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Global evidence on inequities in rural health protection

New data on rural deficits in health coverage
for 174 countries

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Abstract

This paper presents global estimates on rural/urban disparities in access to health-care services. The report uses proxy indicators to assess key dimensions of coverage and access involving the core principles of universality and equity. Based on the results of the estimates, policy options are discussed to close the gaps in a multi-sectoral approach addressing issues and their root causes both within and beyond the health sector.

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Foreword

While inequities in health protection are increasingly recognized as an important issue in current policy debates on universal health coverage (UHC) and in the post-2015 agenda, the rural/urban divide is largely ignored. A key reason for disregarding equity in coverage and access to health care of large parts of the population relates to the nearly complete absence of disaggregated data providing sufficient information at national, regional and global level. Only vague and fragmented information, often limited to micro-data, can be found.

Given this gap in information, it is hardly possible to quantify and assess the extent of disparities and deficits experienced by rural populations as regards key aspects of their rights to health and social protection; the availability, affordability and financial protection of needed health services; and increases or decreases in inequities. Further, governments and policy-makers lack evidence to set priorities, and thus face challenges in addressing the issues that are spread over various policy domains including health, social protection, labour market and more generally economic and fiscal policies.

This paper presents and analyses for the first time related global, regional and national data. It is developed and made available by the ILO. The data allow investigating both the extent of and major causes of rural/urban inequities in coverage and access to health care. Further, it discusses impacts and policy options to achieve more equitable results.

The data development and related assessments provided in this paper are anchored in the framework of universal health protection along the lines of international legal standards, particularly the ILO Social Protection Floors Recommendation, 2012 (No. 202) and the UN Resolution on Universal Health Coverage (12 December 2012).

The paper has been developed as part of the mandate of the ILO Areas of Critical Importance (ACI) on Decent Work in the Rural Economy as well as the ACI on Creating and Extending Social Protection Floors, and has been reviewed by a significant number of experts in relevant development agencies. It highlights the needs of disadvantaged, marginalized and vulnerable rural populations and contributes to related global research products and statistics. Further, it provides guidance to ILO member States on establishing and extending social protection floors for all as a fundamental element of national social security systems.

The evidence provided in the paper suggests that inequalities in coverage and access to health care exist globally, in every region and nearly every country. In fact, the place of residence can be considered as the entry door or key barrier to accessing needed health care. Against this background, the paper aims at contributing to the development of urgently needed policy responses realizing the universal human rights to social protection and health, particularly for rural populations.

Isabel Ortiz
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Abbreviations

AAAQ	Availability, accessibility, acceptability and quality (criteria)
ACI RE	Areas of Critical Importance on “decent work in the rural economy”
ACI SPF	Areas of Critical Importance in “creating and extending social protection floors”
CBHI	Community-based health insurance
CBM	Community-based monitoring
FD	Financial deficit
GDP	Gross domestic product
GHO	WHO Global Health Observatory Database
HRH	Human resources for health
ILO	International Labour Organization/ Office
ISSA	International Social Security Association
MDG	Millennium Development Goals
MMR	Maternal mortality ratio
NGO	Non-governmental organization
NRHM	National Rural Health Mission (India)
OECD	Organisation for Economic Co-operation and Development
OHCHR	Office of the Hugh Commissioner for Human Rights
OOP	Out-of-pocket payments/expenditure
PPP	Purchasing power parity
PSI	Public Service International
SAD	Staff access deficit
SBA	Skilled birth attendance
SPFs	Social protection floors

THE	Total health expenditure
UHC	Universal health coverage
UN	United Nations
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNPOP	United Nations Population Division
WHO	World Health Organization

Key messages

1. While reducing inequalities in health protection is widely recognized in the current discourse of universal health coverage (UHC) and the post-2015 agenda, differences and impacts experienced by rural populations as compared to urban populations have not been assessed up to now, given the absence of disaggregated data.

2. Against this background, the ILO has developed for the first time global evidence that suggests significant if not extreme differences between rural and urban populations in health coverage and access at global, regional and national levels:

    - While 56 per cent of the global rural population lacks health coverage, only 22 per cent of the urban population is not covered. Globally most deprived of health coverage is the rural population in Africa.

    - The situation is aggravated by extreme health workforce shortages in rural areas impacting on the delivery of quality services: in rural areas a global shortfall of about seven million missing health workers to deliver services is observed, compared to a lack of three million skilled staff in urban areas. Due to these rural health workforce shortages, half the global rural population lacks access to urgently needed care.

    - Deficits in per capita health spending are twice as large in rural areas as in urban areas.

    - The deficits observed result in unnecessary suffering and death, as reflected for example in rural maternal mortality rates that are 2.5 times higher than urban rates. Globally, the highest levels in rural maternal mortality are found in Africa.

3. Based on the evidence provided, it can be concluded that the place of residence largely determines coverage and access to health care. In fact, the rural/urban divide is a consistent feature across the world, existing in all regions and within all countries. Currently, the place of residence can be considered as an entry door or a key barrier to accessing health protection. As a result, the place of residence determines whether people live or die.

4. The results of ILO estimates suggest that the fundamental rights to health and social protection remain largely unfulfilled for rural populations. The issues behind these developments range from missing or fragmented legislation to gaps in implementation, resulting for example in severe deficits in service delivery in rural areas. Thus, rural populations cannot contribute to urgently needed economic growth, wealth and development.

5. While core issues leading to the observed inequalities can be identified within the health sector, many of the root causes are found beyond the sector itself. They include poverty, informality, discrimination and lack of voice and power.

6. Addressing these issues requires systemic changes anchored in rights and social and economic empowerment: ending the rural/urban divide involves establishing, extending and fully implementing social protection coverage, as outlined in the ILO Social Protection Floors Recommendation, 2012 (No. 202) (ILO, 2012a), to rural areas with a view to achieving universal coverage and addressing the gaps in access to health care.

7. In line with Recommendation No. 202, the current discourse on universal health coverage and the post-2015 agenda needs to consider state guarantees to ensure that all in need – including those living in rural areas – have access to health protection and services that meet the criteria of availability, affordability, accessibility, acceptability and quality (AAAQ):

    - *Availability* of health services requires an adequate number of skilled rural health workers employed with decent working conditions, particularly adequate wages, and

sufficiently equipped to provide quality services. The ILO identifies 41.1 health workers per 10,000 population as a minimum density to provide universal health coverage.

- *Affordability* of quality health services and financial protection requires minimizing out-of-pocket (OOP) payments for health care, through universal health protection coverage anchored in legislation resulting in access to quality care. Free prenatal and postnatal medical care for the most vulnerable should also be considered.

- Respecting the dignity of rural populations, non-discrimination and responsiveness to special needs are key for *accessibility and acceptability* of services for rural populations.

- *Quality* with due regard to social justice and equity should be achieved through a variety of resources that are *financially, fiscally and economically sustainable*, taking into account the contributory capacity of rural populations and creating fiscal space through various methods including the prevention of fraud, tax evasion and non-payment of contributions, as well as increased efficiency and effectiveness in the provision of health care.

8. Key principles to extend equitable health protection and income security to rural populations include universality, equity and non-discrimination. These principles call for solidarity in financing and fairness in burden sharing. It is also vital to avoid financial hardship or an increased risk of poverty for rural populations when accessing needed health care.

9. Further, efforts are needed to balance the maldistribution of funds between rural and urban areas and construct more adequate rural structures based on a concept of inclusive societies where everybody is equally covered by health protection and can access quality care when in need.

10. Successful policies aiming to achieve equity in health protection and reduce the rural/urban divide require a rapid and sustained extension of social protection including health protection to rural areas. This involves political commitment and social and national dialogue as well as technical expertise to

    - prioritize equity-based strategies to extend health protection to rural areas and fully implement related reform policies; and

    - coordinate with other policy sectors with a view to improve policy, enhance income generation, create employment opportunities and promote decent working conditions for rural populations, including rural health workers, as outlined in Recommendation No. 202.

11. Efficient and effective multisectoral policies to address the root causes of rural inequities should consider the specific living and working characteristics of rural populations. If not addressed, the rural/urban disparities identified in access to health care carry the potential to considerably hamper overall socio-economic development in many developing countries.

12. The necessary fiscal space to address rural/urban inequities in health coverage and access can be made available from various sources, including reducing the waste of health-care funds – e.g. due to inefficient purchase of overpriced drugs – that is estimated at 20−40 per cent of global health expenditure.

13. Impacts of in investments in more equitable access should be considered in the context of the better health status of the population, including the workforce, and improved economic performance, e.g. productivity as well as employment opportunities.

1. The need to share resources equally between rural and urban populations, and the discourse on universal health coverage

Inequitable resource-sharing between rural and urban areas resulting in socio-economic differences is a persistent global phenomenon that is particularly apparent in developing countries. In 2011, 3.1 billion people or 55 per cent of the population in these countries lived in rural areas and many of them experienced poverty and ill-health: 70 per cent of the developing world's 1.4 billion extremely poor people are living in rural areas (IFAD, 2011). Hence, although some 350 million rural people left extreme poverty in the 2000s, poverty remains acute and predominant in rural areas.

The situation is aggravated by the fact that rural populations are frequently confronted with informality and self-employment and thus cannot generate sufficient income to afford basic goods and services such as health. Also, public investments are often scarce and rural areas are characterized by the absence of essential infrastructure, for example for health care and transport. As a result, large parts of rural populations are left behind and often suffer from social exclusion.

A key tool to address these inequities is social protection, such as health protection provided through national health services and national and social health insurance schemes. Against this background, a global political discourse in recent years has focused on achieving universal coverage in social protection, including health protection. This has been reflected in international standards such as the ILO Social Protection Floors Recommendation, 2012 (No. 202), which calls for universal guarantees for at least essential health care and basic income support for all in need. The notion of universal health coverage has also been developed over the years in other UN agencies, particularly the World Health Organization (WHO), which referred to it in, for example, a resolution of the World Health Assembly (WHO, 2011) encouraging countries to aim for universal health coverage (UHC), and the UN resolution on universal health coverage (UN Resolution A /67/L.36 of 12 December 2012). Today, the principle of universal social protection coverage has also gained momentum in the context of discussions of the post-2015 development agenda.

While the concept of UHC is widely accepted and supported, it lacks clarity and globally agreed definitions in many of its dimensions. What is coverage? Who is covered? Which services need to be provided? Which quality levels should be available? These and many more questions remain largely open in the current discourse. As a result, in some countries narrowly targeted temporary safety nets occur, providing services at lowest levels and ignoring the need for equal access, while other countries have achieved comprehensive coverage for both health and income support in a relatively short time (ILO, 2014a).

The specific replies to the questions above depend principally on country-specific characteristics and policies. However, there are some fundamental principles that should be followed and agreed upon. At the core lies – besides the principle of universality that includes everybody – the principle of equity. A prerequisite of equity is the development and realization of rights guaranteeing legal entitlements, for example to health care for all in need, independently of where people live. Such rights have to be implemented with a view to ensuring human dignity and addressing vulnerability and social exclusion. Thus, States need to guarantee that quality health services are available and accessible, without financial hardship, for all in need as outlined in ILO Recommendation No. 202.

An analysis of the status quo and progress towards UHC needs to focus on these principles and criteria. They imply that financial barriers such as high out-of-pocket payments (OOP) and the absence of needed services, often due to the lack of a sufficient number of health workers or underfunding of services in specific areas, are detrimental to universal coverage as they create inequities in effective access to health care. However, such analyses are currently not possible due to the scarcity of data, particularly disaggregated data and specifically disaggregation by rural and urban areas. At present there are no globally comparable data available that measure countries' health access deficits in rural areas.

The lack of disaggregated data and analysis has a strong influence on national resource allocation processes, leading to a neglect of rural populations in the policy processes of many countries. The absence of data on rural populations at both global and national levels has contributed to the creation and reinforcement of "urban biases" in many countries. National data do not reveal the discrimination affecting the rural poor and are thus not adequate to give policy-makers the necessary guidance on how to tackle rural/urban inequities and share resources more evenly. Without meaningful data, resources will continue to be inequitably allocated and rural/urban inequities will persist. Hence, there is a strong need to increase the availability and quality of disaggregated data to ensure the identification of the rural poor, to estimate the magnitude of rural/urban inequities, and to eventually make the need for action visible to policy-makers.

Against this background, this paper takes a fresh look at data development and applies new methodologies. The assessment presented cannot fill research gaps within countries, but it seeks to provide a starting point for serious discussion and further research on the issues that leave people in rural areas behind the rest of the world's population. It presents for the first time global estimates on rural/urban disparities in access to health-care services. The report uses proxy indicators to assess key dimensions of coverage and access involving the core principles of universality and equity. Based on the results of the estimates, policy options are discussed to close the gaps in a multi-sectoral approach addressing issues and their root causes both within and beyond the health sector.

2. Addressing the information gap: A fresh look at data and methodologies

Global, regional and national data on health coverage and access are very scarce and, if available at all, are hardly comparable. One of the few globally comparable databases providing an overview of key dimensions of coverage and access to health care was developed by the ILO (2010). It consists of five indicators measuring key dimensions of coverage and access to health care: affordability, availability and financial protection of quality health services complemented by information on health outputs based on maternal mortality ratios (table 1).

Table 1. Indicators used to measure rural/urban coverage and access to health care

Indicator	Definition	Dimension of coverage and access	National estimates available from
Legal coverage	Percentage of population affiliated to or registered in a public or private health system or scheme	Rights to social security and health	ILO Social Health Protection Database/ OECD health data
Staff access deficit	The gap between the number of physicians, nurses and midwives per 10,000 population and the median in "low vulnerability" countries (currently 41.1)	Availability of health care	WHO Global Health Observatory Database
Financial deficit	The gap between actual per capita health spending (excluding OOP) and the median expenditure in "low vulnerability" countries (currently US$239)	Quality of health care	WHO National Health Accounts (Global Health Expenditure Database)
Out-of-pocket spending (OOP)	The amount of money paid directly to health care providers in exchange for health goods and services as a percentage of total health expenditure	Financial protection in case of ill-health	WHO National Health Accounts (Global Health Expenditure Database)/ World Bank Global Consumption Database
Maternal mortality ratio (MMR)	The number of maternal deaths per 10,000 live births	Health system outcomes	WHO, UNICEF, UNFPA, World Bank and UNDP

Sources: Scheil-Adlung et al., 2010; ILO, 2014a.

The approach disentangles different drivers of gaps and deficits in health coverage and access. The set of indicators chosen identifies the shares of these drivers as regards overall gaps in coverage and access and thus allows key policy interventions to be identified. The databases used refer to the latest comparable data available at global level. A full description of the methods used to calculate national estimates for each of these indicators can be found in the *World Social Protection Report 2014/15* (ILO, 2014a).

However, the data available are not disaggregated by rural and urban populations. In fact, no international database is currently available that would allow global comparisons on coverage and access to health care. The scarce data available are often fragmented, even within countries, based on varying definitions of coverage, access, quality or scope of benefits, and do not make it possible to assess the status quo of rural/urban disparities in terms of coverage and access within and across countries. Against this background, it is necessary to develop and apply new methodologies and approaches that allow an assessment of inequalities and an estimation of deficits in health protection for rural populations.

This paper proposes an approach following up on the earlier methodologies used to estimate deficits in universal health coverage (Scheil-Adlung et al., 2010; ILO, 2014a). The proposed methodology refines the previous approach by applying it to rural and urban areas: current estimates for deficits in universal health coverage based on the above five indicators are disaggregated to measure rural/urban differentials in access to health care. The methods used are deliberately not country-specific to ensure cross-country comparability.

Given the lack of available global databases, nearly all options to disaggregate data involve the use of proxies. Thus, the disaggregation is based on those proxies that were judged to be the best balance between the precision of estimates and scarce data availability. The proxies chosen were tested for loss of precision against direct estimates that were available for selected countries. Proxies meeting the requirements and considered most appropriate have been cross-checked with available country data and the results adjusted where necessary.

The legal coverage of the rural population was estimated by using the percentage of GDP provided by the agricultural sector. The GDP provided by other sectors made it possible to estimate the legal coverage of urban populations. In countries where national legal coverage reached values above 99 per cent or below 1 per cent of the population, rural and urban disparities were assumed to be the same. Estimating the staff access deficit, the financial deficit and the maternal mortality ratio (MMR) of the rural population was based on skilled birth attendance (SBA) given the high correlation observed. In countries where the national deficit was zero, no rural or urban deficits were assumed. The estimates of OOP of the rural population were based on World Bank household expenditure data. Since the database is biased towards low- and middle-income countries, rural and urban discrepancies in high-income countries were assumed equal. All assessments of estimates are either population or births (MMR) weighted and refer to data from the UN World Population Prospects Database (2012), the World Bank (World Development Indicators Database, Global Consumption Database) and the WHO (Global Health Observatory Data Repository).

Comments on the methodological options were invited from national and international organizations, research institutions, NGOs and others, including the Organisation for Economic Co-operation and Development (OECD); International Labour Organization (ILO); World Bank; World Health Organization (WHO); Bocconi University, Milan, Italy; Dumlupınar University, Turkey; Monash University, Australia; University of Southampton, United Kingdom; University of Heidelberg, Germany; QueenMargaret University, Scotland; Integrare, Spain; the International Social Security Association (ISSA); and Public Service International (PSI).

Since the data used in this paper derive from the approach described above to disaggregate rural and urban populations, some limitations should be taken into account. They concern particularly the following aspects of data interpretation:

- The dynamic nature of the process of urbanization means that the estimates presented here should be interpreted as a snapshot in time.
- A country-specific use of definitions for urban and rural populations might impact on cross-country comparisons. The reduction of urban/rural to a binary variable can also be problematic for some countries, because it tends to be more of a continuum than a binary variable.
- Our reliance on proxy indicators has undoubtedly resulted in loss of precision, but it is not possible to estimate the likely extent of this. In some cases, too, lack of data or reliability of data was a problem for the selected proxy indicators.

- Given the assumptions made for regions with low or little difference in rural and urban areas – particularly in North America and Western Europe – disparities may exist even though the results of this study do not reflect them.
- The use of the equal rural and urban thresholds to estimate the financial deficit and staff access deficit may result in an underestimation of the rural deficits, as the rural populations might need more health workers per capita, either because certain health conditions are more prevalent in rural areas or because lower population density means that rural health workers cannot see as many service users in a working day, especially if part of the health worker's role is to work in the community.

The best way to overcome the limitations described is to collect more and better data, including sub-national disaggregation. However, there are considerable resource implications to this and it is unlikely to happen in the foreseeable future. In the meantime, it would be useful to study in more depth the relationships between the selected proxy variables and the coverage access indicators, which would permit more nuanced and evidence-informed adjustments to be made.

3. The evidence: Inequities in access to health care in rural and urban areas

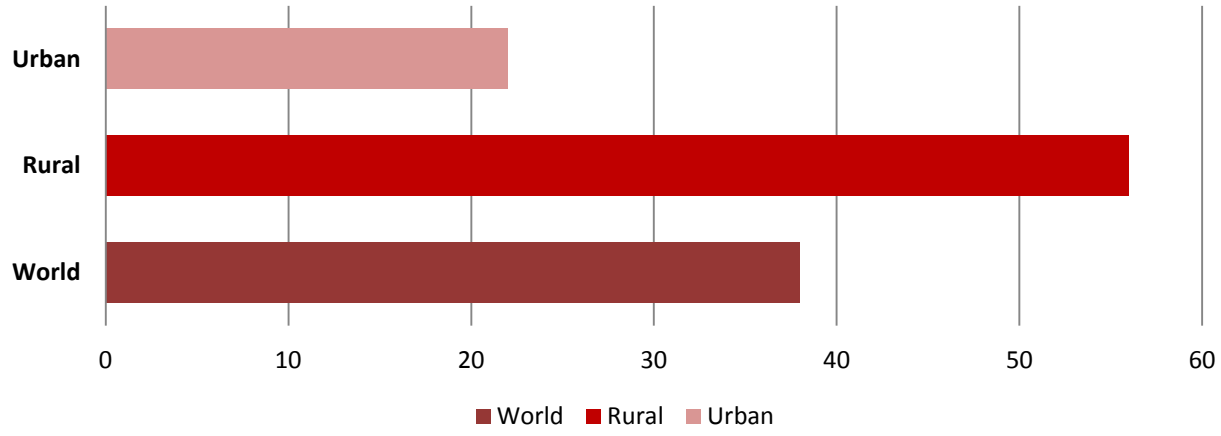
We assume that inequities in access to health care between rural and urban areas are likely to occur as regards the various dimensions of the criteria of accessibility, availability, affordability and quality of services (AAAQ). Thus, using the set of indicators outlined above, we estimate related disparities in terms of AAAQ as regards the existence of rights-based coverage, health worker shortages, financing gaps, the impoverishing potential due to OOP and the extent of maternal mortality in both areas.

3.1. The lack of rights at rural level

Legal coverage provides information on the proportion of the global population that is not protected by legislation or affiliated to a national health service or health scheme and which therefore does not have the right to access health care when in need. In the absence of such rights, no entitlements to health care exist. As a result, people seeking health care are deprived of equal opportunity to receive the highest attainable level of care, including prevention. Besides quantity, quality of care may be hampered; nor is timely access to care ensured. Further, discrimination on account of gender, age, minority or other aspects still exists.

The global deficit in rural coverage is 2.5 times higher than that in urban areas. The absence of legal health coverage worldwide is high: 38 per cent of the global population are without rights-based health coverage (figure 1). The highest deficits occur globally in rural areas, where 56 per cent of the population are without legal health coverage. Figure 1 shows that the deficit in rural areas is 2.5 times higher than in urban areas, where the deficit amounts to 22 per cent.

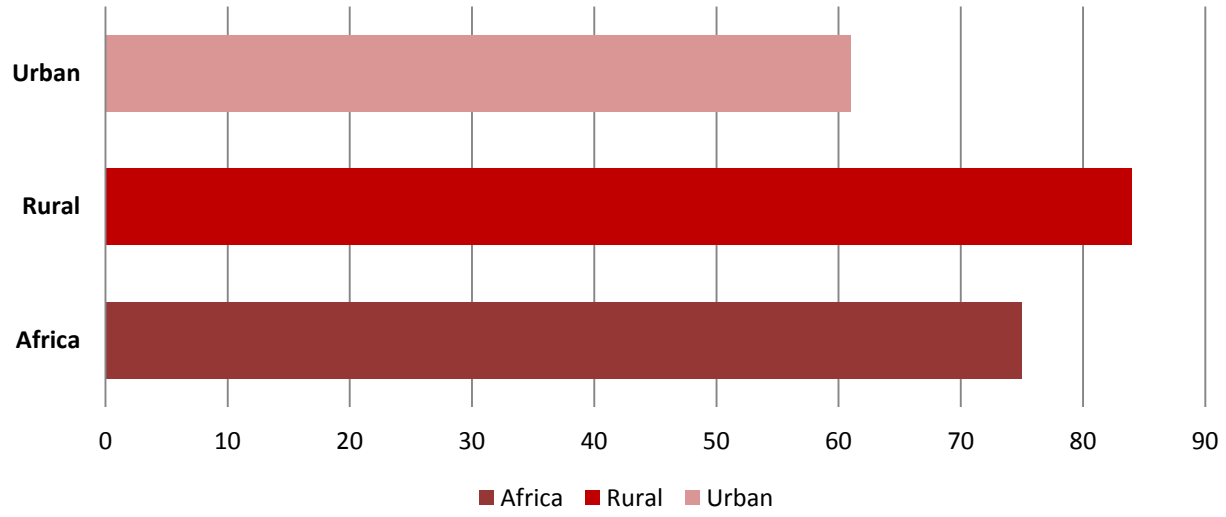
Figure 1. Proportion of the global population not protected by legislation or affiliated to a health insurance scheme, 2015 (percentages)



Source: ILO estimates, 2015.

