-for-service payments—an invitation for providers and patients to increase use of services. To combat rapid escalation of costs, Ghana has implemented case-rate payments for inpatient care and is now piloting capitation payments for primary care. Similarly, Vietnam is piloting capitation payments for some benefits to shift services to lower-level facilities, reduce hospital overcrowding, and avoid overuse of services.<sup>68</sup> The global health community has recognised Rwanda for its results-based financing approach that pays providers based on performance.<sup>28,42,60,69</sup>

Quality of care remains a major challenge, but several of our selected countries are taking steps to improve quality.<sup>70,71</sup> The Philippines and Ghana have both improved facility-accreditation systems, and Kenya is in the process of implementing similar improvements. Ghana is experimenting with a claims-audit process that denies payment for services that do not meet national treatment protocols. The Indian Government has designed a quality management system for RSBY that is in the first phase of implementation in five states. Nevertheless, quality initiatives remain scarce. A 2009 review of RSBY in the state of Kerala noted that only 19.2% of enlisted hospitals were accredited.<sup>13</sup> In the

future, national health insurance models could offer additional opportunities to affect quality through public reporting of quality indicators, financial incentives for quality, and patient choice between competitive providers.<sup>72</sup> However, all these quality interventions need dedicated resources, leadership focus, and improved capacity for data collection and analysis. Additionally, health insurance will need to be complemented with supply-side investments to ensure better distribution of facilities, health-care workers, functional medical equipment, and computer systems. Without investments in quality, countries run the risk of wasteful increases in access to unnecessary or poor-quality services.

### Three dimensions of coverage

#### Who is covered?

The nine developing countries' national health insurance programmes are still evolving, which makes comprehensive and definitive assessment premature. We can, however, examine their progress across the three dimensions of coverage: who is covered, what services are covered, and what proportion of costs is covered.<sup>18</sup> Progress in these dimensions can be driven by policy decisions to prioritise one dimension over another, and are affected by how successful a country has been in the implementation of their chosen systems of revenue-generation, pooling, and delivery.

Countries aspiring to universal coverage by definition hope to provide access to care to all. In practice, however, because of resource limitations, some of the analysed countries have prioritised coverage of specific populations. Kenya and Nigeria are expanding formal-sector coverage programmes to the informal sector.<sup>31,33</sup> India has focused its government health insurance efforts on poor people.<sup>30</sup> Indonesia is merging previously separate insurance schemes to create one universal scheme.<sup>26</sup> Ghana, the Philippines, Vietnam, and Mali are creating programmes that aim to cover their full populations.<sup>25,27,29,32</sup>

One indicator of their progress is percentage of population enrolled in a government coverage programme. Rwanda and the Philippines claim to have enrolled more than 75% of their population in health insurance schemes. Ghana, Indonesia, and Vietnam cover about half of their populations; India, Kenya, Mali, and Nigeria, at earlier stages of reform, cover less than 20% (table 2). These numbers are subject to debate—government enrolment figures do not always match household survey data.<sup>73</sup>

Additionally, overall enrolment numbers could mask inequalities. Some critics have worried that scarce government resources have been used to pay for middle-income or high-income people, who otherwise would have self-funded their health care, and coverage programmes have not been focused on the needs of the most vulnerable populations.<sup>74,75</sup> Investigators of some studies have reported that some supposedly universal coverage programmes have counterintuitively reduced equality of expenditure (with government expenditures

benefiting rich people, who often have greater access to services, more than poor people).<sup>76</sup>

Despite impressive overall growth in enrolment, the recruitment of poor people to health insurance coverage in Ghana is at issue. Although previous studies showed that poor people enrol at a lower rate than do rich people, preliminary findings reported in 2012 suggest that the National Health Insurance Scheme could be more equitable than previously thought, with similar proportions of the population enrolled across income quintiles.<sup>51,52</sup> Even with the focus on poor populations in India, wide variation in coverage between socio-economic classes persists.<sup>77</sup> Moreover, enrolment does not necessarily mean that care is received. When benefits are not well understood or quality services are inaccessible, financial coverage can be rendered useless. Studies have shown that service use within India's RSBY scheme is far lower than expected in some regions in view of enrolment levels, which raises concerns about comprehension of and access to benefits.<sup>13-15</sup>

