Rural poverty and health services: challenges and gaps

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Critical concepts and definitions

- **Health inequities** are unfair and remediable differences in health. They manifest in differential exposure, vulnerability, access, health outcomes and consequences. Health inequalities are measurable differences.

- **Social and environmental determinants** are the conditions in which people are born, grow, live, work and age, and they are largely responsible for health inequities.

- **Universal health coverage (UHC)** means all people receiving the health services they need, of sufficient quality to be effective while at the same time ensuring that the use of these services does not expose the user to financial hardship. UHC is a goal, and the means to attain it is health systems strengthening.
Key messages

1. Rural-urban health inequities persist, compounding and intersecting with health inequities between income quintiles.

2. These health inequities are the result of weaker health systems in rural areas and adverse social and environmental determinants experienced by the rural poor.

3. Strengthening rural health systems and intersectoral action on health can contribute to rural poverty reduction.
Differences between urban and rural – the case of maternal mortality

Table 1. Evolución de la razón de mortalidad materna en el Perú según región, zona y quintil de pobreza 2002-2011

<table>
<thead>
<tr>
<th></th>
<th>2002-2006</th>
<th>2007-2011</th>
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<tbody>
<tr>
<td>Región</td>
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<tr>
<td>Costa</td>
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<td>Sierra</td>
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<td>Selva</td>
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<td>Zona</td>
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<tr>
<td>Urbana</td>
<td>76.9</td>
<td>70.0</td>
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<tr>
<td>Rural</td>
<td>192.1</td>
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</table>

Table 2 Pregnancy-related mortality indicators by NUTS-1 region, type of settlement and age group

<table>
<thead>
<tr>
<th>Type of settlement</th>
<th>Population female 15-49</th>
<th>Live births</th>
<th>Pregnancy-related deaths (15-49)</th>
<th>Pregnancy-related deaths/ Female deaths</th>
<th>Pregnancy-related mortality ratio</th>
<th>95% Confidence Interval Lower limit</th>
<th>95% Confidence Interval Upper limit</th>
<th>Life time risk 1 in</th>
<th>Pregnancy-related mortality rate</th>
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<td>Urban</td>
<td>7,949,418</td>
<td>458,151</td>
<td>129</td>
<td>3.3</td>
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<td>25.1</td>
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<td>Rural</td>
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<td>652</td>
<td>4.4</td>
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</table>

Sources:
Intersecting types of disadvantage - the rural poor

Inequalities in coverage of essential health services by income group, urban versus rural households, and level of education across the South-East Asia Region

Need to also account for gender, ethnicity, caste and other influencing factors

Source: Monitoring progress on universal health coverage and the health-related Sustainable Development Goals in the South-East Asia Region: 2018 update
Inequities and health determinants

For example – drinking water:

- It is estimated that **55 per cent of the rural population** and **85 per cent of the urban population** use safely managed services.

- For rural dwellers who have access to piped drinking water, the bacteriological **quality of this water** can be poor, in particular as system **maintenance** may be more neglected in rural areas.

- Contaminated water can transmit diseases such as diarrhoea, cholera, dysentery, typhoid and polio. It can also carry chemical contaminants from industry and agriculture.

Inequities and health determinants

For example – drinking water continued:

- Contaminated drinking-water is estimated to cause more than 500,000 diarrhoeal deaths each year.
- Compounding the already present rural-urban inequities in exposure to risk factors, there are also inequities in access to treatment.
- Children in urban areas and more affluent households are more likely to receive the recommended treatment (ORS) for diarrhoeal diseases than children in rural areas and those living in poorer households.

We need to scale up intersectoral action to address the determinants and improve the health system response in rural areas.

Sources:
https://data.unicef.org/topic/child-health/diarrhoeal-disease/
Inequities and health determinants

For example – Endemic zoonoses

- 70% of the rural poor depend on livestock. Endemic zoonoses are a major risk factor for human disease and the profitability of livestock for the rural poor.

