Fighting Childhood Pneumonia in Uganda

Eric Wang | Ryan Kouchakji
Isabella Stokes | Amanda Schmitz
Challenges of the Uganda Pneumonia Program
How can we improve it over the next five years?

Initial $10 million and additional $4 million per year for the next 5 years
How do we allocate these funds for the Ugandan Vaccination Program?
Fighting Childhood Pneumonia in Uganda

ANALYSIS

UNDERSUPPLY

MISDIAGNOSIS

LACK OF AWARENESS

FUNDING

INTRODUCTION | ANALYSIS | SOLUTIONS | FINANCIALS | APPENDIX
<table>
<thead>
<tr>
<th>Alternatives</th>
<th>Feasibility</th>
<th>Sustainability</th>
<th>Scalability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Village Teams</td>
<td>✓</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Mass Radio Campaign Programs</td>
<td>✓</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Sustainable Drug Sell Initiatives</td>
<td>✗</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>Healthcare Professional Training</td>
<td>✓</td>
<td>✓</td>
<td>✗</td>
</tr>
</tbody>
</table>
Fighting Childhood Pneumonia in Uganda

ANALYSIS

INTRODUCTION | ANALYSIS | SOLUTIONS | FINANCIALS | APPENDIX
Fighting Childhood Pneumonia in Uganda

SOLUTIONS

- Societal
- Community
- Relationship
- Individual

INTRODUCTION | ANALYSIS | SOLUTIONS | FINANCIALS | APPENDIX
Fighting Childhood Pneumonia in Uganda

SOLUTIONS

- Mass Media Campaign
- Mobile Vaccination Team
- Mothers as advocates
- N/A

INTRODUCTION | ANALYSIS | SOLUTIONS | FINANCIALS | APPENDIX
Societal: Promote social norms that promote vaccination with multi-media campaign
Relationship: Use the campaign to target and empower mothers as advocates for their child’s health.
Community: One mobile vaccination team per three districts
• 38 teams
• 2-3 months rotations
• 5 professionals: 2 nurses, 2 nursing assistants, 1 educator

Teams exclusively vaccinate
Educators provide mini lectures to reinforce concepts presented in campaigns.
Fighting Childhood Pneumonia in Uganda

FINANCIALS

Nurses
$7000

CNAs

$4400

Educator

$2000

Transportation

$8000

GDP per Capita is only $1424
First Year Vaccination Team Expenditures ~ $813,200

Second Year+ Expenditures ~ $520,000
Fighting Childhood Pneumonia in Uganda

FINANCIALS

$3.30 per Pneumococcal Conjugate Vaccine (PCV) dose
4 Required Doses → $13.20

Average cost of pneumonia treatment is $52.95 per person

Preventive vaccination is a quarter of the cost of treatment
Fighting Childhood Pneumonia in Uganda

FINANCIALS - CAMPAIGN

227 Cities
$19 per Poster
100 Posters per City

Cities x Poster cost x Posters per City = $431,300

280 Radio Stations in Uganda
Top 20 Radio Stations
35 Plays per week at $75 per Minute Slot = $2,730,000
Fighting Childhood Pneumonia in Uganda

RECAP

SOLUTIONS:

1. EDUCATIONAL CAMPAIGN
2. MOBILE VACCINATION UNITS
Thank you!
Risk Mitigation

• Money Mismanagement: Gavi’s 2006 Uganda Vaccine Program:
  • Most districts did not have training, not ready for introduction
    • Lack of progress
    • Contextual changes: leadership, new financial systems led to poor planning and adjustment to plans.
  • The relationship between vaccine stakeholders in Uganda is “delicate”
  • 2013 study showed that only 43% of health workers had sufficient knowledge of vaccines and unique handling requirements

• To regulate and prevent money mismanagement, we will have periodic budget audits and check ins with our representatives from Gavi.
Through donor commitments, this innovative funding mechanism incentivises vaccine makers to produce suitable and affordable vaccines for the world's poorest countries. These countries are then able to plan for immunisation programmes knowing that vaccines will be available rapidly, in the quantities they need and at affordable prices.

The introduction of these vaccines is largely thanks to the generosity of Italy, the United Kingdom, Canada, the Russian Federation, Norway, and the Bill & Melinda Gates Foundation who together contributed US$ 1.5 billion through an innovative financing mechanism, called the Advance Market Commitment (AMC) for pneumococcal vaccines.

MANUFACTURERS
Participating manufacturers must make a 10-year commitment to supply a share of the target demand of 200 million doses annually at a price no higher than US$ 3.50 per dose (paid for by Gavi with a co-financing contribution from the recipient country governments, in accordance with Gavi’s standard co-financing policy). In return, each manufacturer will receive a share of the committed AMC Funds of US$ 1.5 billion in proportion to their supply commitment.
Smallpox Vaccine Dissemination
You cannot get vaccinated for smallpox (ended in 1972), because of its limited availability of vaccine and possibility of severe side effects. Routine Vaccination is not recommended to prevent disease to general public, but is available if a person gets exposed. Within four days of exposure, the severity can be limited.
(http://healthvermont.gov/emerg/smallpox/smallpox_fact.aspx#nine)
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Previous Nursing Pay</td>
<td>$1,380 USD/year</td>
</tr>
<tr>
<td>Reformed Nursing Pay</td>
<td>$3,480 USD/year</td>
</tr>
<tr>
<td>Mobile Vaccine Nurse</td>
<td>$3,500 USD/year</td>
</tr>
</tbody>
</table>
Social Structures/Cultural Factors of Uganda

About Uganda:
- 20th century: class system dominated by small, educated middle class (professionals, wage earners working for the state), and small number of commercial farmers. Population basically consists of poor peasant farmers and government workers.
- Agricultural country, soil & coffee = most important resource
- Women traditionally considered inferior to men; independence is extremely discouraged
- “Budgets were usually inadequate to meet districts’ needs, leaving district health managers in difficult position of making decisions…” (pg. 6)
- “Long-term public financing of promising pilot programs was not guaranteed” (pg. 6)
- Nearly a quarter of population lived below poverty line, only a third of the population has access to improved sanitation (WATER)
- Avg GDP = $1,424 = ranked 166th in 2012
- 90% rural areas, 10% urban
- Traditional society:
Fighting Childhood Pneumonia in Uganda

Population Density

Uganda Population Density

Legend based upon Africa Map

- 0 - 2
- 2 - 10
- 10 - 25
- 25 - 100
- 100 - 250

Population Areas per km²


INTRODUCTION | ANALYSIS | SOLUTIONS | FINANCIALS | APPENDIX
Existing NGOs in Uganda

• No current NGOs relating directly to pneumonia.
• Uganda Health Marketing Group: Indigenous organization that was founded by reputable public health and social marketing Ugandan professionals in 2006.
  • Committed to creating strategic health communication and accelerating health market growth in Uganda.