Health Inequality Monitoring: Approaches and Challenges

Dr Ahmad Reza Hosseinpour

Health Statistics and Information Systems Department (HSI) & Gender, Equity and Human Rights Team (GER)
Should inequality be monitored alongside average?
Monitoring health

1. Select health indicators
2. Obtain data
3. Analyse data
4. Report results
5. Implement changes

Process:
- Select health indicators
- Obtain data
- Analyse data
- Report results
- Implement changes

Feedback loop:
- Implement changes
- Select health indicators
Selecting health indicators & equity Stratifiers

- Selecting health indicators: similar to methodology used for monitoring health equity

Equity stratifiers – dimensions of inequality
- Economic status (e.g. income)
- Education
- Sex
- Age
- Place of residence
- Race or ethnic background
- Any other stratifier that can distinguish population minority subgroups
Data requirements for equity analysis

- Data sources must contain both health indicators & equity stratifiers

Or

- Possibility to link data sources must exist
Data analysis

Calculating health estimates **disaggregated by equity stratifiers**
- Prevalence of NCD risk factors by education
- Access to health facilities by sex

Calculating **measures of inequality**
- Rural/urban difference in U5MR
- Richest-to-poorest quintile ratio in hypertension treatment
Communicating results

Essential considerations

- Audience-conscious reporting
- Designing effective data visualizations
- Key aspects of reporting:
  1. (a) latest status
  2. (b) trend over time
  3. (c) benchmarking
Communicating results – time trend

Communicating results – latest status

Births attended by skilled health personnel by wealth quintile in Malawi, DHS 2010

<table>
<thead>
<tr>
<th>Quintile 1 (poorest)</th>
<th>Quintile 2</th>
<th>Quintile 3</th>
<th>Quintile 4</th>
<th>Quintile 5 (richest)</th>
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<tr>
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<td>65.9</td>
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<td>89.6</td>
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Percentage
Communicating results - benchmarking

Births attended by skilled health personnel by wealth quintile in Malawi against other low-income African countries, DHS 2005–2010

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<td>27.9</td>
<td>35.5</td>
<td>45.6</td>
<td>62.7</td>
<td>88.5, 89.6</td>
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Communicating results

What to be reported

• Disaggregated data along with summary measures of inequality
• Multiple dimensions of inequality simultaneously
Describing patterns of health inequality using disaggregated data

Coverage of births attended by skilled health personnel in Bangladesh, Gambia, Jordan and Viet Nam, by wealth quintile, DHS and MICS 2005–2007

- Complete coverage
- Marginal exclusion
- Queuing
- Mass deprivation

Births attended by skilled health personnel (%)

Quintile 1 (poorest)      Quintile 2      Quintile 3      Quintile 4      Quintile 5 (richest)

Bangladesh, DHS 2007
Gambia, MICS 2005
Jordan, DHS 2007
Viet Nam, MICS 2006
Communicating results

What to be reported

• Disaggregated data along with summary measures of inequality
• Multiple dimensions of inequality simultaneously
Multiple dimensions of inequality simultaneously (1)

Under-five mortality rate in Nigeria, by place of residence, DHS 2008

![Bar chart showing under-five mortality rates in rural and urban areas in Nigeria, with rural rate at 221 per 1000 live births and urban rate at 139 per 1000 live births.]

Source: Adapted from World Health Organization Centre for Health Development: country profiles on urban health, Nigeria.
Multiple dimensions of inequality simultaneously (2)

Under-five mortality rate in Nigeria, by place of residence and wealth, DHS 2008

- Rural: 221 deaths per 1000 live births
- Urban (overall): 139 deaths per 1000 live births
- Urban poorest quintile: 252 deaths per 1000 live births
- Urban richest quintile: 50 deaths per 1000 live births

National average = 201

Source: Adapted from World Health Organization Centre for Health Development: country profiles on urban health, Nigeria.
Assessing the situation and defining the priorities

Assessing inequality and national average in reproductive, maternal and child health interventions in the Philippines with a simple numerical scale (simplified version)

1 indicates no further action is needed

2 indicates further action is needed

3 indicates further action is needed urgently

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<td>2</td>
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Assessing the situation and defining the priorities

Prioritizing inequality and national average in RMCH interventions in the Philippines, using average scores for health indicators and equity stratifiers (simplified version)

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Why conduct health inequality monitoring?

Agenda setting and implementing changes

- Political will
- Popular support
- Funding
- Feasibility
- Timing
- Cost-effectiveness

Social determinants of health framework: 
*Multisectoral action*
Reference

Handbook on Health Inequality Monitoring: with a special focus on low- and middle-income countries

WHO Global Health Observatory Health Equity Monitor