#### What is covered?

Which services are covered by insurance schemes is of fundamental importance with respect to the ultimate effect on population health and financial protection. One way to assess what is covered is to examine benefits packages (table 2). Schemes in Ghana, Indonesia, Nigeria, Mali, Rwanda, and Vietnam offer comprehensive preventive, primary, hospital, and (in some cases) drug benefits. Schemes in India, Kenya, and the Philippines have previously focused on inpatient services, but all are now taking steps to expand benefits to include more primary and preventive services. The Kenyan National Hospital Insurance Fund might be expanded to comprehensive coverage for targeted groups, after a recent extension of comprehensive coverage to members of teachers' unions. PhilHealth has recently expanded some primary care benefits for all enrollees, and plans to include additional outpatient benefits such as drugs for hypertension and diabetes.

That all nine selected countries either have or are attempting to move towards comprehensive benefits suggests the emergence of new patterns of health insurance policy making. Past insurance models were based on the premise that low-probability, high-cost inpatient services were most likely to lead to impoverishment. But mounting evidence suggests that outpatient and drug costs attributable to chronic diseases can be more debilitating than inpatient events.<sup>78</sup> Moreover, coverage of primary and preventive services is expected to yield greater effects on population health than inpatient services.<sup>79</sup> Thus, these countries have recognised that inpatient-focused programmes might neither fully protect against financial risk nor cover services that improve population health most cost-effectively.

Still, comprehensive benefits present challenges of financial sustainability and administrative complexity.

Ghana's comprehensive benefits package raises questions of long-term affordability.<sup>49,51</sup> In 2010 the country's National Health Insurance Scheme spent over budget, and the scheme's administrators project continued fiscal imbalances without increases in revenues or decreases in costs.<sup>65</sup> India's largely private and very fragmented delivery system for primary care and drugs makes it difficult to effectively cover these services while avoiding fraud and ensuring quality. Yet RSBY is running several pilot schemes for outpatient services.<sup>80</sup>

Another way to assess what is covered is to look beyond what is promised by the benefits package and to measure what proportion of the population that needs a particular health intervention actually receives it. Financial coverage of a benefit does not ensure delivery; patient demand for and availability of the service are also necessary. As a proxy measurement for what is actually delivered, we examined percentage of births attended by skilled staff—an indicator for quality of maternal and child health care. In Kenya, Mali, and Nigeria, skilled attendance remains less than 50%. Rwanda, Ghana, India, and the Philippines have skilled-attendance coverage of roughly 50–60%. Indonesia and Vietnam have better coverage, at 75% and 88%, respectively (table 2).

#### What proportion of cost is covered?

The proportion of costs covered by an insurance programme shows how well people are protected from impoverishment caused by health costs. Important indicators of progress are therefore a country's overall out-of-pocket spending as a percentage of total health spending, and reductions in out-of-pocket spending achieved since reforms were implemented. Even though some national health insurance programmes do not yet cover the entire population, we would expect these programmes to have some effect on overall out-of-pocket spending. In fact, most of the nine developing countries assessed have reduced out-of-pocket spending (calculated by comparing out-of-pocket spending just before initiation of reforms with most recent available data for each country), with Ghana, Indonesia, and Vietnam reporting between 4 and 6 percentage point reductions from pre-reform levels. India, Kenya, Nigeria, and Rwanda have had smaller reductions of between 2 and 3 percentage points. Only Mali, which is just starting to implement its new insurance schemes, and the Philippines have reported increases in out-of-pocket spending (table 2).