The rural populations in Africa are most deprived of rights-based coverage. As much as 83 per cent of the rural population living on the African continent have no entitlements to health care (figure 2), while in urban areas 61 per cent of the population still do not enjoy such legal rights. The absence of such rights concerns 75 per cent of the total African population. Worse, those African countries with highest poverty levels have lowest levels of coverage (ILO, 2014a).

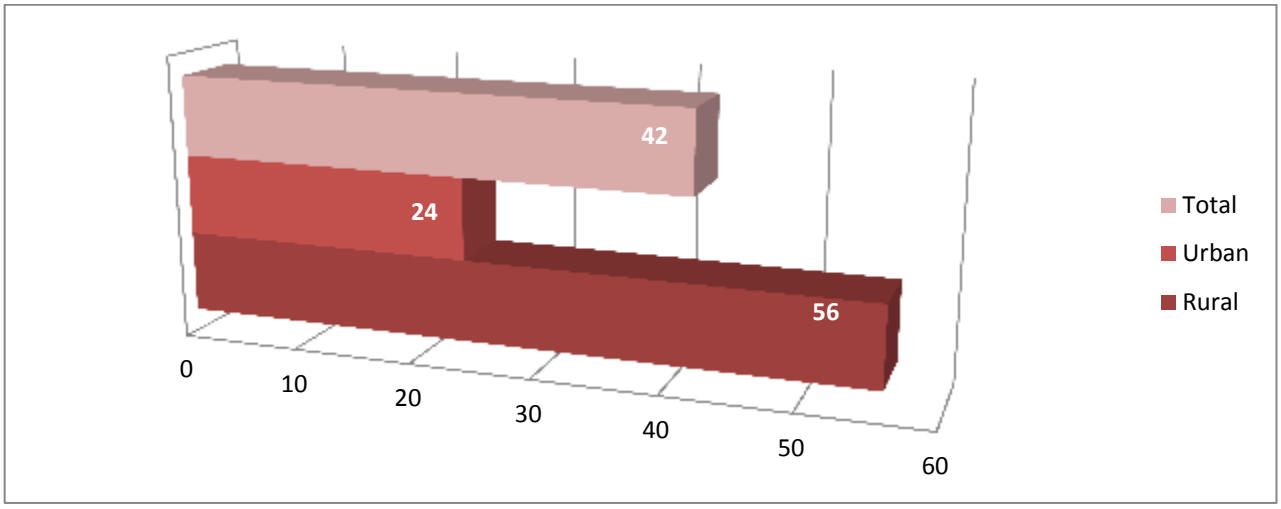
Figure 2. Proportion of the rural population in Africa not protected by legislation or affiliated to a national health service or scheme, 2015 (percentages)



Source: ILO estimates, 2015.

The globally most extreme rural/urban inequities in legal coverage occur in Asia and the Pacific. In addition to the deficits in rural/urban coverage, it is important to assess inequities in terms of the extent of differences. The most extreme differences in legal coverage between rural and urban populations worldwide are observed in Asia and the Pacific: more than twice as many people are experiencing coverage deficits in rural than in urban areas − 56 per cent of the rural population and 24 per cent of the urban population (figure 3).

Figure 3. Rural/urban coverage deficits in Asia and the Pacific: Proportion of the population not protected by legislation or affiliated to a national health service or scheme, 2015 (percentages)

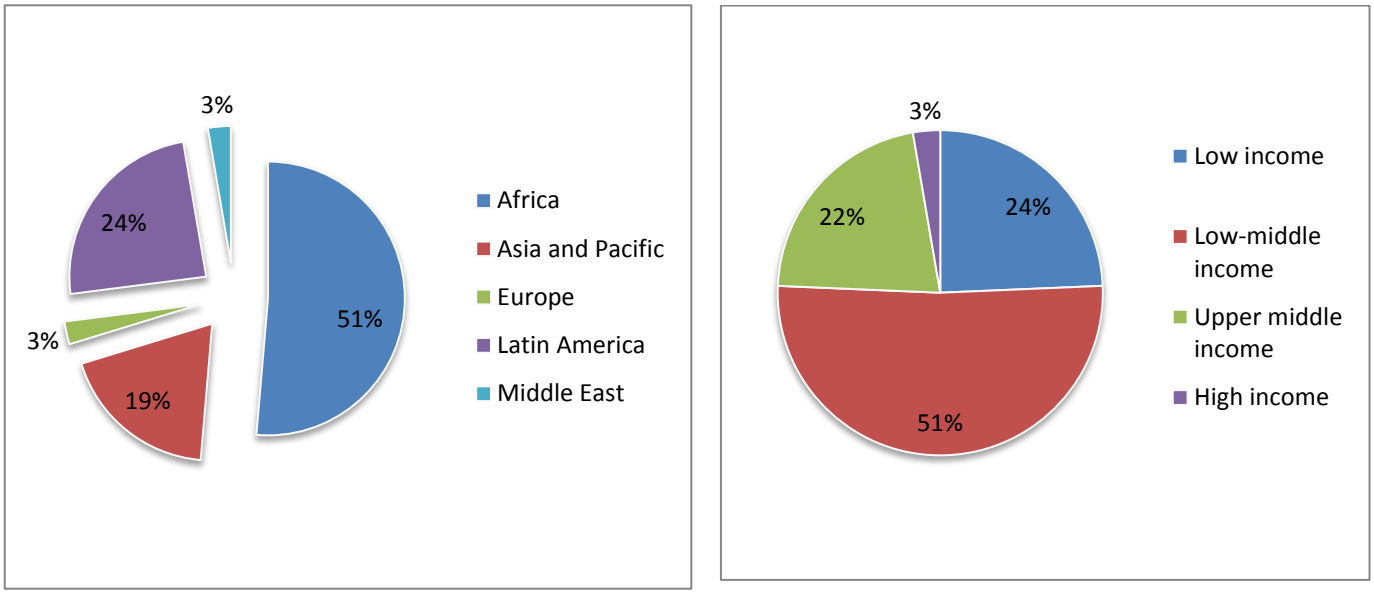


Source: ILO estimates, 2015.

In 37 countries of the world inequities in legal health coverage of the rural population are extreme; coverage of these rural populations is more than 50 per cent less than that of the urban populations. For example, in Bosnia-Herzegovina only 9 per cent of the urban population lack coverage as compared to 67.5 per cent of the rural population.

More than half of these countries are in Africa, 24 per cent in Latin America and the Caribbean, 19 per cent in Asia and Pacific, and the rest in Europe and Middle East. The majority of these countries (51 per cent) are characterized by low to middle income, but countries at all income levels are concerned (figure 4). These results point to the fact that the extreme inequities in rural/urban coverage cannot be explained just by constraints on resources.

Figure 4. Distribution of countries where the rural coverage gap exceeds the urban by over 50 per cent, by region and income level, 2015 (37 countries; percentages)



Source: ILO estimates, 2015.

Against this background, it is of utmost importance that governments increase their efforts to extend and implement legislation covering the entire population, particularly including those living in rural areas. Even in countries with resource constraints, equitable access should be guaranteed, as requested by ILO Recommendation No. 202 (ILO, 2012a).

3.2. The impact of shortages of rural health workers and of their working conditions

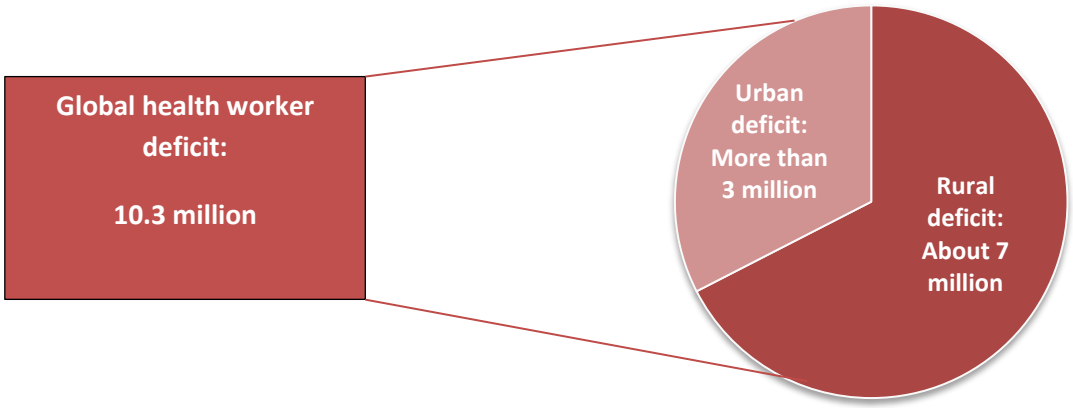
Health workers are a prerequisite for access to health care. Without skilled health workers, no quality health services can be delivered to those in need. Gaps in the health workforce can occur if there are insufficient numbers of health workers available in rural and/or urban areas, or if the skill mix of physicians, nurses and midwives does not match the needs in a specific area. Such deficits and imbalances in the availability of professional health workers necessarily result in no or inequitable access to quality health care.

The quality of care provided by skilled health workers is significantly affected by their working conditions. In addition to the lack of such workers, low wages and unsafe workplaces are among the core reasons for health worker shortages, as experienced most recently in Ebola-affected countries (ILO, 2014b). In consequence, the impacts on health can be very severe and even lead to unnecessary deaths.

Health worker shortages are more than twice as high in rural areas than in urban areas. ILO estimates show that only 23 per cent health workers in the world today are deployed in rural areas, while 50 per cent of the world's population are living in these areas and need to be served. Thus, rural areas experience extreme extents of unmet needs for physicians, nurses and midwives.

Given the requirement to achieve UHC and provide health care equally to all in need, the ILO estimates that globally 10.3 million skilled health workers are missing in the effort to achieve UHC (ILO, 2014c). This is based on a relative threshold of 41.1 health workers per 10,000 population. Nearly 70 per cent of health workers (seven million), are missing in rural areas (figure 5) compared to some three million in urban areas.

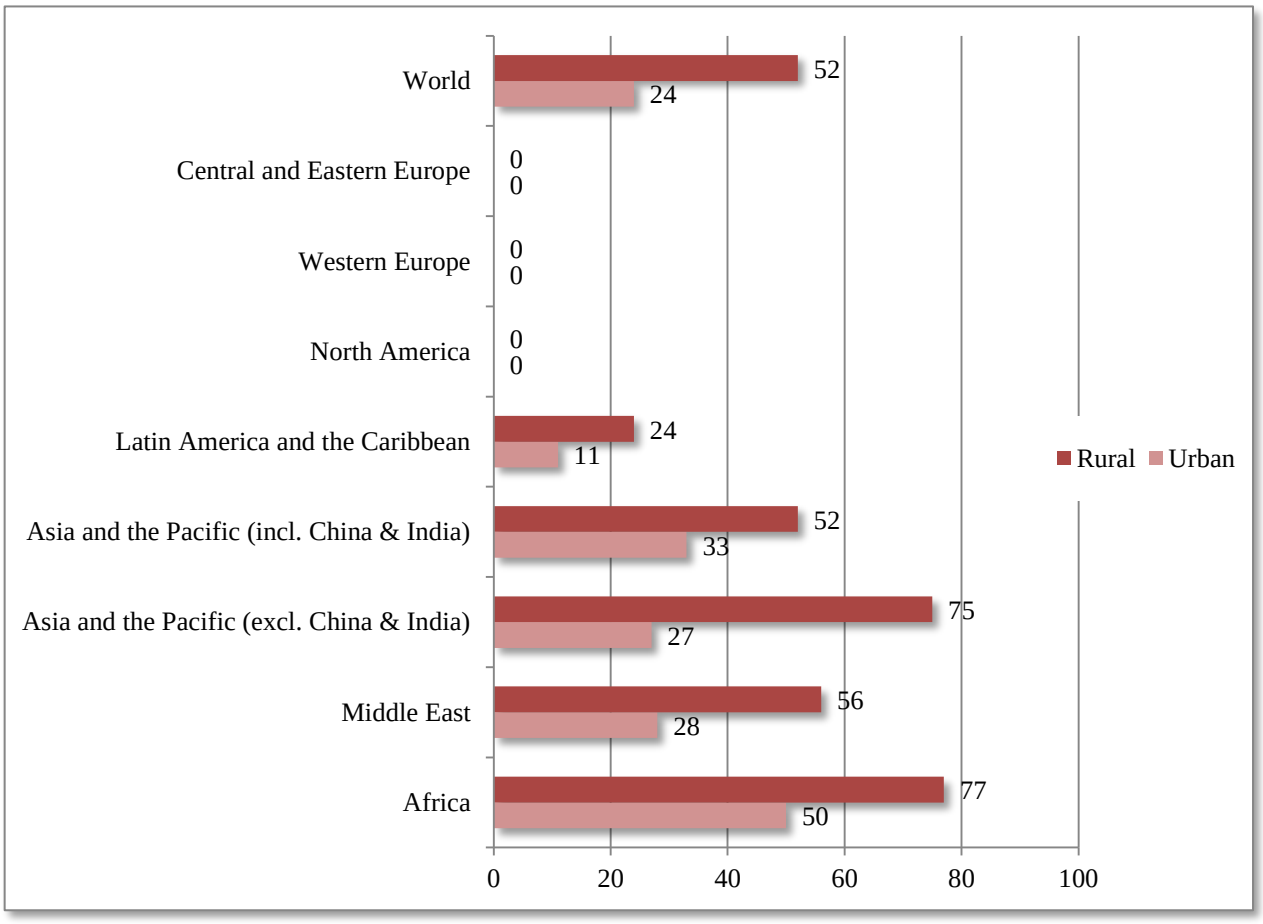
Figure 5. Global estimates of skilled health worker deficits in rural and urban areas, 2015 (millions)



Source: ILO estimates, 2015.

Half the world's rural population lacks effective access to health care. As a result of these health worker shortages, more than 50 per cent of the global rural population lacks effective access to health care, compared to 24 per cent of the urban population (figure 6). Again, the highest gaps for the rural population are in Africa, where as much as 77 per cent of the population has no access to health care due to the absence of needed health workers; while in urban areas half of the population is still underserved.

Figure 6. Rural/urban populations without access to health care due to health worker shortages, 2015 (ILO staff access deficit,* percentages)



Note: *The staff access deficit is a measure of how the number of physicians, nurses and midwives per 10,000 population compares with the median in low-vulnerability countries. A high value indicates a large deficit.
Source: ILO estimates, 2015.

Throughout the world, countries are experiencing more significant health worker deficits in rural than in urban areas. In all countries that experience health worker shortages, deficits are greater in rural than in urban areas. In some countries (most notably in China) the difference is very small, but in others (mainly low- and low-middle-income countries) the rural/urban disparity is large.

The gaps are most obvious in Africa where, as shown in figure 6, 77 per cent of the rural population cannot access needed health care due to the absence of skilled health workers. However, with the exception of Europe and North America, all regions are affected by high rural/urban disparities. In Latin America and the Caribbean the access gap of the

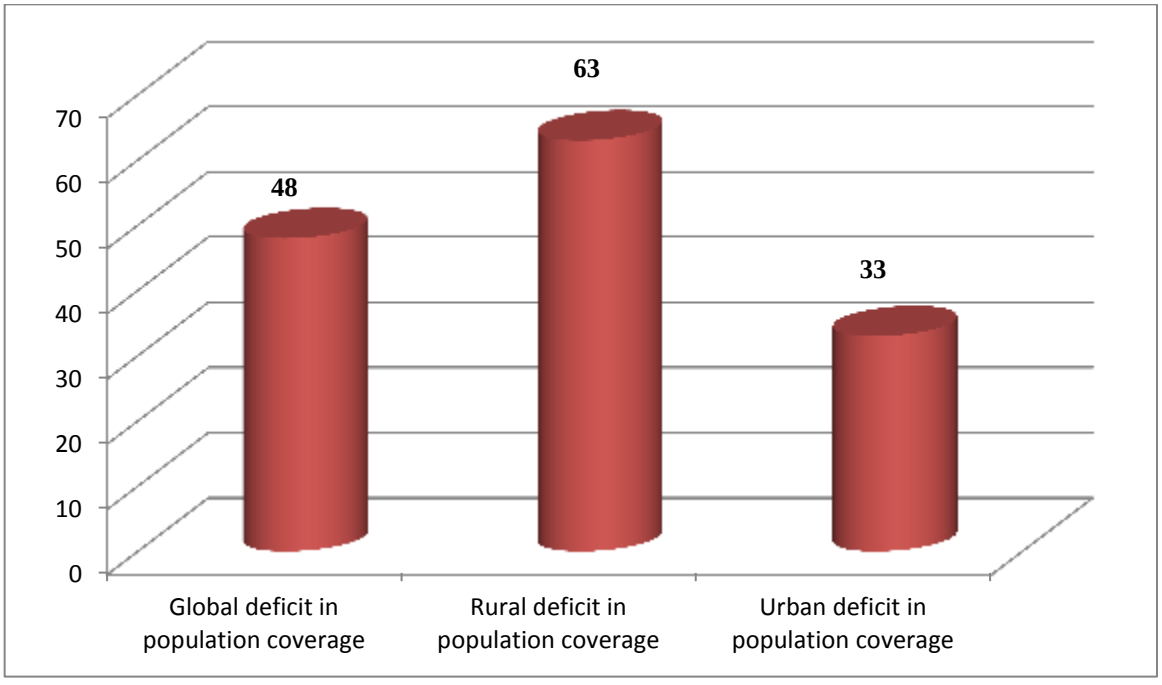
rural population is over twice that of the urban population: 24 per cent (rural) compared to 11 per cent (urban) are excluded from access to health care due to health worker shortages.

3.3. The extent of inequitable funding for health protection in rural and urban areas

Deficits in health-care funding determine nearly all dimensions of access to health care, for instance waiting periods, quality of care, acceptance or rejection of patients, availability of infrastructure and health workers and much more. While such deficits exist widely, they are particularly observed in rural areas.

Lack of financial resources leaves 63 per cent of the world's rural population without access to health care. Underfunding of global health financing results in an access deficit of 48 per cent of global population − nearly half the people in the world. This deficit is unequally distributed across rural and urban populations: while in urban areas it concerns 33 per cent of the population, it is nearly twice this amount in rural areas: 63 per cent (figure 7).

Figure 7. Rural and urban population without access to health care due to a lack of financial resources, 2015 (percentage of total world population)

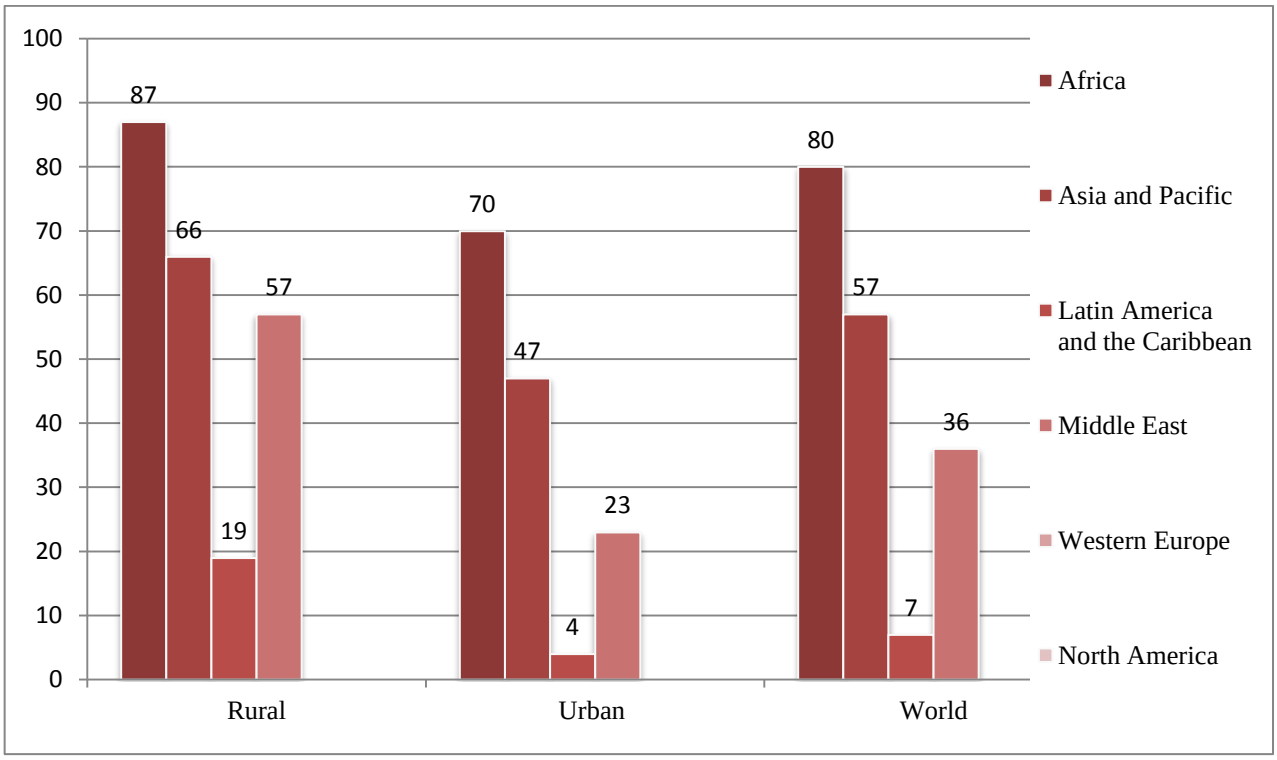


Source: ILO estimates, 2015.

The rural population in Africa suffers most from the financial deficit. While the percentage of the population not covered due to the financial resource gap is higher in rural than in urban areas (except in Europe and North America), the highest gaps are in Africa, where 87 per cent of the rural population are excluded from access to health care due to

underfunding, compared to 70 per cent of the urban population. In Asia and the Pacific, 66 per cent of the rural population are not covered due to lack of financial resources, compared to 47 per cent of the urban population (figure 8).