Sources:

Density of poor livestock keepers (update of Thornton et al., 2002 by Kruska, this study)
Changing demographics and health inequities in rural areas

- Migration of children to areas of economic growth often results in older family members being left behind in rural areas without traditional social support structures.

- There is an urban-rural difference in older people’s health in many countries, with rural older adults suffering poorer health than those living in urban areas, linked to adverse social determinants and weaker health systems in rural areas.

- Rural-urban inequities are also found in older adult’s access to social and health protection schemes.

- Geographical distances and less developed transport services in rural areas pose additional challenges to accessing health and social care, who may require these services more frequently and may face additional barriers accessing them if they start to suffer from a loss in mobility or cognitive function.

Source:
UNECE Policy Brief on Aging No. 18
Key messages

1. Rural-urban health inequities persist, compounding and intersecting with health inequities between income quintiles.

2. These health inequities are the result of weaker health systems in rural areas and adverse social and environmental determinants experienced by the rural poor.

3. Strengthening rural health systems and intersectoral action on health can contribute to rural poverty reduction.
Understanding barriers faced by the rural poor using the Tanahashi Framework

Inadequate provider network and service allocation to levels, lack of sufficient numbers of adequately skilled personnel, lack of basic amenities, lack of health products

Distance and time to get to facility, inadequate transport means, security, direct costs for treatment, indirect costs for transport and accommodation, opportunity costs, opening times, administrative requirements, bribes

Intersecting demand-side factors such as gender norms, preference for traditional healers, discrimination of ethnic minorities, negative perceptions of service quality, fear of stigmatization or lack of confidentiality

Inability to follow through with timely referral due to distance, costs, etc of accessing secondary and tertiary care, insufficient provider compliance due to lack of supportive requirements, absenteeism, diagnostic inaccuracy facilitated by weak lab network

Mapping barriers across the patient pathway – Mongolia example

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Aimag government representatives considering the barriers experienced by low-income rural and remote herder populations along the health pathway for treatment of cardiovascular disease.
Health systems and the rural poor

• In reforms towards Universal Health Coverage, health systems need to account for the specific needs of the rural poor:
  – **Financing** – e.g., ensuring equity in financial protection (can the rural poor access financial protection and is the depth of coverage and services included appropriate for their needs?)
  – **Service delivery** – e.g., ensuring coverage by the rural poor with services of the type and intensity that are proportionate to need, using equity-oriented service delivery models that account for multidimensional poverty in rural areas
  – **Human resources** – e.g., enabling the availability of adequately skilled health personnel in rural areas, and providing gender-responsive and culturally appropriate care for the rural poor
  – **Health information systems/research** – e.g., monitoring health inequalities, strengthening rural health information systems including CRVS
  – **Medicines** – e.g., facilitating the accessibility and availability of essential medicines, technologies and health products for all (not only the urban affluent)
  – **Governance** – e.g., facilitating platforms for intersectoral action to address health determinants (e.g., IHR, water and sanitation, social protection, nutrition, agriculture, transport) and enhance social participation

Source: Author synthesis based on work in Moldova, Vietnam, Nigeria, Indonesia, Mongolia, India and drawing from previous work featured in *Rural poverty and health systems in the WHO European Region*. Copenhagen, WHO Regional Office for Europe, 2010.
Financial protection in rural areas

- Financial protection is a key dimension of Universal Health Coverage; it means nobody suffers financial hardship as a result of getting needed health services.

- Data to monitor this is available for 132 countries; evidence for rural areas has not yet been produced. Financial protection is influenced by the way funding for health is pooled, how it is spent but also about access to services (hence, we need to account for unmet need).

- Study of 39 LMIC: On average, transportation costs were
  - 12% of per-visit treatment charges for outpatient services and
  - 17% of inpatient treatment charges for hospitalization.

- Dorjdagva J et al (2016) about Mongolia: lower income groups are less likely to access specialized services at the higher referral levels due to direct costs, including for co-payments, medicines, and consultations, as well as indirect costs, such as for transport and meals.