Despite these reductions, household out-of-pocket spending remains high in most of the nine countries. WHO guidelines advise that out-of-pocket expenditure of more than 15–20% of total health expenditure can lead to impoverishment.<sup>18</sup> Ghana and Rwanda, at 27% and 22%, respectively, are approaching recommended guidelines. However, five of the selected countries (India, Mali, Nigeria, the Philippines, and Vietnam) still have out-of-pocket spending of more than 50% of total health expenditure (table 2; data from WHO global health

expenditure database). High out-of-pocket costs can be caused by several factors, including absence of full population enrolment in coverage programmes, absence of coverage of key services (such as drugs, some private or high-level facilities, or ancillary costs such as transportation), inappropriate or illegal billing by facilities, and little understanding of benefits by service users.

## Discussion

Examination of the structure of these nine African and Asian national health insurance reforms shows substantial variety. We have identified some common patterns, such as use of tax revenues to subsidise target populations, steps towards broader risk pools, and emphasis on the purchase of services through demand-side financing mechanisms. This information could prove useful for other countries implementing such reforms in the future.

Perhaps more striking than these shared patterns is that these countries are not copying what others have done before. In fact, none of the reforms we analysed purely conforms to common health-system archetypes, nor are they identical to each other. This variety suggests that, despite an understandable tendency for policy researchers to attempt to uncover definitive evidence for how reforms should be pursued, it is unlikely that one correct path will be identified, especially in view of the contextual features of each country, such as political environment, culture, and inherited legacy. Instead, policy makers will probably continue to benefit from learning about what other countries have done and then scrutinising that information to design politically and operationally feasible options for their national contexts.

We have provided some measurement of progress in these nine countries through examination of indicators related to who is covered, what services are covered, and what proportion of costs are covered by each insurance scheme. We have identified some positive trends, such as increasing enrolment in government health insurance, a movement towards expanded benefits packages, and decreasing out-of-pocket spending accompanied by an increasing government share of spending on health. Universal health coverage is an objective that countries typically pursue incrementally rather than achieve immediately.<sup>9</sup> Not surprisingly, the indicators we have analysed suggest that, despite progress, much work remains for our selected countries to achieve universal coverage.

Improved definitions of how to measure progress towards universal coverage are needed; a set of globally agreed upon indicators does not yet exist. Countries would benefit from common, comparable standards to measure their progress over time and in comparison with other countries, along dimensions such as fairness of resource distribution, delivery of key services, quality of services, and reductions in impoverishment caused by health costs. Such standards could enable policy makers and practitioners to assess how well they are achieving

their goals, which could allow for midcourse policy corrections and improved implementation.

In the meantime, many of the nine analysed countries continue to make iterative improvements in policies and practices. PhilHealth has announced plans to prevent public hospitals from charging copayments, and since 2007 has had a 50% increase in the number of claims filed by poor people.<sup>97</sup> The Ghanaian scheme is working to improve identification and enrolment of poor people.<sup>36</sup> India's RSBY and Kenya's National Hospital Insurance Fund are piloting primary care benefits. But the complex interplay of domestic politics, international donor pressure, financial realities, and operational feasibility presents challenges to the design and implementation of programmes that can achieve all goals. Tradeoffs are inevitable. As countries of all incomes around the world work to achieve universal health coverage, we are heartened that these nine developing countries are pushing ahead with reforms, however challenging.

### Contributors

GL and AG led the drafting of the report. AA, RM, and NO made substantial contributions to the development of the report, and contributed specific examples from their respective countries. All contributors reviewed the report and agreed the final version.

### Conflicts of interest

AA was formerly Secretary of the National Social Security Council, Coordinating Ministry for People's Welfare, Indonesia. RM is the immediate past chair of the National Hospital Insurance Fund Board, Kenya. NO is currently the Director, Administration and General Counsel, National Health Insurance Authority, Ghana. We declare that we have no conflicts of interest.

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