Figure 8. Estimated health coverage gap due to financial deficits in rural/urban areas, selected regions, 2015 (percentages)



Source: ILO estimates, 2015.

Significant inequities in rural/urban financial resource gaps are also found in other regions. Large differences are found in

- Asia, where the difference amounts to nearly 19 percentage points; and
- Latin America and the Caribbean, where the difference exceeds 15 percentage points.

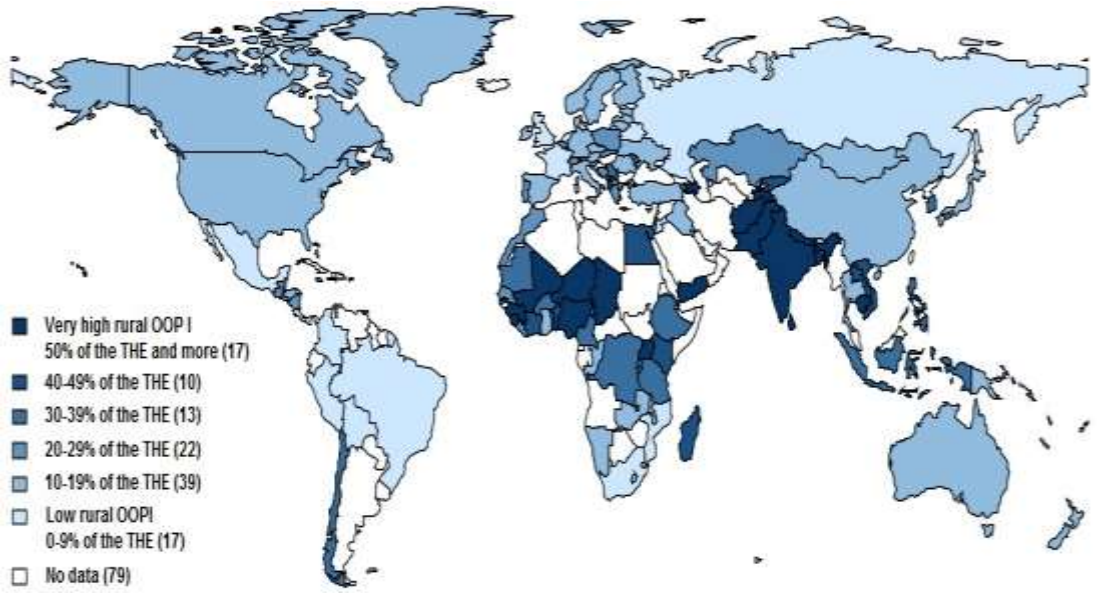
3.4. The health-related impoverishment of the rural vulnerable

Out-of-pocket payments (OOP) represent the most inequitable and unfair form of health financing, given the regressive impact on income as well as the absence of any risk pooling or sharing of the financial burden. Frequently, and particularly in low-income countries, OOP result in financial hardship of individuals and whole families if access to services involves significant amounts. OOP that exceed 40 per cent of household income, net of spending on basic necessities, is usually considered as catastrophic and often result in impoverishment or deepened poverty.

The regional and national patterns of OOP reflect the impact and results of various dimensions of health coverage and access to health care as regards rights, financing and availability. Thus, when interpreting the extent of OOP in rural and urban areas it is important to consider that OOP result from gaps in legal coverage, comprehensiveness of benefits, and availability and affordability of care, as well as the financial resource deficits.

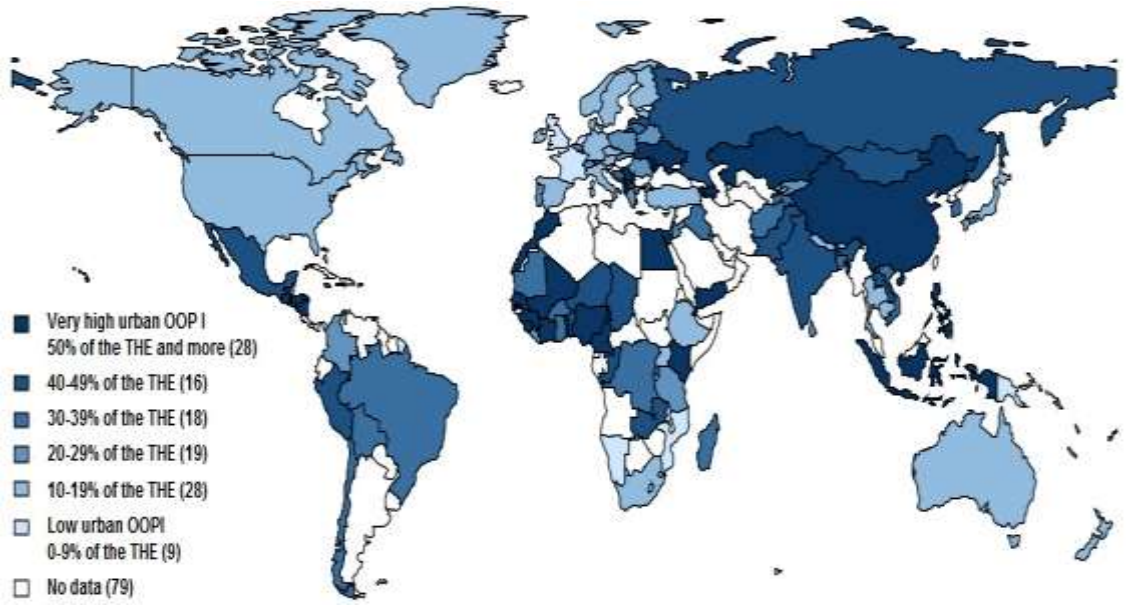
A global overview of the extent of rural and urban OOP as a percentage of total health expenditure (THE) is provided in figures 9 and 10.

Figure 9. Distribution of rural OOP across the world, 2015 (percentage of THE)



Source: ILO estimates, 2015.

Figure 10. Distribution of urban OOP across the world, 2015 (percentage of THE)

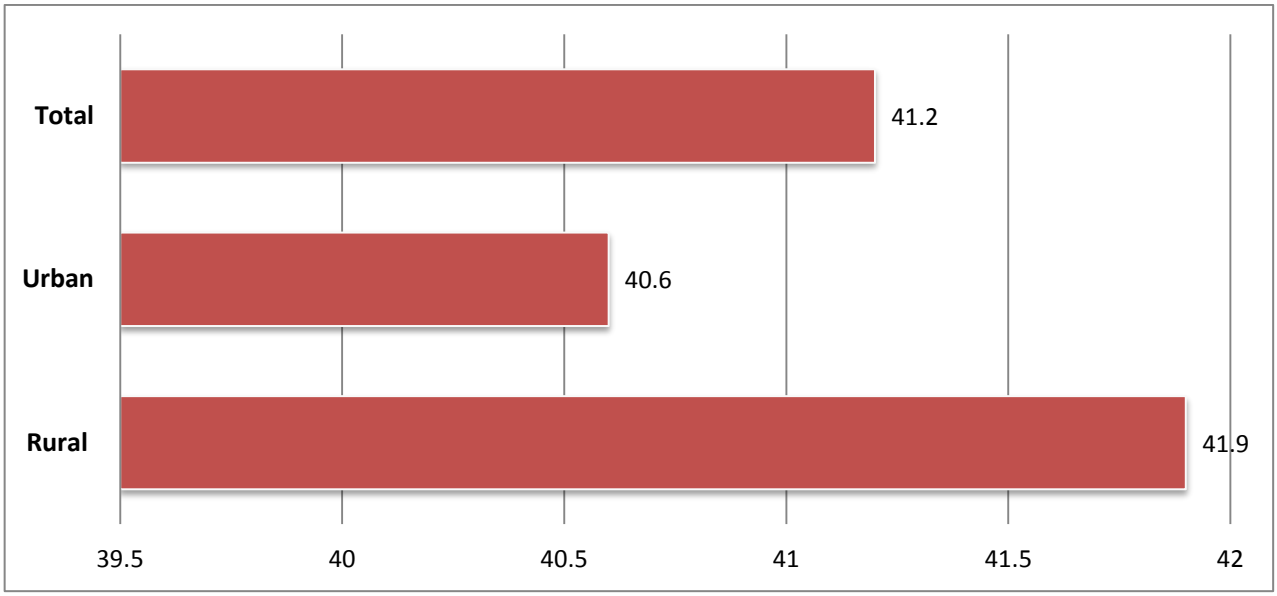


Source: ILO estimates, 2015.

OOP are globally marginally higher for rural than for urban populations, but the opposite is true at regional level. Global rural/urban inequities in OOP exist to some extent: global rural OOP are higher than global urban OOP, at nearly 42 per cent of THE compared to 40.6 per cent respectively (figure 11). However, the situation at regional level is much more differentiated; it indicates lower OOP for rural populations than for urban populations (figure 12). In most regions there are significant differences in the amounts of rural and urban OOP:

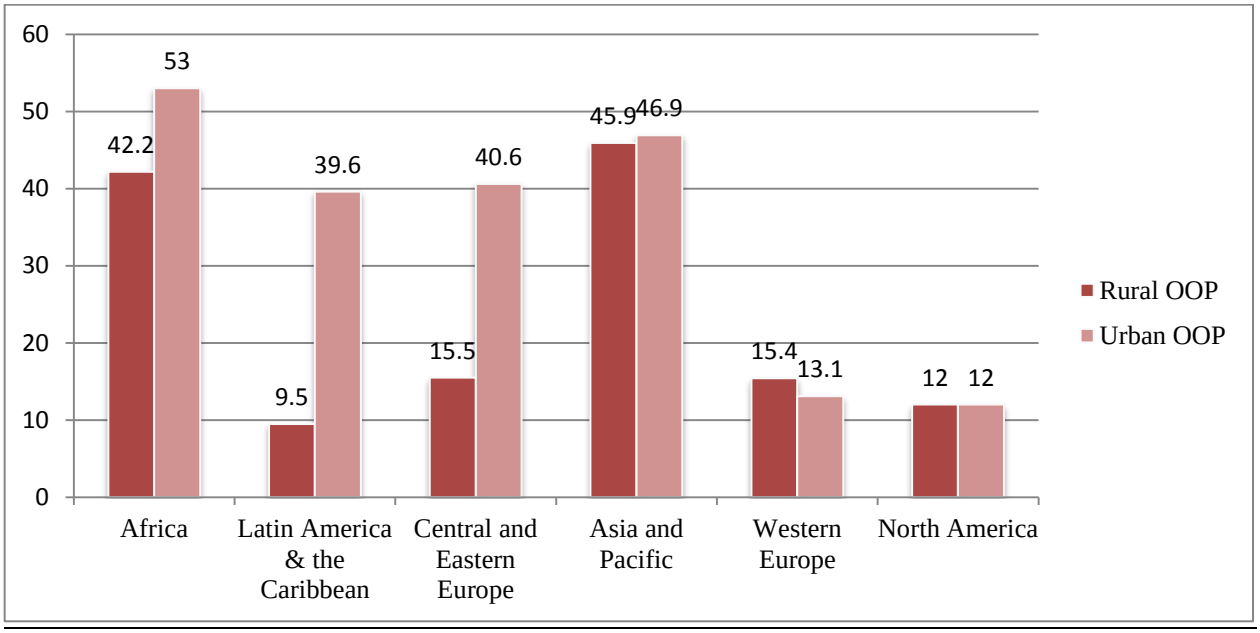
- In Africa, Latin America and the Caribbean as well as Central and Eastern Europe, rural OOP are lower than urban OOP.
- The highest regional OOP for rural populations are found in Asia and the Pacific, at nearly 46 per cent of THE– an amount that is only marginally lower than that for the urban population. Rural populations in Africa are burdened by more than 42 per cent of total health expenditure.
- The most extreme inequities are found in Latin America and the Caribbean as well as Central and Eastern Europe, where rural OOP are less than 10 and 15.5 per cent respectively of THE, but urban OOP reach about 40 per cent.

Figure 11. Global rural and urban OOP, 2015 (percentage of THE)



Source: ILO estimates, 2015.

Figure 12. Distribution of rural and urban OOP, selected regions,* 2015 (percentage of THE)



Note: * Due to insufficient data the Middle East is excluded from this figure.
Source: ILO estimates, 2015.

Lower amounts of rural than urban OOP reflect the exclusion of rural populations from access to health care. The lower rural OOP reflect the significant gaps in coverage of the rural population that exceed the deficits in urban coverage in some regions by more than 50 per cent. This is the case in Central and Eastern Europe as well as in Asia and

the Pacific. In addition, in these regions the financial coverage gaps as well as the health workforce shortages are predominantly found in rural areas. As a result, the rural population hardly has an opportunity to spend OOP even if in need. Thus, it can be concluded that the lower rural OOP mirror the exclusion of the rural population from needed care.

Further analyses of OOP in specific countries confirm the regional findings: countries such as Colombia, Côte d'Ivoire and Ukraine are characterized by:

- infrastructure that exists mainly in urban areas and is hardly reachable by the rural population. This results *in higher utilization rates by the urban population* involving higher levels of OOP. In some countries, health-care services may be totally unavailable in rural areas. Thus, no access to health care is possible and low or no OOP occur;
- *higher financial resource gaps* in rural than in urban areas; and
- *higher rural than urban health workforce shortages* (Colombia, Côte d'Ivoire).

Finally, for the very poor OOP may even be zero, as private expenditure may not be an option at all. Thus, this group of people is not reflected in the OOP statistics despite experiencing the most significant inequity.

Where rural OOP are higher than urban OOP, gaps often occur but health care is at least accessible even if at a higher price for the rural than for the urban population. This is the case in Western Europe and in some countries of the Middle East such as Iraq (see the statistical annex). In these countries, *quality care and infrastructure can be accessed, but at a higher price* than that of the urban population. The additional costs may involve transportation costs or seeking care at more expensive providers that offer services closer to home.

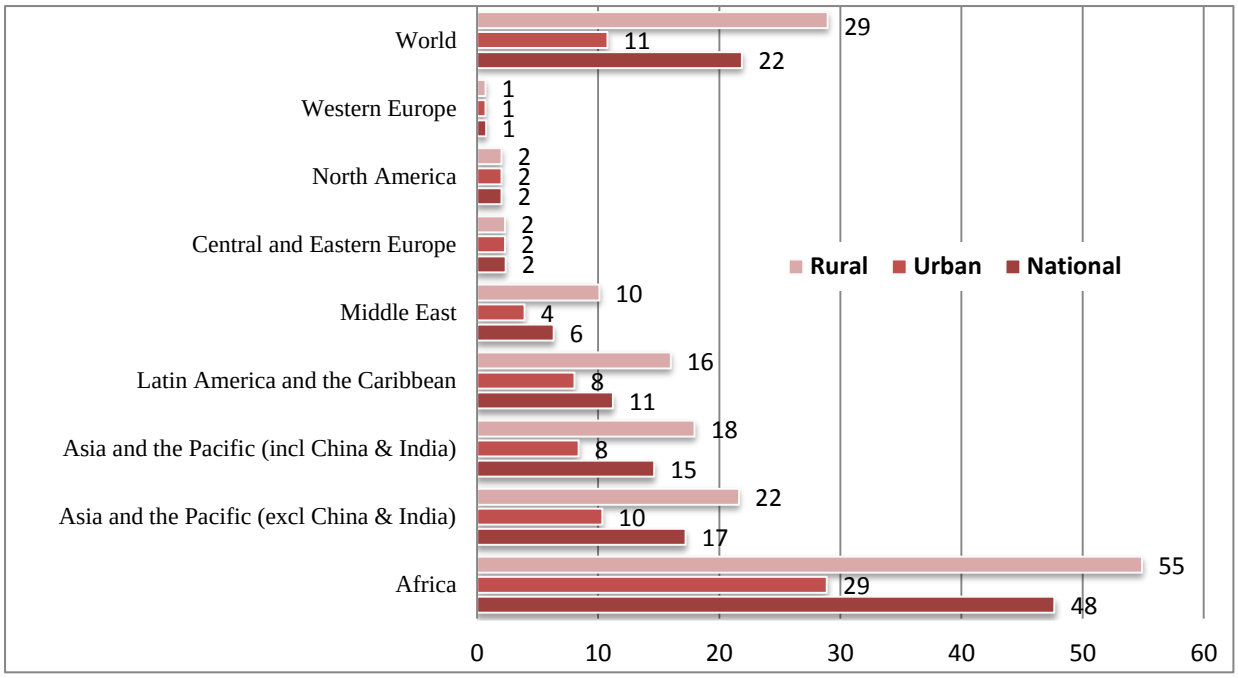
Given the extent of OOP observed in rural areas and the extreme inequalities within regions and countries, it can be assumed that the rural population is at a much higher risk of health-related impoverishment than the urban population. Even if OOP are lower in rural areas, the impact of ill-health on wealth and income generation of the sick person's family will play an important role.

3.5. Life-threatening inequities: The extent of rural maternal mortality

Maternal mortality serves as an overall indicator of the performance of a health system, and particularly the affordability and availability of quality services provided by health workers, including midwives.

Globally, the maternal mortality ratio (MMR) is 2.5 times higher in rural than in urban areas. Across the world as a whole, an estimated 22 maternal deaths per 10,000 live births were observed in 2012. But the maternal mortality ratio (MMR) is much higher among the rural population: 29 maternal deaths per 10,000 live births in rural areas as compared to 11 in urban areas. In addition, in all regions except Europe and North America, the rural MMR is at least double the urban MMR (figure 13).

Figure 13. Maternal mortality rates: Number of deaths per 10,000 live births, selected regions, 2015

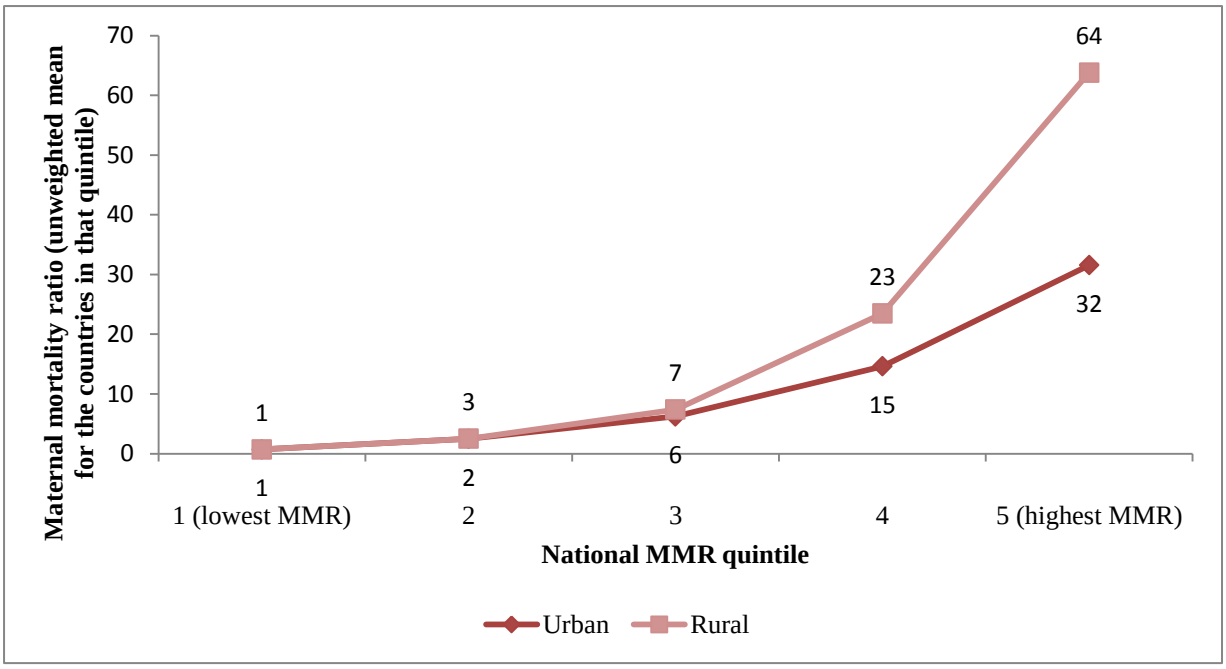


Source: ILO estimates, 2015.

Globally, the highest levels of MMR are found in rural Africa. Figure 13 shows that the most affected are those most in need, namely low-income countries in sub-Saharan Africa where the vast majority of people living in rural areas have no effective access to health-care services. In rural Asia MMR are as high as 18 maternal deaths per 10,000 live births, compared to 8.4 in urban areas. The rural/urban difference is 2.7 times higher in Africa than in Asia and the Pacific.

In 24 countries rural/urban inequities are extreme. Rural MMR amounts to more than double the urban estimate in 16 African countries, five Asian countries, two countries in Latin America and one country in the Middle East (see the statistical annex). We find a close relationship between these disparities and the national MMR: the higher the national MMR estimate, the greater the disparity between the urban and rural estimates (figure 14). In other words, in countries where MMR are high, it is the rural population that is most concerned.

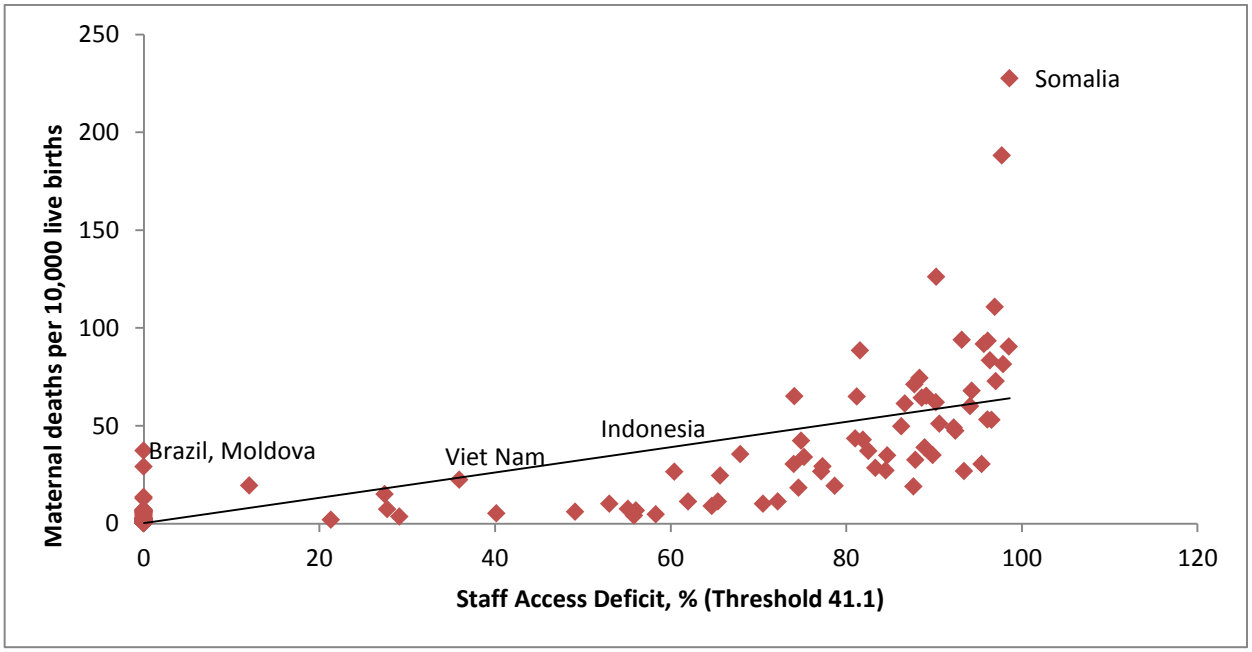
Figure 14. Urban/rural estimates of maternal mortality rates, 2015 (by national MMR quintile)



Source: ILO estimates, 2015.