Human resources for health in rural areas

<table>
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<th>Country</th>
<th>Year</th>
<th>Rural</th>
<th>Urban</th>
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Human resources for health in rural areas

Increasing access to health workers in remote and rural areas through improved retention:

• Education recommendations
• Regulatory recommendations
• Financial incentives recommendation
• Personal and professional support recommendations

Insufficient basic amenities in facilities – example from Indonesia

AccessMod© is a Geographic Information Systems (GIS) toolbox that can be used to:

- Measure the **average time of travel** to different categories of health care facilities (accessibility coverage);
- Estimate **geographical coverage** (a combination of availability and accessibility coverage) to address resource use within an existing health facility network;
- Design **scenarios to model an increase in accessibility and geographic coverage** that would occur from specific investments aimed at adjusting the location of health facilities, or increasing the number and/or capacity of existing health facilities. This analysis can inform health infrastructure planning and investment strategies for UHC.
Geographic accessibility analysis using travel time (pregnant women walk or are carried + vehicle on the roads)

*Burkina Faso: 61% of pregnant women could reach a BEMOC within 2 hours*
Strengthening service delivery – E-health

The MAPS (mHealth Assessment and Planning for Scale) Toolkit

http://www.who.int/reproductivehealth/topics/mhealth/maps-toolkit/en/
Mortality by age and sex
Life expectancy (mortality before age 70)
Child / neonatal mortality
Mortality by cause Maternal, HIV, TB, malaria, leading NCDs, suicide, road traffic accidents

Morbidity HIV, TB, malaria, hepatitis B, NTD; adolescent births

Coverage of interventions
Prevention: FP, ANC4+, immunization, tobacco, alcohol, ITN, air quality etc.;
Treatment: child treatment, SBA, ART, TB, severe mental illness, etc.;
Protection: Catastrophic expenditure /impoverishment due to health OOP

Other
IHR surveillance capacity, knowledge & access SRH, etc.

Source: Presentation of Kathy O’Neil, Coordinator, Health Information Systems, WHO Headquarters, October 2016.
Wealth and urban/rural inequalities in birth certificate coverage persist in most low and middle income countries.

Weak CRVS systems lead rural and poor children to be systematically excluded from the benefits tied to a birth certificate, and prevent these children from being counted in national health data.

Meta-analyses of all of these trials showed that exposure to women’s groups was associated with a 37% reduction in maternal mortality and a 23% reduction in neonatal mortality, with high heterogeneity for maternal and neonatal results.
Key messages

1. Rural-urban health inequities persist, compounding and intersecting with health inequities between income quintiles.

2. These health inequities are the result of weaker health systems in rural areas and adverse social and environmental determinants experienced by the rural poor.

3. Strengthening rural health systems and intersectoral action on health can contribute to rural poverty reduction.
Improving the health of the rural poor contributes to poverty reduction

- Health costs associated with waterborne diseases such as malaria, diarrhoea, and worm infections represent more than one third of the income of poor households in sub-Saharan Africa.

- Longitudinal studies among agricultural workers in Kenya and miners in Botswana and Uganda demonstrate a consistent V-shaped pattern for labor force participation and productivity over the course of HIV infection, declining sharply as symptoms worsen in the months before ART initiation and rebounding to near-normal within a few months.

Source:
Improving the health of the rural poor contributes to poverty reduction.

Figure. Comparing ART program costs and benefits. Annual discounted ART program costs, productivity gains, orphan care costs averted, and net monetary benefits for the cohort of Global Fund-supported patients on treatment as of 2011.

Progressive universalism for the rural poor...“in reforms towards UHC, we must ensure that the most disadvantaged are benefitting at least as much as the more advantaged...”
Thank you.
We are actively aiming to strengthen our work and partnerships for the health of the rural poor.

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Photo: WHO Oct 2018, Nigeria adolescent health services barriers assessment stakeholder meeting, which included a focus on adolescents in rural and remote areas.