Assessment of Public Health Risks From Unsafe Fecal Sludge Management in Accra, Ghana

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Background

• SaniPath tool assesses public health risks from unsafe FSM
• Decision making and advocacy tool for local governments and development partners
• Characterized only poor neighborhoods in Ghana, India and Mozambique
Introduction

• Demand for city wide assessments by decision makers

Research Question

• Can you characterize city level fecal exposure pathways using representative neighborhoods?
Methods

• Engaged local stakeholders from onset
• Used recommended publicly available data to select neighborhoods
• Data sources were 2010 Census data and 2010 Accra Metropolitan Authority Poverty Map
• Used income levels, population density and sanitation coverage to aggregate and rank neighborhoods
• 4 representative neighborhoods selected out of 87
## Methods

<table>
<thead>
<tr>
<th>Neighborhood</th>
<th>Ranked Sanitation Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ringway Estates</td>
<td>Good</td>
</tr>
<tr>
<td>Adabraka</td>
<td>Moderate</td>
</tr>
<tr>
<td>Kokomlemle</td>
<td>Poor</td>
</tr>
<tr>
<td>Chorkor</td>
<td>Very Poor</td>
</tr>
</tbody>
</table>
Conditions within study neighborhoods
Methods

• Data collection from April to August 2016
• SaniPath Tool Assessment took 2-4 weeks per neighborhood
  – Behavioral surveys
    • Key informant interviews and transect walks, household and community surveys
  – Environmental sampling and analysis
    • Ocean, drains, food, water, soil, public latrines, flood
SaniPath deployment in 4 neighborhoods
Accra, Ghana, 2016
Drains

SaniPath deployment in 4 neighborhoods
Accra, Ghana, 2016

Drinking Water

Chorkor
Percent Exposed = 71%
Dose: $10^6.4$ CFU/month

Kokomlemle
Percent Exposed = 50%
Dose: $10^5.51$ CFU/month

Adabraka
Percent Exposed = 58%
Dose: $10^5$ CFU/month

Ringway
Percent Exposed = 52%
Dose: $10^4.64$ CFU/month

Very Poor
Poor
Moderate
Good
Summary

• Publicly available data can be used for a SaniPath city level assessment by sanitation planners and advocates

• Poor FSM in a city may lead to public exposure to fecal contamination irrespective of where you live
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