The maternal mortality rate increases with the extent of the health worker deficit. The extent of MMR in rural areas is strongly related to the staff access deficit, as shown in figure 15: with decreasing levels of health workers, particularly midwives, the MMR increases significantly.

Figure 15. The rural staff access deficit and maternal mortality, selected countries, 2015



Source: ILO estimates, 2015.

3.6. The size of global rural/urban inequities

Globally, rural populations experience considerably lower levels of health coverage and access to health care than urban populations. As we have seen earlier (figure 1), 22 per cent of the urban population worldwide are not affiliated to a health scheme or system, compared to 56 per cent of the rural population. Thus, more than half the global rural population is deprived of the right to access health care when in need.

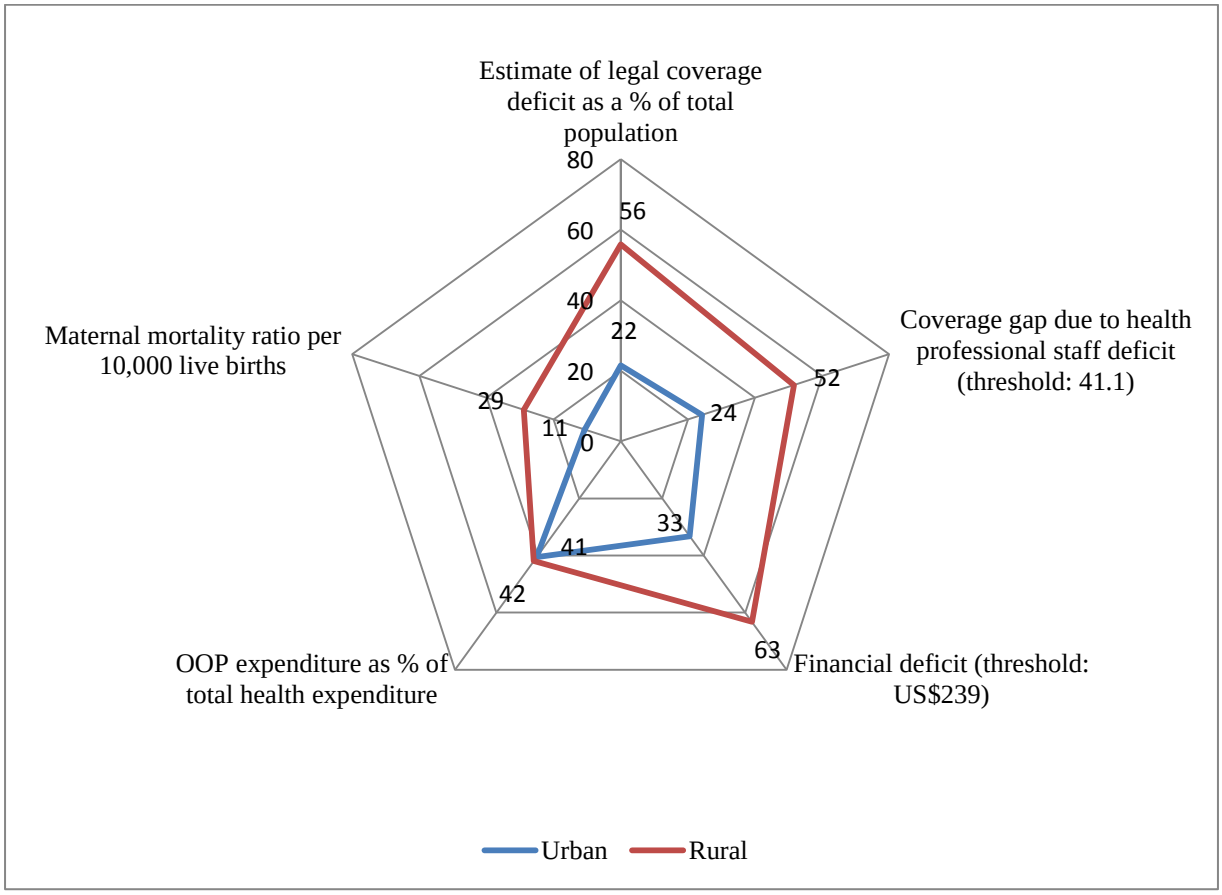
A similar level of exclusion is found as regards the coverage gap due to the lack of health workers sufficient to provide quality care: 52 per cent of the rural population lack such access as compared to 24 per cent of the urban population.

Large inequities are also observed as regards the financial deficit and maternal mortality ratios that burden the rural population about twice as much as the urban.

OOP seem to be less inequitable; however, the detailed analyses above reveal that the extent of rural OOP is closely linked to non-access to services as compared to the urban OOP that reflect higher utilization rates.

Figure 16 brings together these findings to show the global deficit in effective access to health services among both rural and urban populations.

Figure 16. The global deficit in effective access to health services, urban and rural populations, 2015 (percentages)

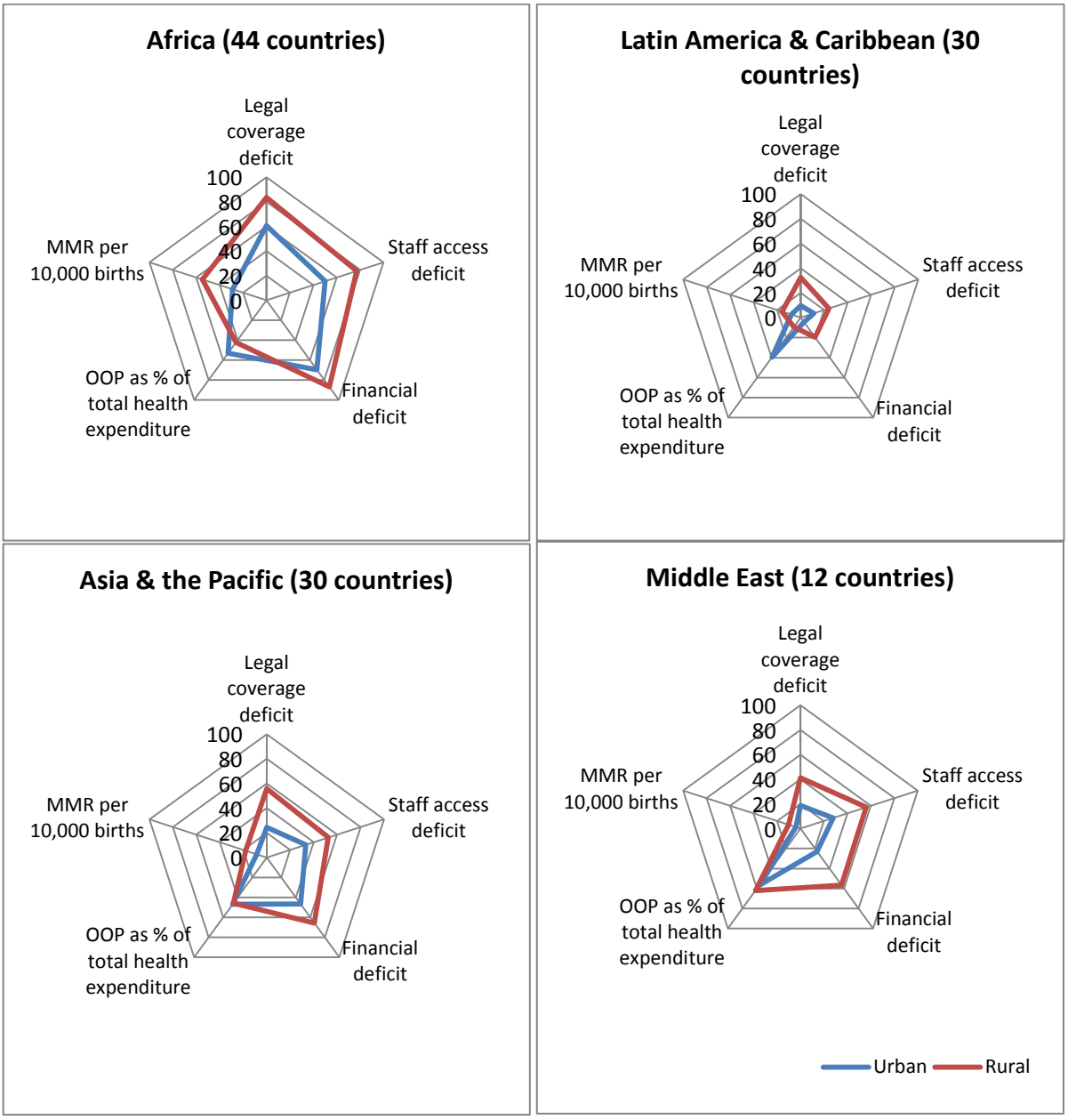


Notes: OOP = out-of-pocket expenditure, MMR = maternal mortality ratio. Regional averages weighted by urban and rural population, except for MMR which is weighted by urban and rural skilled birth attendants.
Source: ILO estimates, 2015.

When breaking down these results by region (figure 17) we find similar features, except for regions with a significant number of high-income countries:

- Virtually all the legal, staff access and financial deficits occur among rural populations.
- The inequities in OOP are relatively smaller, except for Latin America and the Caribbean.
- Maternal mortality ratios are regionally most important in Africa, but are also significant in other regions.

Figure 17. Regional deficits in effective access to health services, urban and rural populations, 2015 (percentages)



Notes: OOP = out-of-pocket expenditure, MMR = maternal mortality ratio. Regional averages weighted by urban and rural population, except for MMR which is weighted by urban and rural skilled birth attendants.

Against this background, it can be concluded that:

- No single action focusing on only one of the areas highlighted by the indicators can solve the issues observed: it is necessary to apply a comprehensive and systematic approach that addresses issues within the health systems simultaneously − mainly the lack of rights, health workers, funding, financial protection and quality. Thus, extending health protection and related equitable access to all is key.

- Further, the close relationship between gaps in access to health care and the socio-economic characteristics of the rural population need to be considered when searching for sustainable solutions to address the health protection deficits and gaps experienced by rural populations, in order to minimize the impacts of inequities deriving from issues beyond the health sector.

3.7. Inequities in rural and urban areas at national level: Selected country studies

How does the situation look at country level? In this section we assess selected countries in Africa, Asia and Latin America: Cambodia, Mexico, Nigeria and Zambia. An overview of the results for these countries is presented in table 2. It shows significant differences that will be discussed in the following sections.

Table 2. Inequities in coverage and access to health care: Cambodia, Mexico, Nigeria and Zambia, 2015

		Cambodia	Mexico	Nigeria	Zambia
Estimate of health coverage as a percentage of total population	National	26	85.6	2	8
	Urban	34	99	3	12
	Rural	24	75.4	1	6
Health expenditure not financed by OOP (%)	National	38	47.1	29	74
	Urban	81	48.2	30	57
	Rural	28	8.1	29	84
Coverage gap due to financial resources deficit (%, threshold: US$239)	National	91	-	87	73
	Urban	88	0	78	52
	Rural	91	0	91	82
Coverage gap due to health professional staff deficit (%, threshold: 41.1 physicians, nurses and midwives per 10,000 population)	National	75	0	60	81
	Urban	67	0	37	68
	Rural	77	0	82	89
Maternal deaths per 10,000 live births	National	25	5	63	44
	Urban	19	4.9	37	25
	Rural	27	5.5	88	65

Source: ILO estimates, 2015.

3.7.1. Cambodia

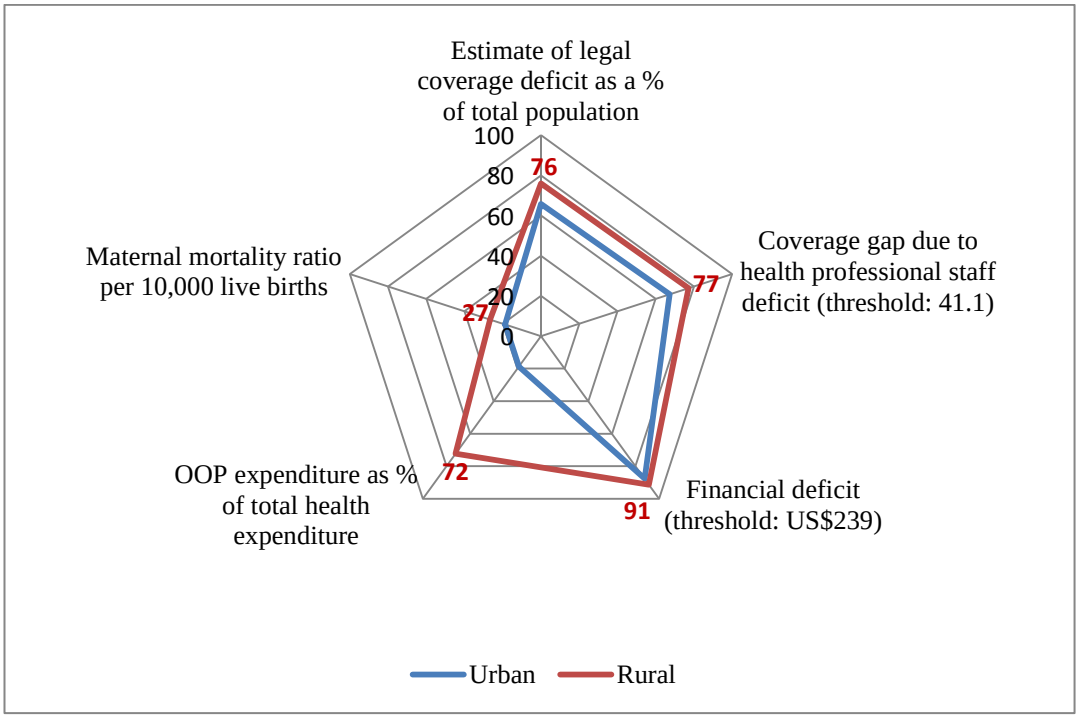
Cambodia has a largely rural population (about 80 per cent), most of whom are engaged in subsistence agriculture, and even in other sectors there have traditionally been low levels of formal employment. Primary health care is delivered through a district-based system, and quality of care and health financing are persistent challenges. Over the last 20 years the national Government has attempted to address these issues, for example through the introduction of the 1996 Health Financing Charter which attempted to regulate the charging of fees for the use of health services. However, concerns about the cost and quality of public health services has led to the growth of the private health sector and low utilization of health services due to financial and other barriers. Furthermore, the Government estimates that only a small proportion of public health funding actually reaches the service delivery level, leading to high levels of OOP and expansion of the private sector. Attempts have been made to address these chronic problems, including setting up health equity funds, and several have been successful in doing so, but initiatives have tended to operate at a local level.

Cambodia is a low-income country with weak taxation systems and high dependence on donor resources, so these local-level successes have tended not to be rolled out regionally

or nationally and their impact on national-level indicators has been very limited (Ministry of Health for Cambodia et al., 2008).

Figure 18 shows high deficits in all dimensions of coverage and access considered. Further, on all five indicators the rural population of Cambodia fares slightly worse than the urban population, while maternal mortality made a relatively small contribution to the overall access deficit. Over recent years Cambodia has made significant efforts to reduce maternal mortality, which probably explains why it performed better on this indicator than on the other four. The most striking finding, however, is the huge urban/rural gap in OOP as a percentage of total health expenditure, which can be considered as a symptom of public health funding being less likely to reach the service delivery points in rural areas than in urban areas.

Figure 18. Health coverage and access to health care in rural and urban Cambodia, 2015



Source: ILO estimates, 2015.

Given that most of the urban/rural gaps are relatively small in Cambodia but that coverage deficits are high, the main challenge for this country will be to address the national deficits without exacerbating the existing level of inequity. Fair health financing mechanisms must also be a priority.

3.7.2. Mexico

Mexico has a relatively urbanized population, with 21 per cent residing in rural areas (World Bank, 2013). Persons employed in the informal sector account for 45.1 per cent of non-agricultural employment in rural areas and 27 per cent in urban areas (ILO, 2012b). By 2012, 52.3 per cent of the country was at the national poverty line. Thus, developments in rural and urban employment and poverty rates have significant implications for Mexico to move towards a more equitable society that includes protection in health.

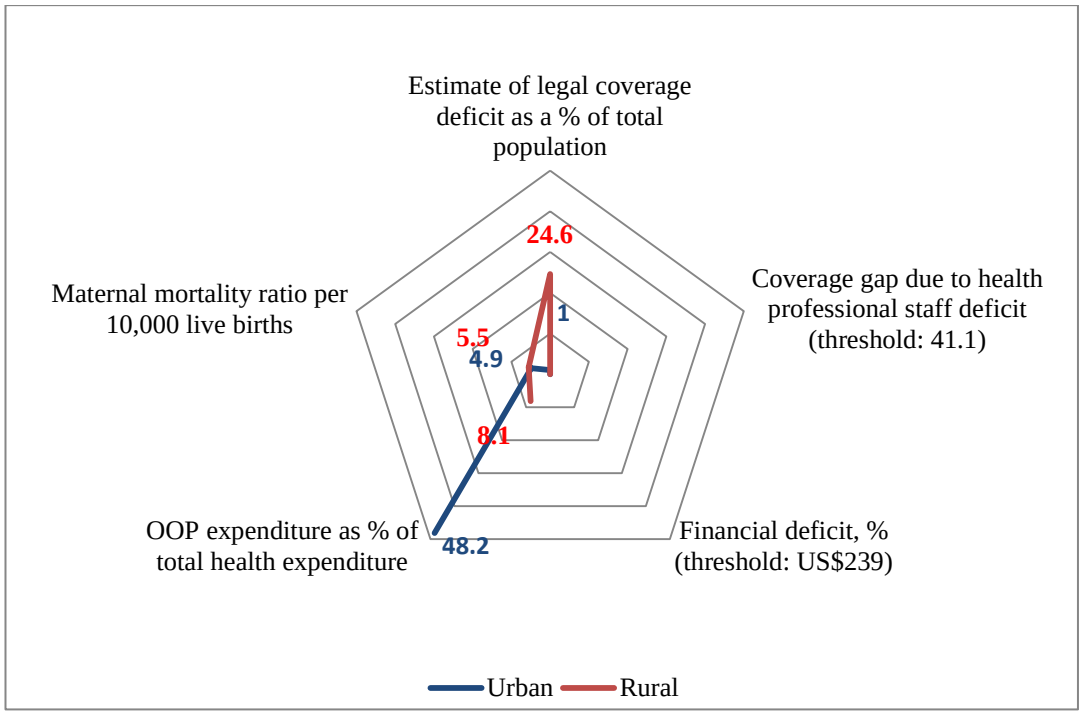
Mexico's health system was first established in 1943. The current national health insurance scheme, Seguro Popular (SP), was introduced in 2003 with the purpose of providing affordable health care to nearly 50 million people who were not yet covered (ILO, 2014a). It was intended to encompass dimensions in social protection of health according to

the AAAQ framework – providing available, accessible, acceptable and quality care for all. Total health expenditure grew from 4.4 per cent of GDP in 1990 to 6.3 per cent in 2010 (Bosch et al., 2012). Coverage through public health insurance improved substantially between 2002 and 2012: Seguro Popular enrolees reached 52.6 million in 2012, with the majority belonging to the poorest four income deciles. In addition, coverage was also extended to 35 per cent of enrolees residing in rural areas and 9 per cent belonging to indigenous communities (Knaul et al., 2012). The provisions of Seguro Popular have reduced the catastrophic expenditure that poor Mexican families had to incur when confronted with a health crisis.

Households enrolled in Seguro Popular are significantly less likely to spend OOP on drugs or outpatient services. The scheme has provided financial protection to urban households as regards prescription drugs, and to rural households as regards access to health facilities (Knaul et al., 2012). Figure 19 shows that despite the progress made nationally over time, the rural population in Mexico is worse off than the population living in urban areas for legal coverage and the maternal mortality ratio (MMR). The deficit in legal coverage is 24.6 per cent in rural areas as opposed to 1 per cent in urban areas. The MMR amounts to 5.5 maternal deaths per 10,000 live births in rural areas versus 4.9 in urban areas −but Mexico fares relatively well compared to the region's MMR of 16 maternal deaths per 10,000 live births in rural areas and eight in urban areas.

However, the gap in OOP is striking. Urban households spend up to 48 per cent in OOP compared to 8 per cent by rural households. This can be associated with the lack of coverage of the rural population that results in lower utilization rates and thus smaller amounts of OOP. Further, imbalances in the availability of rural infrastructure, including private services, may also result in lower utilization rates and related impacts on OOP. This is particularly observed with regard to hospitalization, which is significantly lower among those living in rural rather than urban areas (Salinas et al., 2010).

Figure 19. Health coverage and access to health care in rural and urban Mexico, 2015



Notes: Data on financial deficits are not available. Coverage gap due to health professional staff deficit is 0.
Source: ILO estimates, 2015.

While only a minority of the total population live in rural areas, rural communities consist mostly of vulnerable groups, indigenous populations and informal workers. In remote communities, health centres operate with poor basic apparatus and poor telecommunications infrastructure, and are often staffed by medical students (Knaul et al, 2012). Having identified insufficient legal coverage and shortages in affordable quality services in rural areas, considerable attention must be dedicated to these areas to move towards more equitable access in health care for rural populations.

