Progress Towards the Child Mortality MDG in Urban Sub-Saharan Africa

Nyovani Janet Madise
University of Southampton

Purpose

Examine trends in urban childhood mortality in Sub-Saharan Africa and the linkages to urban growth, access to safe water & vaccination coverage.
Outline

• Child mortality in SSA
• Links between urban growth and child mortality
• Macro-level analyses
• Case study 1: Kenya
• Case Study 2: Zambia
• Conclusions
Child Mortality in Sub-Saharan Africa

• Globally, more than 9.7 million deaths in 2006
  – Nearly 5 million of these from Africa
  – About 3 million in South Asia
  – I.e. 80% of all deaths

• Nearly 6 million of these deaths preventable
Child Mortality in Developing Countries

Under-five mortality rates in developing regions, 2006

Source of data: UNICEF
Progress Towards MDG 4

Source of data: UNICEF, 2007

68 more deaths per 1000 born
Urban Growth and Child Mortality in SS Africa
Urban Growth in SS Africa

• Between 1980s and 2000
  – Urban growth (annual average rate of change) over 4%
  – GDP per capita: -0.8%
  – Food production index per capita: 0.2%
• Fast pace of urbanization in context of poor economic performance
  → growth of informal settlements
Poor sanitation & poor, but expensive healthcare
Child Health in Urban Areas

• Traditionally ‘urban advantage’ in child health

• Growth of urban poor → diminishing ‘urban advantage’
  – Brockerhoff 1998
  – Fotso (2007) etc
Links between urban growth, access to services and child health

- Rapid Urban Population Growth
- Poor economic performance
- Deteriorating Access to Safe Drinking Water
- Lack of Progress in Child Survival
- Deteriorating Access to Health Services
Macro Analyses: Methods

• DHS data from 22 sub-Saharan African countries
  – Surveys between 1990s and 2000s
• Average annual rate of change (AARC)
  – Urban under-five mortality
  – Urban households with access to piped water
  – Children (1-2 years) who are fully immunized
• Average annual urban population growth between 1980-2000 (UN Population Division)
Change in under-five mortality in 22 African countries, 1990s and 2000s
# Correlations: Urban Growth and Child Mortality

<table>
<thead>
<tr>
<th>Δ Under-five mortality</th>
<th>Δ Urban growth</th>
<th>Δ Access to piped water</th>
<th>Δ Immunization</th>
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<tbody>
<tr>
<td>R=0.41 Weak + (p &lt; 0.1)</td>
<td>R=-0.42 Weak - (p&lt;0.1)</td>
<td>R=-0.45 Weak – (p&lt; 0.1)</td>
<td>R=-0.73 Strong - (p&lt;0.01)</td>
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Case Study 1: Kenya

• Cross-sectional survey in Nairobi slums in 2000
• 4,564 households interviewed
• DHS-type questions, birth histories from women aged 15-49 years etc
• Comparable to 1998 and 2003 Kenya DHS
• Slum definition ‘no own flush toilet’

Infant mortality in Kenya

Deaths per 1000 live births

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<td>68</td>
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<tr>
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Deterioration of Sanitation and Health: Kenya, 1990s-2000s

Access to piped water

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Full vaccination

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Case Study 2: Zambia

• Analysis of DHS 1992 & 1996 to examine trends in child mortality
  (Madise et al. 2003)
• Interaction of urban/rural residence and socio-economic status
  – Rural mortality higher than urban BUT
  – Urban poorest had highest mortality risks
Deteriorating child health in urban areas of Zambia, 1990s

Infant mortality in Zambia

- Rural: DHS 1992 = 121, DHS 1996 = 112, DHS 2001/02 = 100
Access to water and vaccination in Zambia, 1992-2002

Access to piped water
- Slum: 82% (1992), 68% (1996), 74% (2001/02)
- Other Urban: 99% (1992), 98% (1996), 92% (2001/02)
- Rural: 11% (1992), 7% (1996), 7% (2001/02)

Full vaccination
- Slum: 61% (1992), 70% (1996), 63% (2001/02)
- Other Urban: 73% (1992), 79% (1996), 74% (2001/02)
- Rural: 52% (1992), 66% (1996), 59% (2001/02)
Limitations

• Problems of identifying slums in DHS samples

• Small urban samples → smaller samples of slum vs non-slum
  – Larger samples needed to look at intra-urban differentials

• Omission of outlying observations in macro analyses
Conclusion

• Growing poverty in urban areas
• Narrowing gap between urban and rural health outcomes
• Evidence of worsening child health outcomes in urban areas relative to rural
• Poor access to safe water, poor healthcare → poor child health outcome
• Inertia in tackling urban planning hurting most vulnerable
Thank You