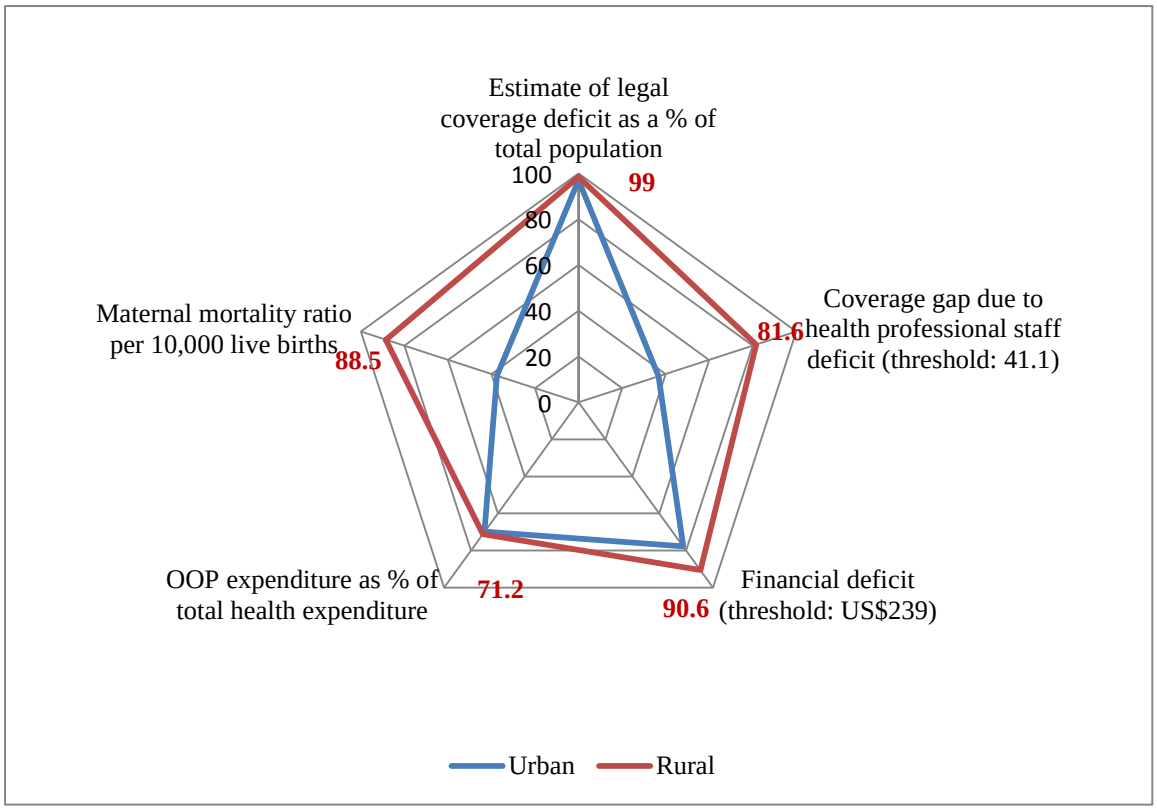
3.7.3. Nigeria

Nigeria is a federation of 36 states and the federal capital territory of Abuja. It is the most populous country in Africa, accounting for about one-sixth of the continent's people. In common with many other African countries it is experiencing rapid urbanization, with about half its current population living in urban areas. The economy largely relies on the oil and gas sector, but agriculture, mining, light industry, and the banking sector also contribute significantly to Nigeria's GDP. Oil resources are concentrated in the southern part of the country, which is much more developed than the north. Three decades of political instability and economic crisis have led to a deterioration of the health system and poor performance on national health indicators. Public spending on health in Nigeria is low, even relative to other sub-Saharan African countries, and health sector governance is weak, with the result that a large private sector has developed and the majority of health services are supplied by private providers. The supply of human resources for health (HRH) is high relative to other African countries, but HRH planning and management tends to be poor (Kombe et al., 2009), with the result that the distribution of the available HRH tends to be inequitable.

National estimates for the five health access indicators reflect these general trends, with a very high financial deficit, high levels of OOP, high levels of maternal mortality, extremely low levels of legal coverage and a high staff access deficit in comparison to other sub-Saharan African countries.

Figure 20 shows that on three of the five indicators (staff access deficit, financial deficit and maternal mortality) the rural population of Nigeria fares much worse than the urban population. For the remaining two indicators (legal coverage and OOP) there is virtually no difference between urban and rural areas. In the case of legal coverage, this is because hardly any Nigerian citizens have such coverage, whether they live in urban or rural areas. In the case of OOP, this result may be indicative of an inadequate public health system in both urban and rural areas, leading to both urban and rural dwellers being dependent on private providers.

Figure 20. Health coverage and access to health care in rural and urban Nigeria, 2015



Source: ILO estimates, 2015.

Given the extreme deficits in health coverage and the significant urban/rural inequities concerning the staff access deficit, financial deficit and maternal mortality, policy efforts must focus on closing these gaps as well as improving overall levels of coverage and reducing OOP, particularly for rural populations, without increasing inequity.

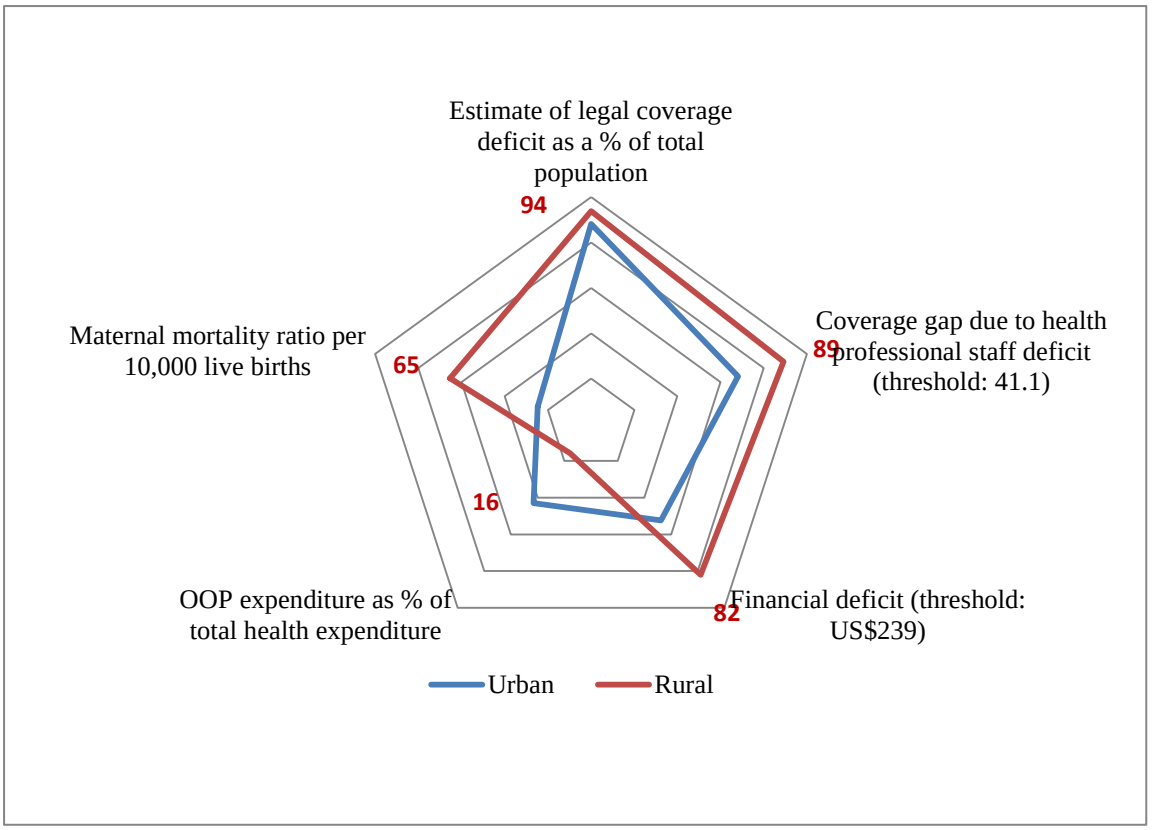
3.7.4. Zambia

About 60 per cent of Zambia's population reside in rural areas, and the agricultural sector accounts for most of the country's employment. Since gaining independence in 1964, Zambia has been a peaceful and politically stable country with a history of good strategic management of its health sector, with the result that most of its health services are provided within the public sector. Private sector provision tends to be located in urban areas, and in 2006 the country abolished user fees in public health facilities in rural districts. However, Zambia still has a major shortage of human resources for health and a problem with inequitable distribution of health resources between urban and rural areas (Ferrinho et al., 2011).

These general trends are reflected in figure 21: the overall deficits in terms of legal coverage, human resources for health and health spending are high and the rural population fares worse than the urban population in terms of staff access, financial deficit and maternal mortality.

Zambia is one of the countries in which OOP is higher in urban than in rural areas, and this is most probably due to the fact that most private sector provision is in urban areas, whereas services for rural populations remain inaccessible, limited and/or of low quality.

Figure 21. Health coverage and access to health care in rural and urban Zambia, 2015



Source: ILO estimates, 2015.

Given that the urban/rural gap for legal coverage is relatively small in Zambia but that coverage is very low, the main challenge will be to address the large national deficit in coverage without introducing inequity. For the staff access deficit, financial deficit and maternal mortality, on the other hand, there is already a significant urban/rural gap, so policy must focus on closing this gap as well as improving overall levels of coverage. The low level of OOP in rural areas is indicative of the success of the policy of abolishing user fees in rural areas (Masiye et al., 2008), but in the context of the low levels of health spending it is further indicative of a lack of health-care provision in rural areas, i.e. no services for rural people to spend money on.

4. Policies to end the rural/urban divide: Extending health protection to all and targeting the social determinants of inequities

The above findings suggest that the place of residence largely determines coverage and access to health care. The rural/urban divide is a consistent feature across the world, existing in all regions and within all countries. Currently, the place of residence can be considered as an entry door or a key barrier to accessing better health protection. The root causes range from a lack of rights to severe deficits in service delivery, as well as poverty, uneven employment opportunities and social exclusion. Ending the rural/urban dualism requires efforts to build more adequate structures that are based on a concept of inclusive societies where everybody can equally receive quality care when in need.

Such a concept needs to aim at extending health coverage and access to all, as well as addressing the social determinants and main causes of the inequities that impact on access gaps − such as poverty, discrimination, unemployment, and working in the informal economy. It needs to acknowledge that the right to health and social protection is a key tool to prevent and reduce inequalities and at the same time help support a transition to more sustainable economies. The prioritization of such policies will support social inclusion and reduce the divergences within and across rural and urban regions.

The most important policies in this context are the establishment and development of national social protection systems and in particular social protection floors that incorporate strategies to extend health protection to the rural populations, guided by ILO social security standards, particularly the ILO Social Security (Minimum Standards) Convention, 1952 (No. 102) and Recommendation No. 202 concerning national floors of social protection.

While it is not possible to outline specific policy approaches that would apply to all countries, overall objectives and some key principles should be applied in all policies that allow for accelerating progress towards more and better health protection for rural populations and eliminating inequalities.

4.1. Key objectives and principles: Removing the leading causes of inequities

Putting into practice the human right to health and social security, as reaffirmed in ILO Recommendation No. 202, requires an approach characterized by **universality** that does not limit coverage to specific target groups, socio-economic groups or groups defined by place of living, age, gender or ethnicity. It is important to aim at inclusiveness in the formulation of national legislation, as well as its implementation and enforcement.

Thus, **universal health protection** should be the key policy objective when aiming to address inequities in access to health care. It should be **anchored in legislation** and implemented according to fixed timelines for the progressive realization of coverage and access to health care in rural areas. This also includes that entitlements to benefits, such as quality care services, preventive care, maternal care, medicines and others, are prescribed by law and meet at least minimum standards of adequate and essential care.

The underlying **principle of equitable access** requires non-discrimination, including by place of living and meeting core requirements such as gender equality and responsiveness

to specific needs such as those of the rural population. It also requires respect for all people and an acknowledgement of their human dignity. In addition, equity requires that legislation does not implicitly or explicitly favour urban residents over rural. Where such discrimination exists it should be progressively removed, with a view to achieving equity in coverage and access.

Universality and equity also call for **solidarity in financing** and fairness in burden sharing for health protection. This entails risk pooling based on financing mechanisms such as tax funding and contribution-based social or national health insurance. Thus, various financing mechanisms can be chosen, particularly to reach out and best include those living in rural areas. Particularly important for rural populations is to consider a diversity of methods and approaches such as national health services, national insurance schemes or mixed protection mechanisms that complement each other – for example, insurance schemes with tax subsidies to cover contributions of the vulnerable.

Further, it is vital to **avoid financial hardship** or an increased risk of poverty for those who need health care. This might occur if benefit packages are too limited or OOP are unaffordable, particularly in the case of severe or chronic diseases. Thus, the financial consequences of accessing health care must be carefully considered in order to avoid barriers and thus inequities.

Finally, it is imperative to ensure that during sickness **income generation is sufficient or income support available** to address the worst forms of health-related impoverishment due to loss of income or work. This entails **coverage for and access to social protection benefits** such as paid sick leave, pension or unemployment schemes or other income support through social assistance programmes. Such income support is necessary to address the problem of avoidance, where those who need care do not seek it because it is unaffordable.

4.2. A shared agenda for the future: Addressing inequities in a coherent multi-sectoral approach

Of the developing world's 5.98 billion people, almost 3.4 billion live in rural areas. It is estimated that this number will increase during this decade, reach its peak in the 2020s and decline to 3.2 billion by 2050 (UN Population Division, 2014).The global trend is determined by rural population growth in Asia and Africa, where nearly 90 per cent of the global rural population live. India (857 million) and China (635 million) alone account for 45 per cent. Three other Asian countries − Bangladesh, Indonesia, and Pakistan − also have over 100 million people living in rural areas. In Africa, large rural populations are found particularly in Nigeria (95 million) and Ethiopia (78 million). And while the number of people living in rural areas will decline in India and China, those in African countries will significantly increase until 2050 − by 50 million in Nigeria, 39 million in Ethiopia and 38 million in Uganda (ibid.). Thus, the highest increase in rural populations is expected to take place in countries that already today have the largest health access deficits.

Against this background, successful policies towards universal health protection need to specifically consider access barriers for rural populations in all dimensions of coverage – be it legislation, financing and funding or making health care available and affordable. In addition, rural specificities need to be taken into account when it comes to the implementation of legislation.

4.2.1. Considering rural living and working characteristics

About 70 per cent of the developing world's 1.4 billion extremely poor people are currently living in rural areas (IFAD, 2011). In other words, **high poverty rates are linked to high percentages of people living in rural areas** compared to urban areas.

Most rural dwellers in developing countries depend on agriculture for their livelihood and subsistence agriculture is common. However, the rural population also participate in **rural labour markets** that are often characterized by **informality of work, unemployment, and significant challenges as regards decent work**. For example, among the rural poor in India casual wage labour is the largest single occupational group (ILO, 2008). This form of labour is unstable, as wages are paid on a task or piecemeal basis and as a result workers are highly vulnerable both to risks associated with agriculture (e.g. natural hazards such as droughts) and to seasonal variations in employment opportunities. The situation is aggravated by the fact that state-run social protection coverage often focuses only on the organized sectors of public and industrial employment, leaving the vast majority of rural populations that operate in the informal economy without any means of income support (ILO, 2011a).

The **wages** of employed rural populations are frequently low and the often physically demanding work offers few opportunities to invest in developing skills and building assets to generate higher incomes. Persistent poverty and limited employment opportunities for decent jobs are also major "push factors" that are responsible for the migration of formerly rural dwellers into urban slums (ILO, 2008).

Self-employed small-scale farmers in developing countries also face obstacles in **income generation.** Local value chains have high transaction costs and are hampered by inadequate infrastructure, long distances and restricted access to financial and business services. As a result, it is difficult for these producers to become suppliers to larger firms, compete in global value chains and enter higher value markets. Due to their size and lack of organization in cooperatives or other producer organizations, small enterprises in rural areas also do not have enough bargaining power to improve their situation (ILO, 2011a).

In addition to economic exclusion and lack of economic opportunities, rural populations largely remain **excluded from participatory processes** within the overall society they live in. Where political representation is absent, legislation and related resource allocation patterns tend to favour urban areas, particularly for public services including education and health. This "urban bias" is fuelled by better-off interest groups in cities that are able to lobby the government to spend money on the services they want, while the poor in rural areas suffer from underinvestment.

Social exclusion and the lack of access to services are most severe for those who are most at risk of poverty. Within rural populations, these are particularly **women, the elderly, minority groups and migrants.**

These characteristics require specific efforts to include rural populations in meaningful health protection that results in effective access to health care when needed. Affordability, availability and financial protection of legally anchored health protection need to be at the centre of successful policies towards universal health coverage.

4.2.2. Moving from charity to rights

The evidence on rural/urban inequities indicates that in most countries a higher percentage of the urban population enjoy rights to health protection coverage than the rural population. As we have seen, the global figures show that while 22 per cent of the population in urban areas lack legal health coverage, 56 per cent of the rural population are not affiliated to any health scheme or system. The existing gaps reflect an absence of legislation or fragmented legislation that concerns more than half the global rural population. While some people without legal rights to health care may have access if they purchase care on a private basis, the majority are unable to do so and thus have no entitlement to health services when in need.

Where legislation is fragmented, it may for instance exclusively cover registered formal workers while excluding seasonal and migrant workers, family members or those working in the informal economy. In addition to these gaps, and contrary to the principles of equity and universality, people living in rural areas often do not enjoy the *same* rights and entitlements as those living in cities.

The reasons for low levels of legal coverage relate to the absence or insufficiency of inclusive legislation. In these cases, charities are often present whose purpose is to serve the rural population, the poor, the vulnerable or the otherwise excluded. Such charities are well-meaning and much appreciated, but they cannot serve as an excuse for government to ignore its responsibility to the population as a whole, providing legal coverage and equitable access to health care for all.

As a prerequisite for equity and equality, a rights-based approach is the most appropriate framework for countries to use when considering ways to narrow and eliminate the urban/rural gap. This is not only in line with the human right to social security and health, but is also highlighted in various ILO Conventions and Recommendations, most recently in Recommendation No. 202 which insists on rights-based approaches to social security and health including the provision of basic guarantees for all irrespective of where they live. Thus, Recommendation No. 202 requires that inequities be addressed both across and within countries.

Addressing gaps in rights requires a focus on at least basic guarantees to health services provided under the roof of universal health protection. Legislation should clearly specify the range, qualifying conditions and levels of benefits. Further, entitlements should be regularly and transparently reviewed, so that those making the decisions can be held accountable.

Finally, the legislation needs to be implemented with a view to achieving equitable access to health care for all. Poor implementation of legislation is a key concern for rural populations: The absence of infrastructure, the lack of health workers or high co-payments are among the main reasons for poor access. Further issues relate to setting up approaches that match the specificities of rural populations, including personal and work status, or illiteracy with its related lack of awareness of rights.

4.2.3. Developing fiscal space and allocating resources to rural health protection

The analysis in section 3 revealed that in many countries expenditure on health protection is currently characterized by underfunding. Financial deficits are found in all regions and concern mostly low- and lower-middle-income countries, with rural areas more

concerned than urban. The deficit results in a coverage gap of as much as 63 per cent of the global rural population. This gap is twice the size of the urban gap, which concerns 33 per cent of the global population living in urban areas. Generating sufficient funds for health protection that are equally shared between rural and urban populations is thus an important issue.

When developing the fiscal space needed it should be considered that health protection is an investment in the human resources of countries and can yield significant social and economic returns in terms of productivity, economic growth and wealth, due to its impacts on the health status of the population, including mortality rates, absenteeism and other issues. Further, since there are also indirect savings through reduced health-related poverty, funds for poverty alleviation are also appropriate.

Taking these considerations into account, domestic revenues for health protection can be generated through both

- specific health financing mechanisms; and
- funds from government budgets that are related to economic development or broader development policies.

The most frequently used health financing mechanisms for generating domestic revenues include taxes and income-related contribution payments for national or social insurances. When applying such mechanisms, the potentially negative impacts for the rural population should be taken into account. These include the use of value-added taxes that – given consumption patterns – place a heavier burden on the low-income and poor populations most frequently found in rural areas. As regards insurance-based income generation, the link to formal work and related work contracts that are less available in the informal settings found in rural economies will be of concern. Thus, addressing this issue through contribution subsidies might be considered.

Unfortunately, OOP are also often used as a financing mechanism despite the negative impact on accessibility of health care and their regressive impact on income, thereby further contributing to inequities. Thus, under no circumstances should OOP such as user fees and co-payments be considered for fiscal space.

Most relevant for the development of fiscal space are the efficiency and effectiveness of national health services, as well as social and national health insurance schemes. Frequently, issues relate to:

- high administrative costs;
- long administrative procedures;
- inefficient and/or unequal allocation of funds to urban centres;
- fraud or waste of funds.

The World Health Organization estimates that the waste of health-care funds accounts for 20 to 40 per cent of global health expenditure (WHO, 2010) and may be significantly higher in specific countries. This is equivalent to US$300 billion which disappears in corruption or due to error. In addition, it observed that large amounts of money are wasted through not adequately maintaining equipment. Efficiency savings can also be achieved by purchasing drugs, medical equipment and other items at competitive prices. There is consequently a large potential for mobilizing domestic funds and thus fiscal space in both rural and urban areas through increased efficiency and effectiveness within the health sector.

Given the returns of health protection in terms of economic growth and wealth, reallocating domestic revenues from national funds that are foreseen for achieving related objectives should be considered, such as funds from government budgets related to economic development or to the broader development agenda. Also considered should be the setting up or enabling of macroeconomic frameworks that allow for increased fiscal space, for instance with regard to increasing borrowing from domestic or international sources and debt reduction.

In addition to these options, fiscal space can be developed by increased international aid. However, this cannot be seen as sustainable and should not be considered a long-term solution.

The additional funds gathered from increased fiscal space should be allocated with a view to addressing inequities in access to health care and health protection for the whole population. This includes resource allocation that ensures that funds do not flow only to staffing and infrastructure costs (which tend to benefit urban areas). Both financial allocations and other resources such as buildings, beds and staff should reflect the population and disease burden of the diverse areas in the country.

Strategic purchasing can ensure that the resources are used in a cost-effective way to provide at least essential services reflecting local needs. Passive purchasing – without supervision of whether services are appropriate – tends to favour areas where utilization is high, which again may bias public spending towards urban areas. An efficient tool within a strategic purchasing approach is performance-based financing, which can incentivize specific types of service as well as their quality. In some countries, higher payments have been made within schemes to remote areas, recognizing that reaching those populations can require more effort from providers. For example, the Democratic Republic of Congo allocates 15 per cent (Witter et al., 2013) higher capitation payments to more remote provinces, while Burundi allocates 40 per cent higher capitation payments to such areas (Montagu, 2002). Public/private partnerships and social franchising can also extend the range of services in rural areas at acceptable cost in some circumstances, and have been used widely for family planning services.

4.2.4. Making quality health care equally available in rural areas

The availability of quality health care requires that adequate − or at least essential − health services, quality drugs and other supplies can be accessed by everybody in all areas of a country. As section 3 has demonstrated, inequities in the availability of health care in rural as compared to urban areas occur in many countries, although to a different extent and due to a variety of dysfunctions in the health systems. Some general patterns resulting in inequities that are frequently observed include:

- An *overall shortage of health workers* that amounts in rural areas to seven million additional doctors, nurses and midwives out of the global shortfall of 10.3 million needed to provide universal quality services (ILO, 2014a). The demand for health workers largely outstrips the supply. Some choose to work in urban areas given the lack of decent working conditions and incentives for qualified health professionals to live and work in rural areas. Moreover, the lack of opportunities for career advancement or promotion locally or to combine public and private practice, feelings of professional and/or personal isolation, the necessity to work multiple jobs to make up for poor salaries, and not having easy access to necessary equipment are all factors that have led to greater levels of voluntary attrition (including “brain drain”) among rural health workers.

The situation is aggravated by labour market and educational institution admission policies favouring the urban elite, providing more job opportunities in urban areas and leading to most graduates being urban dwellers who are less likely to choose the challenge of living and working in rural areas. Further, the education on offer frequently does not develop the skills needed to work in rural settings. For example, nursing schools tend not to train nurses to perform tasks or procedures which have traditionally been within the remit of physicians. However, if a nurse is the only staff member in a rural community, (s)he may need to have these skills (and be authorized to use them) in the absence of a physician. Thus, there may be a need to create a new cadre of health professionals who are trained in these additional skills.

- *Poor rural health and transport infrastructure* leading to rural dwellers finding it difficult to attend health facilities, and to health professionals choosing not to live and work in rural areas. Those with partners and families may be particularly reluctant to live where they perceive the educational and employment opportunities for their families to be poor.

- *Unfair distribution of health spending* resulting in lower per capita expenditure in rural areas than in urban areas, *and financial management systems* which restrict local prioritization of such expenditure.

- Greater levels of *inefficiency* in rural areas. This is due to various causes, including a lack of management information about the numbers and locations of existing health workers which make it very difficult for planners to deploy human resources to where they are most needed. Also, poor stock systems distribution of essential drugs and supplies can result in gaps in stock supplies in remote areas. Inefficiency can also occur if qualified health professionals have to spend time on non-clinical tasks such as cleaning, administration and health education due to the absence of other staff to take on these roles. Finally, inefficiencies affecting rural health facilities more than urban facilities include a lack of referral mechanisms, for instance if specialist care is needed but difficulties are encountered in transporting patients.

- *Health policy focusing mainly on the public sector*, rather than attempting to better integrate the public and private sectors.

Against this background, policies need to particularly focus on *increasing the number of skilled health workers* and distributing them in an equitable way within countries where they are urgently needed. This requires the consideration of national and global health labour market dynamics and a particular focus on the low retention rates in rural areas. To meet (future) needs and ensure the accessibility of health-care services in rural areas it is crucial to train, employ, remunerate and motivate a rural health workforce that is sufficiently large and skilled to provide quality health care for all in need.

Related policies often rely on migration and recruiting health workers from other countries. However, this cannot be considered a satisfactory option, given the large gaps to be filled. More promising are policies focusing on developing the health workforce in each country with a view to training and employing more health workers.

In many countries, the rural health worker shortage is more severe for physicians than for other cadres such as nurses and midwives. If training more physicians to work in

rural areas is not an option or unlikely to be effective, countries could consider "task shifting", i.e. changing the scope of practice of other health worker cadres in rural areas. For example, nurses or midwives could be authorized to prescribe certain types of medication and conduct certain types of medical procedure which are normally carried out by physicians. This requires training, as discussed above.

Health workers in rural areas should be provided with job opportunities and decent working conditions, including adequate wages and incentives to work in these areas. Poor working conditions lead to difficulties in attracting and retaining high-quality workers and therefore to poor availability of health care. Poor working environments can also lead to limitations on the quality of care that health workers are able to provide, even if they have the necessary knowledge and skills – for example, if the water or power supply is unreliable.

Being able to work effectively and securely is an important motivator for health workers and increases retention (Henderson and Tulloch, 2008). Although working conditions are typically more disadvantaged in rural areas, this can be addressed by conducting facility surveys and prioritizing investment in infrastructure, equipment and supplies to those levels and areas which fall most short of the norms.

Given the high proportion of women in the health workforce, gender-sensitive interventions are particularly relevant in rural areas. These may include specific working time arrangements such as part-time work and special leave in case of family emergencies. The ILO Nursing Personnel Convention, 1977 (No. 149) and its related Recommendation (No. 157) set out how countries should address issues such as:

- nurses' remuneration, working conditions, career prospects, education and training;
- occupational safety and health regulations;
- the involvement of nursing personnel in the planning of health services.

The development of the rural health workforce and its equal distribution across rural areas should go hand in hand with improvements in *rural infrastructure.* This particularly concerns geographical access to health facilities in rural areas, which may be difficult due to the absence of roads or transportation. It should be recognized that ensuring a sufficient number of well-equipped health facilities, transport infrastructure and appropriate accommodation for health workers is a crucial ingredient for access to health care in rural areas.

Addressing inequalities of the rural compared to the urban population particularly requires a fair *distribution of funds*, particularly allocating resources according to needs. This might include recognizing that it can be more costly to deliver services in remote and rural areas despite lower population density.

Meeting rural health needs is not just about volume and allocation of funds but also relates to the *efficiency* of public financial management, e.g. the ability to deliver resources reliably, regularly and with sufficient flexibility for local facilities to be able to spend on their priorities. Improving public financial systems can be especially important for primary and rural facilities, which have less ability to generate funds from other sources. Kenya, for example, has experimented with direct facility financing to ensure that funds reach frontline providers, and studies suggest that relatively small increases in funding may significantly affect the performance of a health facility when the funds are managed at the periphery (Opwora et al., 2010).

Increasing efficiency in rural settings also includes the use of IT for health protection and health services to enhance the potential of access to health care. This may be achieved

through ID-cards for registration in insurance schemes, remote consultation, diagnostic services stock management and information systems for administrators.

Investment and other policies in health systems often focus on the public sector without *coordinating with the private sector* that provides a large and growing proportion of health care, including in rural areas. However, in countries with a weak public sector health system and/or a relatively strong private health sector, policies which aim to improve health outcomes are unlikely to achieve widespread, sustainable success if they focus solely on the public sector. Thus, when aiming to address rural inequities it is of utmost importance to take a more integrated approach, particularly to address imbalances of both sectors. For example, South Africa (like many other countries) has a large imbalance between the public and private health-care sectors, with the majority of total health expenditure going to the private sector even though only a minority of the population (mainly relatively wealthy urban dwellers) can access private sector care (Van Rensburg, 2014).The rest of the population (including most rural dwellers) experience much lower levels of availability.

Further, policies that include both the public and private sectors can also help to tackle problems that arise due to the "over-commercialization" that has been observed in many low- and middle-income countries where under-resourcing of the public health system has led to the growth of a "fee-for-service" health-care market which has little or no regulation or consumer protection, and under which it is common for those employed by the public sector to have a private practice and/or to charge services users with "under-the-counter" payments (WHO, 2008). Such a system has implications for both the availability and quality of health care, and has been found to erode public trust in health-care providers. Regulation of the private sector is much more achievable if that sector is viewed and treated as an integral part of the country's health system rather than as something entirely separate.

4.2.5. Guaranteeing affordability of care and financial protection

Deficits in affordability of care and financial protection are often due to gaps in legal coverage, including eligibility issues and constraints on benefit packages or packages that involve high co-payments. These factors result in potentially impoverishing OOP and their related access barriers to health care. Addressing these issues through adequate policies requires:

- Developing inclusive legislation that *closes gaps due to no or fragmented coverage*. Fully implementing such legislation is likely to significantly reduce geographical inequities in OOP. This might include rethinking health financing mechanisms, e.g. the provision of subsidies to the rural population if gaps in coverage occur due to employment-based insurance schemes.

  In the past, community-based health insurance (CBHI) and micro-health insurance have also been promoted as mechanisms for enrolling the informal workforce, particularly in rural areas. However, while such schemes have potential for local-level improvements and spreading costs over time, they tend to suffer from adverse selection as membership is voluntary, which leads to financial risks. In addition, reaching the poorest and scaling up have proved challenging.

- Addressing constraints on benefit packages or involvement of *high OOP* in benefit take-up through legislation, and ensuring that such legislation is accordingly implemented, for example through minimizing OOP and developing benefit packages meeting at least essential needs.

Additionally, there should be *protection against loss of earnings* due to ill-health, so that people are able to take time off work when they are unwell. Research has found that the provision of paid sick leave is self-financing in the longer term, because it reduces the spread of communicable diseases and maximizes the productivity of those who are at work (Scheil-Adlung et al., 2010).

Further reasons for lack of affordability and financial protection often include the *patterns of resource distribution* within health systems, which commonly favour higher-level facilities over primary ones, and urban areas over rural. If, for example, supplies do not reach rural facilities, then households may be forced to purchase medicines in the open market, generating high OOP. Similarly, access costs are often higher where the network of facilities is spread more thinly, as is commonly the case in rural areas. In addition to ensuring that rural areas are not disadvantaged in terms of the financing of health-care systems, *needs-based resource allocation* can ensure that funds do not flow according to staffing and infrastructure only – which as stated above tends to benefit urban areas. Both funding and other resources such as buildings, beds and staff should reflect the population and disease burden of different areas.

Also, *strategic purchasing* can ensure that the resources are used to provide essential services which reflect local needs and are also cost-effective.

In addition, the *design of schemes* may need to be adapted to meet different conditions in rural areas. For the safe motherhood voucher scheme in Kenya, for example, a range of marketing strategies had to be developed – what worked in rural areas was different from what worked in urban areas (Bellows et al., 2011).

Other mechanisms with potential to provide financial protection in rural areas include *demand-side financing* where resources are transferred to households, sometimes on condition that they utilize specific services (ILO, 2014a). These can be focused on rural areas, like the cash transfer scheme in Bolivia which is available to all households in 70 rural districts with a pregnant woman or young child, conditional on their use of preventive services (Witter, 2012). Some conditional cash transfer schemes are now on a large scale, both in terms of households covered and the size of resources transferred. The PROGRESA scheme in Mexico, for example, covers 40 per cent of rural households and is estimated to provide an average of 20 per cent of household consumption in recipient households (Gwatkin et al., 2004; ILO, 2014a).

4.2.6. Addressing the social determinants of inequities: Social protection policies

The above-mentioned policies focus primarily on tools available within the health sector. They should be complemented by socio-economic and labour market policies that aim to address inequities in a *broader framework to coordinate health, social and developmental policies* with a view to alleviating poverty and achieving universal social protection, including health protection.

International evidence on *social protection* cash benefits and transfers such as social assistance, old-age pensions, child benefits and unemployment benefits has proven their impact not only on short-term poverty, but also on human capital accumulation in the medium term (ILO, 2014a). They can also lower the need for the sale of assets and other

negative coping strategies when accessing health care, which have important long-term consequences for beneficiary households (DFID, 2011).

Addressing income inequalities in rural areas reduces financial barriers to accessing health care by increasing the ability of households to afford health-care services. *Rural development programmes* and any intervention that increases household and community livelihood assets (financial, natural, social, and so on) and endowments can both improve purchasing power. Development programmes can include investment in rural education systems to develop the human capital, as well as to improve the transport infrastructure which not only supports local livelihoods and markets but also reduces access costs for health. Among the strategies for rural development are the following (ILO, 2011b):

- Establish human resource-based rural development at the core of national and international development strategies. Economic growth and development architecture should adopt rural development as a core pillar.

- Promote human-resource-based rural development through strengthening: (i) the "voice" of rural stakeholders so that they can enter into dialogue with key decision-makers at local and national levels; and (ii) the capacity of rural stakeholders to engage in high-value-added, high-return activities.

- Achieve a balance between farming and non-farming activities through a combination of support for agricultural productivity and assistance for diversification into higher-value manufacturing and service activities such as tourism and water management.

- Move from short-term, isolated interventions to longer-term programmes with strong policy connections to ensure sustainability and integration of programmes into mainstream national policies.

- Focus on women and youth as the main drivers of rural development, in contexts where their potential remains under-appreciated, under-developed and under-used.

- Expand and promote partnerships with other agencies, NGOs, donors, think tanks and media; the wide range of stakeholders reflects the size and multi-faceted nature of rural development gaps.

Finally, implementing *labour market policies* to support the development of rural employment opportunities is a key tool in reducing rural poverty. Creating decent jobs in rural areas can contribute to poverty reduction, social inclusion and sustainable socio-economic development. This particularly requires the transformation of informal into formal labour markets, and investments in rural areas.

4.3 The implementation process

The number of policies needed to achieve equality in access to health care for rural populations outlined above, coupled with the complexity of the policy-making, presents an important challenge. Thus, it is important to take a structured, transparent and evidence-based approach, but this in itself can be a challenge due to a lack of reliable evidence on which to base decisions (Youngkong et al., 2009).

However, making policy decisions on an ad hoc basis is likely to maintain or exacerbate existing inequities and should be avoided: a lack of structured policy processes, for example those concerning priority-setting and the involvement of different ministries as well as representatives of employers, employees, NGOs and others is judged to be among the reasons why there has been only limited progress towards the Millennium Development Goals (Mirelman et al., 2012).

A structured policy implementation process includes some key steps, starting from identifying the issues and defining objectives, to developing and coordinating policy options within and across sectors with a view to policy coherence, holding social and national dialogue, and strengthening capacity for implementation as well as monitoring. Identifying the issues and setting the objectives to address them can be based on a matrix that lists the issues observed in a country and the various dimensions of coverage and access for rural populations. An example based on the issues discussed above is provided in table 3.

Table 3. Identifying core issues of rural/urban health access deficits

Issue	Components of effective access affected by the issue				
	Rights to social security and health	Availability of health care	Quality of health care	Financial protection and affordability	Monitoring health system outcomes
Issues within the health sector					
Fragmented legislation implicitly or explicitly excluding rural populations	✓			✓	
Lack of or poor implementation of legislation for guaranteeing access to essential health care	✓	✓		✓	
High OOP for rural populations				✓	
Overall shortage of human resources for health		✓	✓		
Lack of decent working conditions for rural health workers		✓	✓		
Poor rural health infrastructure		✓	✓		
Health system inefficiency including lack of evidence-based decision-making		✓	✓	✓	
Maldistribution of health spending/poor financing mechanisms	✓	✓	✓	✓	
Lack of social/national dialogue	✓	✓	✓	✓	✓
Lack of accountability	✓	✓	✓	✓	✓
Issues beyond the health sector impacting on effective access					
Rural poverty	✓			✓	
Rural unemployment/lack of decent work in rural areas	✓	✓		✓	
Large informal economy in rural areas	✓			✓	
Gaps in social protection coverage and income support		✓		✓	
Neglected rural development policies	✓	✓	✓	✓	
Cultural acceptance of inequality/low awareness of rights and entitlements	✓				
Poor rural transport infrastructure		✓	✓		

Based on the results of such an analysis, policy options within and beyond the health sector addressing the issues can be developed and prioritized. Clearly stated objectives, principles and policies should be defined, such as those outlined in ILO Recommendation No. 202. These may include developing legislation, ensuring effective implementation and identifying related fiscal space for inclusive coverage, adequate labour market policies and poverty alleviation in a framework of coherent socio-economic policies. An example focusing on the policy options discussed above is provided in table 4.

Table 4. Selected policy options for reducing urban/rural health access deficits

Issue	Policy options
Lack of or poor design and implementation of legislation guaranteeing access to health care; cultural acceptance of inequality /low awareness of rights and entitlements; maldistribution of health spending	Establish basic guarantees in legislation and boost rural entitlements, subsidized health insurance or exemption from payments for rural populations
	Review existing revenue sources and if appropriate broaden revenue base and/or identify alternative health financing mechanisms
	Coordinate health financing mix to avoid fragmentation and maximize coverage
	Improve enforcement of tax and contribution obligations
	Develop health workforce and infrastructure
	Introduce decent working conditions for rural health workers including adequate wages and incentives
	Introduce or strengthen demand-side financing, e.g. conditional or unconditional cash transfers, voucher schemes
	Create specified budget lines for essential health care
	Broaden access to judicial system
	Review budget allocation mechanisms to ensure allocation is based on need
	Introduce paid sick leave
	Include private sector as well as public sector as integral to health policy, planning and regulation
Inefficiency of health system	Establish or strengthen systems for monitoring quality of care at all levels, but especially primary care
	Invest in e-health/m-health technology for communications between rural health workers and other parts of the health-care system
	Reduce need for health care, e.g. by increasing access to family planning, health education, vaccination, preventive care
	Ensure public financial management systems are able to deliver resources reliably, regularly and with flexibility to allow local priority-setting
	Establish or strengthen effective referral mechanisms
	Introduce strategic purchasing mechanisms for procurement
Lack of evidence-based decision-making and accountability	Ensure political or financial decentralization of the health system
	Establish or strengthen health management information systems and build capacity to analyse and use the management information
	Establish or strengthen accountability mechanisms at all levels of the health system
	Establish or strengthen a national human resources for health observatory
	Strengthen the voice and the capacity of rural stakeholders such as workers, employers, women, civil society, etc.
Lack of social protection; rural poverty; unemployment; lack of decent work; large informal economy	Develop/raise national social protection floors focusing on alleviating poverty and increasing household livelihood assets in rural areas
	Include rural development as core element of national development strategy
	Develop enabling rural labour market policies, including incentivizing employers to offer formal rather than informal employment
	Invest in rural transport infrastructure, e.g. road building and maintenance
	Implement policies stimulating investments in improving agricultural productivity and assistance for diversification into manufacturing and service industries in rural areas instead of/in addition to agriculture

Following the identification of issues and the development of policy options it is important to set priorities involving ***national and social dialogue***. All interested parties must be involved in the design, implementation and periodic review to ensure that policies achieve their objectives; in the context of urban/rural equity, the local government and rural health

service providers, managers and users as well as workers and employers should be involved. In the social and national dialogue process the cross-cutting nature of the issues and policies should be reflected and policy coherence prevail.

In countries with ***decentralized health protection schemes***, local government have some or all of the responsibility for health services in terms of service provision and financing. This can effectively make local government into an intermediary between service users and central government – as for example if the central government allocates a budget for health to an area, and the local government decides how to spend it. This can result in problems of accountability, since the local authority is accountable to both the central government (to account for how it spends central government funding) and the local population (to account for how well it delivers health services). Such problems are not insurmountable, but do require the different actors to engage directly with each other. Two well-known examples follow:

- In the Health Agent Programme in the state of Ceará in Brazil, the state health department set and monitored recruitment procedures for community health workers, but local authorities actually recruited the workers, which put them in the position of being accountable to both the state government and local citizens. The success of the scheme was partly attributed to the fact that the state authorities engaged directly with communities and explained what they could expect of their local authority, which empowered civil society to hold the local authorities accountable (Brinkerhoff, 2003).
- India's National Rural Health Mission (NRHM) was launched in 2005 with the aim of improving access to health care for the rural population (Government of India, 2014). One of its policy initiatives was to tackle a lack of accountability using community-based monitoring (CBM). In group discussions, members of rural communities − with a particular emphasis on women and marginalized groups − were asked to rate various elements of primary care and outreach services, with the results summarized in the form of scorecards. The scores were presented to public meetings and, where appropriate, issues were referred up to state-level officials. As one element of a larger accountability effort, CBM appeared to have been successful in making improvements to these primary care services (Kakade, 2012).

Efficient and effective implementation frequently requires ***capacity building*** at one or more levels of the health system. Further**,** ***regular monitoring*** of all aspects and dimensions of coverage and access to health care is a key policy tool for assessing inequities between rural and urban populations if results are to be taken into account, for example, in policy reforms. The accurate monitoring of progress towards closing urban/rural gaps will require more and better quality data than currently exist. This study has revealed that relatively few countries collect the data that would allow sub-national disaggregation, for example of the maternal mortality ratio, and even those that do collect the requisite data tend not to produce sub-national estimates. If policy is to be evidence-based and health system outcomes are to be reliably monitored, this information gap must be addressed.

Within health systems we find that in most low- and middle-income countries, health management information systems and vital registration systems are either non-existent or inadequate (HMN and WHO, 2011) due to insufficient financial and/or human resources to maintain them and/or insufficient IT infrastructure and/or poor understanding of the potential benefits. However, a lack of high-quality management information leads to decisions that are not evidence-based. In some countries, even if management data are available, they are not always used for the purposes of monitoring and informing decision-making, whether because decision-makers are not aware of the available data, or have little faith in their reliability, or are not held accountable for their decisions.

5. Conclusions

This report has provided for the first time comprehensive global evidence on the extent of inequities in rural health coverage and access compared to the coverage of urban populations. It indicates that in most countries (including high-, middle- and low-income countries):

- In many parts of the world, the global rural population is excluded from rights to health protection to a greater degree than the urban population.
- Globally and regionally, rural populations experience important inequities in access to needed health care compared to urban populations.
- In some countries rural populations are faced with extreme social exclusion from access to health care as compared to urban populations, due to the absence of financial protection and professional health staff needed to deliver quality services.
- The rural/urban inequities observed result in higher rural mortality, as indicated by higher maternal mortality in rural than in urban areas.

Given the evidence provided, this report leaves no room for doubt about the urban/rural gap in access to health care; the question is more about the size of the deficits than about whether or not they exist. Even if there is uncertainty about the exact scale of the deficits, given the scarcity of data, the evidence provided in the report suggests that building universal health coverage and providing equitable effective access for the rural population should be among the core obligations and highest priorities of governments throughout the world.

A human rights and national approach based on the concept of national social protection floors is an appropriate social protection framework for countries to use when considering ways of narrowing and eliminating the urban/rural gap. Investments in social and health protection to develop universal schemes and systems based on sustainable financing and good governance should be adequate to address inequities in access. Related reforms should not create additional inequities, for example related to older persons, women or informal workers, but should close access gaps and deficits.

Guiding principles for establishing health protection should include equity, particularly achieving equitable access to quality health care characterized by availability, affordability and financial protection and thus particularly accessible to the poor, informal workers and other vulnerable groups living in rural areas. Narrowly targeted approaches are not adequate to protect the rural population sufficiently, given the dynamic processes and constant changes observed as regards urbanization and impoverishment.

The availability of at least essential health care is dependent on having an efficient and effective health protection scheme or national health service that provides access to sufficient health facilities, health workers, drugs and supplies for the rural population. Quality services and other benefits should be adequate (or at least meeting essential needs) so as to avoid impoverishment.

An acute shortage of health workers has been identified as a key issue preventing many countries from achieving equitable access to health care for rural populations, and the data provided in this report confirm that, in many countries, there is more of a shortage in rural areas than in urban areas. Improving equity in access for rural populations involves providing decent jobs and working conditions for health workers in these areas and reviewing the distribution of funds to rural areas.

Policy options to establish and increase equitable health protection are country-specific. Generally, they include providing universal health services through tax-funded national health services or contribution-based national or social health insurances. When setting up such schemes and services, effective consultation with and involvement of key stakeholders is important. These include government ministries, trade unions, employers, health-care providers, social insurance schemes, civil society and health service users. Dialogue with all these groups will help to ensure that those responsible for the successful implementation of the policy are supportive of it and aware of what they need to do in order to achieve it.

Addressing rural/urban inequities requires embedding health protection reforms in broader social protection and labour market reforms to ensure sustainability of progress in eliminating inequities in access to health care. Policies that focus on a single issue or that apply to a single sector are likely to have little, if any, effect on equality in health coverage and access. It is important to address the root causes of inequitable access, which cut across a number of different sectors and levels within sectors. In making labour market policy, among the priorities should be increased inclusiveness and transforming informal into formal labour markets.

Statistical annex: Deficits in universal health protection by rural/urban areas: Global, regional and country estimates, latest available year

Region or country	Legal health coverage deficit, % of population without legal coverage[1, 3, 4, 9, 12, 13]				Out-of-pocket expenditure, % of total health expenditure[1, 3, 5, 6, 12, 15]				Financial deficit, % of population not covered due to financial resource deficit (threshold: US$239)[1, 2, 3, 7, 8, 11, 12, 14]				Staff access deficit, % of population not covered due to health professional staff deficit (threshold: 41.1)[1, 2, 3, 8, 10, 12, 14]				Maternal mortality ratio, deaths per 10,000 live births[1, 3, 4, 8, 12, 14]			
	Total	Urban	Rural	Year*	Total	Urban	Rural	Year*	Total	Urban	Rural	Year*	Total	Urban	Rural	Year*	Total	Urban	Rural	Year*
Africa	74.6	60.8	83.5	...	46.0	53.0	42.2	...	80.3	69.6	86.8	...	66.9	50.0	77.1	...	47.7	28.9	54.9	...
Latin America and the Caribbean	14.5	9.8	32.6	...	34.4	39.6	9.5	...	7.4	4.4	19.5	...	14.2	11.3	23.9	...	11.2	8.0	16.0	...
North America	14.4	13.5	18.4	...	12.0	12.0	12.0	...	0.0	0.0	0.0	...	0.0	0.0	0.0	...	2.0	2.0	2.0	...
Western Europe	0.4	0.4	0.4	...	13.7	13.1	15.4	...	0.0	0.0	0.0	...	0.0	0.0	0.0	...	0.7	0.7	0.7	...
Central and Eastern Europe	5.6	1.7	13.6	...	32.4	40.6	15.5	...	7.3	6.8	8.5	...	0.0	0.0	0.0	...	2.3	2.3	2.3	...
Asia and the Pacific	42.2	24.5	55.8	...	46.4	46.9	45.9	...	57.3	46.7	65.6	...	44.2	33.3	52.5	...	14.6	8.4	18.0	...
Middle East	26.2	18.8	41.2	...	57.8	56.7	62.1	...	36.1	22.9	56.7	...	38.8	28.0	56.2	...	6.3	3.9	10.1	...
World	38.1	21.6	55.8	...	41.2	40.6	41.9	...	48.0	33.2	63.2	...	37.7	24.2	51.6	...	21.9	10.8	28.9	...
Africa																				
Algeria	14.8	8.9	26.5	2005	19.7	…	…	…	23.1	…	…	…	32.5	…	…	…	9.7	…	…	…
Angola	100.0	100.0	100.0	2005	28.1	…	…	…	43.4	…	…	…	62.0	…	…	…	45.0	…	…	…
Benin	91.0	87.2	94.0	2009	44.5	48.5	41.3	2003	91.2	90.4	91.7	2006	81.4	79.8	82.5	2006	35.0	32.2	37.2	2006
Botswana	…	…	…	…	4.4	…	…	…	0.0	0.0	0.0	2010	32.0	…	…	…	16.0	…	…	…
Burkina Faso	99.0	99.0	99.0	2010	32.9	36.2	31.8	2009	90.1	86.1	90.9	2010	86.2	81.3	87.9	2010	30.0	21.4	32.6	2010
Burundi	71.6	67.8	72.0	2009	26.3	7.9	28.4	2006	94.5	92.0	94.7	2010	96.2	94.5	96.4	2010	80.0	54.9	83.5	2010
Cabo Verde	35.0	27.9	46.5	2010	21.8	31.0	6.8	2007	49.3	…	…	…	79.1	…	…	…	7.9	…	…	…
Cameroon	98.0	…	…	2009	66.1	91.6	38.9	2007	90.0	86.4	92.7	2011	89.9	86.8	93.2	2011	69.0	50.6	94.0	2011
Central African Republic	94.0	94.6	93.6	2010	45.1	…	…	…	95.7	91.1	95.9	2010	93.0	88.1	96.1	2010	89.0	42.9	93.4	2010
Chad	…	…	…	…	72.7	45.2	80.4	2003	95.7	88.0	97.5	2004	95.6	87.9	97.7	2004	110.0	39.3	188.2	2004
Comoros	95.0	94.4	95.2	2010	58.8	…	…	…	89.7	88.4	90.2	2012	76.2	73.3	77.3	2012	28.0	25.0	29.3	2012
Congo	…	…	…	…	37.2	49.4	16.4	2005	75.0	73.0	78.5	2012	93.6	76.4	81.2	2012	56.0	51.8	65.0	2012
Congo, Democratic Republic (DRC)	90.0	82.1	94.0	2010	33.4	37.0	33.2	2004	95.3	94.5	96.1	2010	87.2	84.4	88.6	2010	54.0	46.2	64.4	2010
Côte d'Ivoire	98.8	98.6	99.0	2008	56.5	67.4	45.3	2008	88.1	82.3	90.7	2011	85.3	80.1	90.6	2011	40.0	27.0	51.1	2011

Region or country	Legal health coverage deficit, % of population without legal coverage [1, 3, 4, 9, 12, 13]				Out-of-pocket expenditure, % of total health expenditure [1, 3, 5, 6, 12, 15]				Financial deficit, % of population not covered due to financial resource deficit (threshold: US$239) [1, 2, 3, 7, 8, 11, 12, 14]				Staff access deficit, % of population not covered due to health professional staff deficit (threshold: 41.1) [1, 2, 3, 8, 10, 12, 14]				Maternal mortality ratio, deaths per 10,000 live births [1, 3, 4, 8, 12, 14]			
	Total	Urban	Rural	Year*	Total	Urban	Rural	Year*	Total	Urban	Rural	Year*	Total	Urban	Rural	Year*	Total	Urban	Rural	Year*
Djibouti	70.0	68.4	75.3	2006	41.7	53.4	2.6	1996	69.9	63.6	84.5	2006	75.9	72.0	88.9	2006	20.0	16.6	38.9	2006
Egypt	48.9	20.8	70.4	2008	59.2	74.7	47.3	2009	76.1	72.7	78.1	2008	0.0	0.0	0.0	2010	6.6	5.8	7.2	2008
Equatorial Guinea	…	…	…	…	30.5	…	…	…	0.0	0.0	0.0	2010	86.0	…	…	…	24.0	…	…	…
Eritrea	95.0	85.7	97.5	2011	54.8	…	…	…	97.2	…	…	…	89.2	…	…	…	24.0	…	…	…
Ethiopia	95.0	94.3	95.1	2011	36.1	18.2	39.7	2004	95.4	84.1	98.9	2011	93.7	77.1	97.0	2011	35.0	6.8	72.9	2011
Gabon	42.4	40.6	53.6	2011	44.6	…	…	…	19.9	16.0	36.9	2012	0.0	0.0	0.0	2010	23.0	21.9	29.2	2012
Gambia	0.1	0.1	0.1	2011	20.4	28.8	9.4	2003	91.1	88.1	93.6	2013	78.5	72.7	86.3	2013	36.0	26.8	49.7	2013
Ghana	26.1	4.5	48.8	2010	27.7	35.3	19.8	2006	77.7	70.7	82.1	2011	74.1	67.5	81.0	2011	35.0	26.7	43.6	2011
Guinea	99.8	99.6	99.9	2010	62.6	71.4	57.9	2007	95.9	91.3	97.2	2005	97.2	94.5	98.5	2005	61.0	28.7	90.5	2005
Guinea-Bissau	98.4	…	…	2011	39.6	…	…	…	90.9	85.4	94.3	2010	83.0	73.5	90.3	2010	79.0	49.2	126.2	2010
Kenya	60.6	33.1	69.1	2009	45.8	51.6	44.0	2005	91.9	86.2	93.2	2009	77.2	61.9	81.9	2009	36.0	21.1	42.8	2009
Lesotho	82.4	58.8	91.1	2009	17.6	16.8	17.9	2002	51.5	30.4	57.8	2009	85.6	79.6	87.8	2009	62.0	43.2	71.3	2009
Liberia	…	…	…	…	24.6	29.1	20.4	2007	81.1	67.9	86.9	2007	94.0	90.8	96.9	2007	77.0	45.3	110.7	2007
Libyan Arab Jamahiriya	0.0	0.0	0.0	2004	30.0	…	…	…	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	5.8	…	…	…
Madagascar	96.3	93.8	97.5	2009	43.3	31.7	48.7	2005	94.4	89.6	95.0	2009	90.4	84.0	93.4	2009	24.0	12.9	26.8	2009
Malawi	…	…	…	…	14.0	4.5	15.7	2011	88.9	86.9	89.2	2010	92.2	90.8	92.5	2010	46.0	39.1	47.5	2010
Mali	98.1	97.6	98.4	2008	58.9	62.6	56.9	2006	91.5	86.5	92.6	2013	86.9	80.7	90.2	2013	54.0	34.0	62.0	2013
Mauritania	94.0	89.4	97.2	2009	33.2	30.8	34.9	2004	84.9	76.2	89.7	2007	82.4	72.6	88.4	2007	51.0	32.3	74.5	2007
Mauritius	0.0	0.0	0.0	2010	45.6	78.6	21.8	2007	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	6.0	…	…	…
Morocco	57.7	42.3	76.5	2007	57.2	81.5	25.4	2000	67.3	61.6	82.2	2004	62.3	52.3	74.6	2004	10.0	8.5	18.4	2004
Mozambique	96.0	93.5	97.1	2011	5.7	7.9	5.6	2008	86.6	80.2	89.1	2011	92.6	89.2	94.1	2011	49.0	33.1	60.1	2011
Namibia	72.0	49.2	85.9	2007	7.7	3.5	10.2	2009	0.0	0.0	0.0	2010	29.7	18.2	35.9	2007	20.0	17.3	22.5	2007
Niger	96.9	95.7	97.1	2003	60.5	40.6	64.7	2007	94.7	85.0	96.2	2012	96.6	90.7	97.9	2012	59.0	20.8	81.5	2012
Nigeria	97.8	97.0	98.5	2008	70.5	69.9	71.2	2009	86.8	77.8	90.6	2008	59.6	36.7	81.6	2008	63.0	37.5	88.5	2008
Rwanda	9.0	1.0	11.1	2010	21.2	22.4	20.9	2005	79.4	75.4	79.9	2010	84.0	81.1	84.7	2010	34.0	28.5	34.9	2010
Sao Tome and Principe	97.9	97.3	98.8	2009	56.2	77.4	21.4	2000	78.8	76.7	80.2	2009	49.7	46.4	55.2	2009	7.0	6.4	7.5	2009
Senegal	79.9	69.1	87.4	2007	35.4	50.8	24.2	2005	81.2	73.9	85.8	2010	89.4	85.5	92.2	2010	37.0	26.6	49.1	2010
Seychelles	10.0	1.0	21.4	2011	4.0	…	…	…	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	…	…	…	…
Sierra Leone	100.0	100.0	100.0	2008	77.4	99.0	59.8	2003	92.8	91.5	93.0	2010	95.3	94.7	95.7	2010	89.0	75.4	91.9	2010
Somalia	80.0	…	…	2006	…	…	…	…	…	…	…	…	97.0	94.0	98.6	2006	100.0	50.8	227.6	2006
South Africa	0.0	0.0	0.0	2010	7.4	10.9	1.9	2011	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	30.0	…	…	…
South Sudan	…	…	…	…	65.2	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…
Sudan	70.3	53.6	78.6	2009	…	…	…	…	86.6	…	…	…	71.7	…	…	…	73.0	…	…	…
Swaziland	93.8	82.5	97.0	2006	14.1	11.5	14.8	2010	3.7	0.0	17.4	2010	0.0	0.0	0.0	2010	32.0	29.8	37.3	2010
Tanzania, United Republic of	87.0	79.1	89.8	2010	31.9	24.4	34.6	2007	89.3	81.8	90.7	2010	95.0	91.9	96.1	2010	46.0	27.1	53.2	2010

Region or country	Legal health coverage deficit, % of population without legal coverage [1, 3, 4, 9, 12, 13]				Out-of-pocket expenditure, % of total health expenditure [1, 3, 5, 6, 12, 15]				Financial deficit, % of population not covered due to financial resource deficit (threshold: US$239) [1, 2, 3, 7, 8, 11, 12, 14]				Staff access deficit, % of population not covered due to health professional staff deficit (threshold: 41.1) [1, 2, 3, 8, 10, 12, 14]				Maternal mortality ratio, deaths per 10,000 live births [1, 3, 4, 8, 12, 14]			
	Total	Urban	Rural	Year*	Total	Urban	Rural	Year*	Total	Urban	Rural	Year*	Total	Urban	Rural	Year*	Total	Urban	Rural	Year*
Togo	96.0	93.9	97.3	2010	45.7	58.1	45.0	2006	88.8	76.8	89.0	2010	92.1	86.5	95.4	2010	30.0	14.5	30.5	2010
Tunisia	20.0	2.6	52.5	2005	35.0	…	…	…	32.5	…	…	…	0.0	0.0	0.0	2010	5.6	…	…	…
Uganda	98.0	95.1	98.5	2008	49.9	18.2	55.5	2009	90.7	85.7	91.5	2011	72.6	58.0	75.2	2011	31.0	20.2	34.1	2011
Zambia	91.6	88.2	93.7	2008	26.3	43.0	15.8	2010	73.3	52.3	82.0	2007	81.4	68.0	89.1	2007	44.0	24.7	65.4	2007
Zimbabwe	99.0	99.0	99.0	2009	…	…	…	…	…	…	…	…	69.0	60.7	74.1	2010	57.0	43.9	65.2	2010
Latin America and the Caribbean																				
Antigua and Barbuda	48.9	43.8	71.3	2007	21.0	…	…	…	0.0	0.0	0.0	2010	33.1	…	…	…	…	…	…	…
Argentina	3.2	1.0	5.9	2008	21.6	…	…	…	0.0	0.0	0.0	2010	16.3	…	…	…	7.7	…	…	…
Aruba	0.8	0.8	0.8	2003	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…
Bahamas	0.0	0.0	0.0	1995	28.8	…	…	…	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	4.7	…	…	…
Barbados	0.0	0.0	0.0	1995	28.2	…	…	…	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	5.1	…	…	…
Belize	75.0	61.8	85.7	2009	23.6	…	…	…	16.0	13.1	16.3	2011	39.1	37.8	40.2	2011	5.3	5.1	5.3	2011
Bolivia, Plurinational State of	57.3	46.7	78.3	2009	26.3	35.2	8.8	2007	63.3	54.4	73.7	2008	34.1	20.8	60.4	2008	19.0	15.3	26.5	2008
Brazil	0.0	0.0	0.0	2009	30.6	35.6	3.7	2009	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	5.6	5.6	5.8	2010
Chile	6.9	1.0	17.3	2011	33.0	33.0	33.0	2010	0.0	0.0	0.0	2010	72.3	…	…	…	2.5	2.5	2.5	2010
Colombia	12.3	9.3	21.3	2010	17.8	22.7	3.0	2010	0.0	0.0	0.0	2010	47.9	46.2	53.0	2010	9.2	8.9	10.2	2010
Costa Rica	0.0	0.0	0.0	2009	24.0	…	…	…	0.0	0.0	0.0	2010	55.2	54.8	55.8	2011	4.0	4.0	4.1	2011
Cuba	0.0	0.0	0.0	2011	4.8	…	…	…	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	7.3	…	…	…
Dominica	86.6	83.3	93.2	2009	26.0	…	…	…	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	…	…	…	…
Dominican Republic	73.5	73.0	74.6	2007	39.0	…	…	…	25.7	25.2	26.5	2007	26.6	26.2	27.4	2007	15.0	14.9	15.2	2007
Ecuador	77.2	72.3	87.1	2009	54.5	…	…	…	29.8	…	…	…	19.3	…	…	…	11.0	…	…	…
El Salvador	78.4	73.8	86.6	2009	33.6	42.5	17.5	2010	28.9	…	…	…	44.1	…	…	…	8.1	…	…	…
Grenada	…	…	…	…	53.7	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…
Guatemala	70.0	55.2	83.3	2005	52.9	77.2	29.2	2000	58.3	32.1	74.4	1999	6.6	0.0	12.0	1999	12.0	7.4	19.6	1999
Guyana	76.2	58.0	83.4	2009	30.2	…	…	…	31.4	26.7	32.7	2009	82.9	81.8	83.3	2009	28.0	26.2	28.6	2009
Haiti	96.9	…	…	2001	23.9	…	…	…	81.2	70.1	87.6	2012	93.3	90.3	96.6	2012	35.0	22.0	53.1	2012
Honduras	88.0	82.3	93.4	2006	47.2	76.4	16.1	2004	…	…	…	…	67.9	63.9	72.2	2011	10.0	8.8	11.3	2011
Jamaica	79.9	76.0	84.2	2007	31.0	38.3	23.0	2007	…	…	…	…	64.6	63.9	65.4	2005	11.0	10.8	11.3	2005
Mexico	14.4	1.0	24.6	2010	47.1	48.2	8.1	2010	…	…	…	…	0.0	0.0	0.0	2010	5.0	4.9	5.5	2010
Nicaragua	87.8	84.8	91.6	2005	39.6	52.1	22.7	2005	…	…	…	…	67.9	65.7	70.5	2001	9.5	8.8	10.2	2001
Panama	48.2	48.0	48.7	2008	25.0	…	…	…	0.0	0.0	0.0	2010	19.4	…	…	…	9.2	…	…	…
Paraguay	76.4	71.9	83.5	2009	60.1	…	…	…	35.4	…	…	…	39.6	…	…	…	9.9	…	…	…
Peru	35.6	34.7	38.6	2010	37.1	46.6	5.7	2010	25.5	14.8	44.9	2009	47.3	42.1	64.7	2009	6.7	5.9	9.1	2009
Saint Kitts and Nevis	71.2	35.8	87.8	2008	49.9	…	…	…	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	…	…	…	…

Region or country	Legal health coverage deficit, % of population without legal coverage [1, 3, 4, 9, 12, 13]				Out-of-pocket expenditure, % of total health expenditure [1, 3, 5, 6, 12, 15]				Financial deficit, % of population not covered due to financial resource deficit (threshold: US$239) [1, 2, 3, 7, 8, 11, 12, 14]				Staff access deficit, % of population not covered due to health professional staff deficit (threshold: 41.1) [1, 2, 3, 8, 10, 12, 14]				Maternal mortality ratio, deaths per 10,000 live births [1, 3, 4, 8, 12, 14]			
	Total	Urban	Rural	Year*	Total	Urban	Rural	Year*	Total	Urban	Rural	Year*	Total	Urban	Rural	Year*	Total	Urban	Rural	Year*
Saint Lucia	64.5	17.7	78.5	2003	44.9	…	…	…	0.0	0.0	0.0	2010	47.5	…	…	…	3.5	…	…	…
Saint Vincent and the Grenadines	90.6	87.9	93.2	2008	18.0	…	…	…	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	4.8	…	…	…
Suriname	…	…	…	…	13.4	…	…	…	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	13.0	12.1	13.6	2010
Trinidad and Tobago	…	…	…	…	35.5	…	…	…	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	4.6	…	…	…
Uruguay	2.8	2.2	10.3	2010	17.9	…	…	…	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	2.9	2.9	2.9	2010
Venezuela, Bolivarian Republic of	0.0	0.0	0.0	2010	59.5	…	…	…	0.1	…	…	…	38.3	…	…	…	9.2	…	…	…
North America																				
Canada	0.0	0.0	0.0	2011	14.2	14.2	14.2	2010	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	1.2	1.2	1.2	2010
United States	16.0	15.0	20.6	2010	11.7	11.7	11.7	2010	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	2.1	2.1	2.1	2010
Asia																				
Afghanistan	…	…	…	…	74.3	35.9	86.0	2007	95.2	91.3	96.7	2010	92.3	85.7	94.3	2010	46.0	25.5	67.9	2010
Armenia	0.0	0.0	0.0	2009	55.9	70.2	30.3	2009	74.8	74.7	74.9	2010	0.0	0.0	0.0	2010	3.0	3.0	3.0	2010
Azerbaijan	97.1	96.2	98.0	2006	69.2	80.5	56.2	2008	55.3	51.3	59.3	2006	0.0	0.0	0.0	2010	4.3	3.9	4.7	2006
Bahrain	0.0	0.0	0.0	2006	17.6	…	…	…	0.0	0.0	0.0	2010	21.9	…	…	…	2.0	2.0	2.0	2010
Bangladesh	98.6	97.0	99.2	2003	61.3	30.4	73.3	2010	…	…	…	…	86.4	77.5	89.9	2011	24.0	15.0	35.0	2011
Bhutan	10.0	1.0	15.2	2009	14.6	14.1	14.8	2007	67.0	49.3	69.3	2010	72.6	61.2	78.7	2010	18.0	11.7	19.3	2010
Brunei Darussalam	0.0	0.0	0.0	2010	7.6	…	…	…	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	2.4	2.4	2.4	2010
Cambodia	73.9	65.7	75.9	2009	61.6	18.7	72.2	2008	90.8	87.7	91.4	2010	75.2	67.3	77.2	2010	25.0	18.7	26.7	2010
China	3.1	1.0	5.1	2010	35.3	55.3	15.9	…	24.1	23.9	24.2	2009	29.0	28.9	29.1	2009	3.7	3.7	3.7	2009
Georgia	75.0	64.4	86.8	2008	69.1	…	…	…	54.0	53.7	54.3	2005	0.0	0.0	0.0	2010	6.7	6.7	6.7	2005
Hong Kong (China), Special Administrative Region	0.0	0.0	…	2010	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…
India	87.5	74.9	93.1	2010	61.8	49.8	67.2	2009	90.0	89.0	94.4	2011	62.5	50.5	68.0	2011	20.0	18.1	35.5	2011
Indonesia	41.0	18.4	63.5	2010	47.2	61.2	33.3	2010	80.1	78.0	82.1	2012	61.7	57.7	65.7	2012	22.0	19.9	24.5	2012
Iran, Islamic Republic of	10.0	1.0	19.5	2005	53.6	…	…	…	39.8	…	…	…	49.1	…	…	…	2.1	2.1	2.1	2010
Iraq	…	…	…	…	26.1	32.7	13.1	2006	0.0	0.0	0.0	2010	52.8	51.2	56.0	2011	6.3	6.1	6.8	2011
Israel	0.0	0.0	0.0	2011	25.0	25.0	25.0	2010	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	0.7	0.7	0.7	2010
Occupied Palestinian Territory	83.8	…	…	2004	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…
Japan	0.0	0.0	0.0	2010	14.4	14.4	14.4	2010	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	0.5	0.5	0.5	2010
Jordan	25.0	21.7	39.4	2006	25.1	29.8	2.9	2002	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	6.3	6.3	6.3	2012
Kazakhstan	30.0	6.7	59.3	2001	40.4	56.5	21.8	2003	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	5.1	5.1	5.1	2010
Korea, Democratic People's Republic	…	…	…	…	…	…	…	…	…	…	…	…	0.0	0.0	0.0	2010	8.1	…	…	…

Region or country	Legal health coverage deficit, % of population without legal coverage [1, 3, 4, 9, 12, 13]				Out-of-pocket expenditure, % of total health expenditure [1, 3, 5, 6, 12, 15]				Financial deficit, % of population not covered due to financial resource deficit (threshold: US$239) [1, 2, 3, 7, 8, 11, 12, 14]				Staff access deficit, % of population not covered due to health professional staff deficit (threshold: 41.1) [1, 2, 3, 8, 10, 12, 14]				Maternal mortality ratio, deaths per 10,000 live births [1, 3, 4, 8, 12, 14]			
	Total	**Urban**	**Rural**	**Year***	**Total**	**Urban**	**Rural**	**Year***	**Total**	**Urban**	**Rural**	**Year***	**Total**	**Urban**	**Rural**	**Year***	**Total**	**Urban**	**Rural**	**Year***
Korea, Republic of	0.0	0.0	0.0	2010	34.2	34.2	34.2	...	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	1.6	1.6	1.6	2010
Kuwait	0.0	0.0	0.0	2006	17.5	…	…	...	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	1.4	1.4	1.4	2010
Kyrgyzstan	17.0	7.4	22.2	2001	38.7	29.4	43.7	2010	80.4	80.3	80.4	2012	0.0	0.0	0.0	2010	7.1	7.1	7.1	2012
Lao People's Democratic Republic	88.4	85.2	90.0	2009	41.8	41.4	42.0	2007	90.7	81.5	92.9	2011	76.1	55.8	86.7	2011	47.0	23.7	61.4	2011
Lebanon	51.7	51.6	52.3	2007	44.4	…	…	...	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	2.5	2.5	2.5	2010
Malaysia	0.0	0.0	0.0	2010	32.7	…	…	...	15.6	...	...	...	0.0	0.0	0.0	2010	2.9	2.9	2.9	2010
Maldives	70.0	57.9	78.1	2011	26.1	21.6	29.0	2010	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	6.0	5.7	6.1	2009
Mongolia	18.1	8.7	37.6	2009	35.2	45.4	14.0	2008	59.5	59.3	59.9	2010	0.0	0.0	0.0	2010	6.3	6.3	6.4	2010
Myanmar	…	…	…	...	76.6	…	…	...	98.2	...	...	...	67.0	...	...	...	20.0	...	...	...
Nepal	99.9	99.9	99.9	2010	48.8	14.0	55.8	2010	...	...	...	...	84.8	70.4	87.7	2011	17.0	8.4	18.9	2011
Oman	3.0	1.0	10.7	2005	10.9	…	…	...	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	3.2	...	...	...
Pakistan	73.4	56.5	82.8	2009	60.6	42.2	70.9	2010	95.4	93.7	96.1	2012	68.1	57.5	74.0	2012	26.0	19.1	30.5	2012
Philippines	18.0	1.0	35.1	2009	52.5	71.1	34.9	2006	82.2	77.8	86.3	2008	0.0	0.0	0.0	2010	9.9	7.9	12.9	2008
Qatar	0.0	0.0	0.0	2006	16.0	…	…	...	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	0.7	0.7	0.7	2010
Saudi Arabia	74.0	71.5	85.5	2010	20.0	…	…	...	0.0	0.0	0.0	2010	31.0	...	...	...	2.4	2.4	2.4	2010
Singapore	0.0	0.0	…	2010	62.6	…	…	...	0.0	0.0	...	2010	0.0	0.0	...	2010	0.3	0.3	...	2010
Sri Lanka	0.0	0.0	0.0	2010	44.8	24.5	80.8	2009	78.2	...	...	...	41.2	...	...	...	3.5	...	...	...
Syrian Arab Republic	10.0	1.0	21.6	2008	54.0	…	…	...	79.3	78.3	80.3	2006	23.6	20.1	27.7	2006	7.0	6.7	7.4	2006
Tajikistan	99.7	99.7	99.7	2010	66.5	31.3	79.2	2009	91.0	90.4	91.2	2012	0.0	0.0	0.0	2010	6.5	6.1	6.6	2012
Thailand	2.0	1.0	3.0	2007	14.2	15.3	13.6	2009	27.1	25.5	27.7	2005	57.9	57.0	58.3	2005	4.8	4.7	4.8	2005
Timor-Leste	…	…	…	...	3.7	7.0	2.3	2010	81.4	62.5	86.9	2010	59.1	18.4	74.9	2010	30.0	14.9	42.5	2010
Turkey	14.0	10.8	21.7	2011	16.1	18.3	10.7	2009	0.0	0.0	0.0	2010	3.4	0.0	21.3	2003.0	2.0	2.0	2.0	2010
Turkmenistan	17.7	1.0	34.3	2011	43.7	…	…	...	67.2	...	...	...	0.0	0.0	0.0	2010	6.7	...	...	...
United Arab Emirates	0.0	0.0	0.0	2010	19.5	…	…	...	0.0	0.0	0.0	2010	24.0	...	...	...	1.2	1.2	1.2	2010
Uzbekistan	0.0	0.0	0.0	2010	45.2	…	…	...	79.2	79.2	79.2	2006	0.0	0.0	0.0	2010	2.8	2.8	2.8	2010
Viet Nam	39.0	1.0	56.0	2010	44.8	35.0	49.2	2008	82.4	81.3	82.9	2010	47.7	44.5	49.1	2010	5.9	5.6	6.1	2010
Yemen	58.0	26.8	70.7	2003	73.8	68.0	99.0	2005	91.9	86.0	94.0	2006	78.2	62.7	84.5	2006	20.0	11.6	27.1	2006
Europe																				
Albania	76.4	70.6	82.8	2008	54.4	59.4	49.0	2008	52.1	51.8	52.2	2009	0.0	0.0	0.0	2010	2.7	2.7	2.7	2010
Andorra	…	…	…	...	19.6	…	…	...	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	...	...	...	...
Austria	0.7	0.7	0.7	2010	15.2	15.2	15.2	2010	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	0.4	0.4	0.4	2010
Belarus	0.0	0.0	0.0	2010	19.8	24.6	5.9	2010	5.8	5.9	5.8	2012	0.0	0.0	0.0	2010	0.4	0.4	0.4	2010
Belgium	1.0	1.0	1.0	2010	20.7	20.7	20.7	2010	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	0.8	0.8	0.8	2010
Bosnia and Herzegovina	40.8	8.5	67.5	2004	28.3	30.0	26.8	2007	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	0.8	0.8	0.8	2010

Region or country	Legal health coverage deficit, % of population without legal coverage [1, 3, 4, 9, 12, 13]				Out-of-pocket expenditure, % of total health expenditure [1, 3, 5, 6, 12, 15]				Financial deficit, % of population not covered due to financial resource deficit (threshold: US$239) [1, 2, 3, 7, 8, 11, 12, 14]				Staff access deficit, % of population not covered due to health professional staff deficit (threshold: 41.1) [1, 2, 3, 8, 10, 12, 14]				Maternal mortality ratio, deaths per 10,000 live births [1, 3, 4, 8, 12, 14]			
	Total	Urban	Rural	Year*	Total	Urban	Rural	Year*	Total	Urban	Rural	Year*	Total	Urban	Rural	Year*	Total	Urban	Rural	Year*
Bulgaria	13.0	10.2	20.4	2008	42.9	…	…	...	...	...	...	...	0.0	0.0	0.0	2010	1.1	1.1	1.1	2010
Croatia	3.0	1.0	7.1	2009	14.6	…	…	...	...	...	...	...	0.0	0.0	0.0	2010	1.7	1.7	1.7	2010
Cyprus	35.0	23.9	61.2	2008	49.4	…	…	...	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	1.0	1.0	1.0	2010
Czech Republic	0.0	0.0	0.0	2011	14.9	14.9	14.9	2010	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	0.5	0.5	0.5	2010
Denmark	0.0	0.0	0.0	2011	13.2	13.2	13.2	2010	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	1.2	1.2	1.2	2010
Estonia	7.1	1.0	18.7	2011	18.7	18.7	18.7	2010	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	0.2	0.2	0.2	2010
Finland	0.0	0.0	0.0	2010	19.8	19.8	19.8	2010	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	0.5	0.5	0.5	2010
France	0.1	0.1	0.1	2011	7.4	7.4	7.4	2010	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	0.8	0.8	0.8	2010
Germany	0.0	0.0	0.0	2010	11.9	11.9	11.9	2010	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	0.7	0.7	0.7	2010
Greece	0.0	0.0	0.0	2010	29.2	29.2	29.2	2010	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	0.3	0.3	0.3	2010
Hungary	0.0	0.0	0.0	2010	26.3	…	…	...	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	2.1	2.1	2.1	2010
Iceland	0.0	0.0	0.0	2010	17.9	…	…	...	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	0.5	0.5	0.5	2010
Ireland	0.0	0.0	0.0	2011	12.9	12.9	12.9	2010	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	0.6	0.6	0.6	2010
Italy	0.0	0.0	0.0	2010	19.9	19.9	19.9	2010	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	0.4	0.4	0.4	2010
Latvia	30.0	25.1	40.3	2005	34.9	47.9	16.8	2009	...	...	...	...	0.0	0.0	0.0	2010	3.4	...	...	...
Liechtenstein	5.0	…	…	2008	…	…	…	...	...	...	...	...	0.0	0.0	0.0	2010	...	...	...	...
Lithuania	5.0	1.0	13.5	2009	26.4	33.5	12.0	2008	...	...	...	...	0.0	0.0	0.0	2010	0.8	0.8	0.8	2010
Luxembourg	2.4	…	…	2010	10.0	10.0	10.0	2010	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	2.0	2.0	2.0	2010
Malta	0.0	0.0	0.0	2009	33.4	…	…	...	...	...	...	...	0.0	0.0	0.0	2010	0.8	0.8	0.8	2010
Moldova, Republic of	24.3	1.0	30.3	2004	44.9	52.7	38.0	2009	48.5	48.4	48.5	2005	0.0	0.0	0.0	2010	4.1	4.1	4.1	2005
Monaco	…	…	…	...	7.0	…	…	...	0.0	0.0	...	2010	0.0	0.0	...	2010	...	...	...	...
Montenegro	5.0	1.0	11.6	2004	38.0	48.1	20.8	2009	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	0.8	0.8	0.8	2010
Netherlands	1.1	1.1	1.1	2010	5.3	5.3	5.3	2010	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	0.6	0.6	0.6	2010
Norway	0.0	0.0	0.0	2011	13.6	13.6	13.6	2010	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	0.7	0.7	0.7	2010
Poland	2.5	1.0	3.5	2010	22.2	22.2	22.2	2010	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	0.5	0.5	0.5	2010
Portugal	0.0	0.0	0.0	2010	25.8	25.8	25.8	2010	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	0.8	0.8	0.8	2010
Romania	5.7	1.0	12.1	2009	19.2	25.9	11.7	2009	...	...	...	...	0.0	0.0	0.0	2010	2.7	2.7	2.7	2010
Russian Federation	12.0	1.0	16.7	2011	36.4	46.9	7.3	2008	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	3.4	3.4	3.4	2010
San Marino	…	…	…	...	14.3	…	…	...	...	...	...	...	0.0	0.0	0.0	2010	...	...	...	...
Serbia	7.9	1.0	16.3	2009	36.4	68.3	32.4	2007	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	1.2	1.2	1.2	2010
Slovakia	5.2	1.0	11.5	2010	25.7	25.7	25.7	2010	...	...	...	...	19.7	...	...	...	0.6	0.6	0.6	2010
Slovenia	0.0	0.0	0.0	2011	12.2	12.2	12.2	2010	...	...	...	...	0.0	0.0	0.0	2010	1.2	1.2	1.2	2010
Spain	0.8	0.8	0.8	2010	19.8	19.8	19.8	2010	...	...	...	...	0.0	0.0	0.0	2010	0.6	0.6	0.6	2010
Sweden	0.0	0.0	0.0	2011	16.3	16.3	16.3	2010	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	0.4	0.4	0.4	2010
Switzerland	0.0	0.0	0.0	2010	25.1	25.1	25.1	2010	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	0.8	0.8	0.8	2010

Region or country	Legal health coverage deficit, % of population without legal coverage [1, 3, 4, 9, 12, 13]				Out-of-pocket expenditure, % of total health expenditure [1, 3, 5, 6, 12, 15]				Financial deficit, % of population not covered due to financial resource deficit (threshold: US$239) [1, 2, 3, 7, 8, 11, 12, 14]				Staff access deficit, % of population not covered due to health professional staff deficit (threshold: 41.1) [1, 2, 3, 8, 10, 12, 14]				Maternal mortality ratio, deaths per 10,000 live births [1, 3, 4, 8, 12, 14]			
	Total	Urban	Rural	Year*	Total	Urban	Rural	Year*	Total	Urban	Rural	Year*	Total	Urban	Rural	Year*	Total	Urban	Rural	Year*
The Former Yugoslav Republic of Macedonia	5.1	1.0	12.5	2006	36.2	42.3	27.3	2003	13.8	13.8	13.8	2011	0.0	0.0	0.0	2010	1.0	1.0	1.0	2010
Ukraine	0.0	0.0	0.0	2011	40.5	50.2	19.3	2010	35.0	34.7	35.4	2007	0.0	0.0	0.0	2010	3.2	...	...	...
United Kingdom	0.0	0.0	0.0	2010	9.4	9.4	9.4	2010	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	1.2	1.2	1.2	2010
Oceania																				
Australia	0.0	0.0	0.0	2011	19.3	19.3	19.3	2010	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	0.7	0.7	0.7	2010
Cook Islands	…	…	…	...	5.8	…	…	...	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	...	...	...	...
Fiji	0.0	0.0	0.0	2010	19.7	26.6	12.2	2002	44.5	...	...	...	35.2	...	...	...	2.6	2.6	2.6	2010
Kiribati	…	…	…	...	…	…	…	...	26.9	...	...	...	0.0	0.0	0.0	2010	...	...	...	...
Marshall Islands	…	…	…	...	12.8	…	…	...	0.0	0.0	0.0	2010	26.4	...	...	...	...	...	...	...
Micronesia	…	…	…	...	8.7	…	…	...	0.0	0.0	0.0	2010	7.1	...	...	...	10.0	...	...	...
Nauru	…	…	…	...	5.8	…	…	...	0.0	0.0	...	2010	0.0	0.0	...	2010	...	...	...	...
New Zealand	0.0	0.0	0.0	2011	10.5	10.5	10.5	2010	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	1.5	1.5	1.5	2010
Niue	...	...	...	...	…	…	…	...	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	...	...	...	...
Palau	...	...	...	...	11.1	…	…	...	0.0	0.0	0.0	2010	0.0	0.0	0.0	2010	...	...	...	...
Papua New Guinea	...	...	...	...	13.8	4.9	15.1	2009	70.9	...	...	...	89.2	...	...	...	23.0	...	...	...
Solomon Islands	...	...	...	...	3.2	…	…	...	45.6	...	...	...	47.0	...	...	...	11.0	...	...	...
Tonga	...	...	...	...	12.7	…	…	...	18.5	...	...	...	0.0	0.0	0.0	2010	11.0	...	...	...
Tuvalu	...	...	...	...	…	…	…	...	...	...	...	...	0.0	0.0	0.0	2010	...	...	...	...
Vanuatu	0.0	0.0	0.0	2010	6.0	…	…	...	48.0	39.0	49.7	2007	60.1	53.7	62.0	2007	11.0	9.4	11.4	2007
Western Samoa	…	…	…	...	7.9	…	…	...	3.4	...	...	...	43.6	...	...	...	10.0	...	...	...

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Notes

…: Not available.

* The 'year' column shows the year in which the proxy data were collected.

** The urban/rural input data were from a synthetic database, so do not relate to a particular year

For national estimates:

1. Estimate in percentage of population without legal health coverage. Coverage includes affiliated members of health insurance or estimation of the population having free access to health care services provided by the State.
2. The ILO staff access deficit indicator reflects the supply side of access availability – in this case the availability of human resources at a level that guarantees at least basic, but universal, effective access to everybody. To estimate access to the services of skilled medical professionals (physicians and nursing and midwifery personnel), it uses as a proxy the relative difference between the density of health professionals in a given country and its median value in countries with a low level of vulnerability (population access to services of medical professionals in countries with low vulnerability is thus used as a threshold for other countries). The relative ILO threshold corresponds to the median value in the group of countries assessed as 'low vulnerable' (regarding the structure of employment and poverty). Based on 2011 data from WHO (number of physicians, nursing and midwifery personnel per 10,000), the estimated median value is 41.1 per 10,000 population when weighted by total population. Another way to look at it is to refer to population not covered due to a deficit from the supply side (see second part of example below). Then, the ILO staff access deficit indicator estimates the dimension of the overall performance of health-care delivery as a percentage of the population that has no access to health care if needed. Professional staff includes physicians and nursing and midwifery personnel as defined by WHO. See Indicator definitions and metadata for indicator HRH_01: Number of nursing personnel; HRH_02: Number of physicians; and HRH_03: Number of midwifery personnel available at: http://apps.who.int/gho/data/node.imr [27 February 2015].
3. Coverage gap due to financial resource deficit is based on median value in low vulnerability group of countries. The ILO financial deficit indicator follows the same principle as the access deficit indicator regarding total health spending (in US$ per capita and per year) except out-of-pocket payments. The relative median value in 2011 in group of countries assessed as 'low vulnerable' is estimated at 239 US$ per capita and per year.
4. Aggregate measures are weighted by total population. Refer to data source 3.

For rural/ urban estimates:

5. The percentage of GDP provided by the agricultural sector was used as a proxy for the legal coverage rights of the rural population and the percentage of GDP provided by other sectors as a proxy for the rights of the urban population. The following formulae were applied:

$$\text{legal coverage (urban)} = \mathrm{P_u} \times \mathrm{GDP_{na}}$$

$$legal\ coverage\ (rural) = P_r \times GDP_a$$

P = total population (UN Population Division world urbanization prospects database: http://esa.un.org/unpd/wup/) / GDPa = the proportion of GDP provided by agriculture (from World Bank database: http://data.worldbank.org/indicator/NV.AGR.TOTL.ZS) / GDPna = the proportion of GDP provided by sectors other than agriculture (i.e. 1-GDPa). The subscripts u and r refer to urban and rural respectively. The regional and world legal coverage estimates were calculated by weighting the individual country estimates by population size, separately for urban and rural.

6. National, rural, and urban skilled birth attendance (SBA) rates were used as proxies for health workers distribution as a direct relation was assumed. The following formulae were applied:

$$\text{SAD (urban)} = 100 - ((100 - \text{SAD}_\text{n}) \times \left(\frac{\text{SBA}_\text{u}}{\text{SBA}_\text{n}}\right))$$

$$\text{SAD (rural)} = 100 - ((100 - \text{SAD}_\text{n}) \times \left(\frac{\text{SBA}_\text{r}}{\text{SBA}_\text{n}}\right))$$

SAD = staff access deficit estimate (ILO 2014d) / SBA = % of live births attended by a doctor, nurse or midwife, and the subscripts n, u and r refer to national, urban and rural respectively. Databases: WHO Global Health Observatory (GHO) database, http://apps.who.int/gho/data/view.main.1630?lang=en, http://apps.who.int/gho/data/view.main.94130) and nationally representative sample surveys such as Demographic and Health Surveys (DHS). The regional and world legal coverage estimates were calculated by weighting the individual country estimates by population size, separately for urban and rural.

7. National, rural, and urban skilled birth attendance (SBA) rates were used as proxies for financial resource allocation as a direct relation was assumed. The following formulae were applied:

$$\text{FD (urban)} = 100 - ((100 - \text{FD}_\text{n}) \times \left(\frac{\text{SBA}_\text{u}}{\text{SBA}_\text{n}}\right))$$

$$\text{FD (rural)} = 100 - ((100 - \text{FD}_\text{n}) \times \left(\frac{\text{SBA}_\text{r}}{\text{SBA}_\text{n}}\right))$$

FD = Financial deficit estimate (ILO 2014 d), SBA = % of live births attended by a skilled birth attendant, and the subscripts n, u and r refer to national, urban and rural respectively. Databases: WHO Global Health Observatory, (GHO) database (national SBA figures were taken from http://apps.who.int/gho/data/view.main.1630?lang=en http://apps.who.int/gho/data/view.main.94130), and nationally representative sample surveys such as Demographic and Health Surveys (DHS).

8. National, rural, and urban skilled birth attendance (SBA) rates were used as proxies for the maternal mortality ratio. It was assumed that the rural (/urban) maternal mortality ratio (MMR) is inversely related to the national SBA ratio. The following formulae were applied:

$$\text{MMR (urban)} = \text{MMR}_\text{n} \times \left(\frac{\text{SBA}_\text{n}}{\text{SBA}_\text{u}}\right)$$

$$\text{MMR (rural)} = \text{MMR}_\text{n} \times \left(\frac{\text{SBA}_\text{n}}{\text{SBA}_\text{r}}\right)$$

MMR = MMR estimate ILO 2014d, SBA = % of live births attended by a skilled birth attendant and the subscripts n, u and r refer to national, urban and rural respectively. Databases: WHO Global Health Observatory (GHO), http://apps.who.int/gho/data/view.main.1630?lang=en, http://apps.who.int/gho/data/view.main.94130) and nationally representative sample surveys such as Demographic and Health Surveys (DHS). For Brazil and Mexico, which were not included in the WHO database data came from a UNICEF database (http://www.unicef.org/infobycountry/).

9. Household consumption on health ($PPP) in rural and urban areas are extracted from the World Bank Global Consumption database. The ratio between rural (/ urban) to national household consumption on health are used as proxy for rural and urban out-of-pocket (OOP) expenditure. The following formulae were applied:

$$\text{OOP (urban)} = 100 - (\text{X}_\text{n} \times \left(\frac{\text{C}_\text{u}}{\text{C}_\text{n}}\right))$$

$$OOP\ (rural) = 100 - (X_n \times \left(\frac{C_r}{C_n}\right))$$

X = OOP as a percentage of total health expenditure, C = household consumption on health ($PPP), and the subscripts n, u and r refer to national, urban and rural respectively. Databases: WHO's Global Health Expenditure database (http://apps.who.int/nha/database/Select/Indicators/en), World Bank Global Consumption database (http://datatopics.worldbank.org/consumption/sector/Health). The regional and world OOP estimates were calculated by weighting the individual country estimates by population size, separately for urban and rural.

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