Envisioning a Healthy Future for Children: *Role of Integrated Child Development Services (ICDS) and Anganwadi Workers in Health Education and Malnutrition in Mumbai, India*

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The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

“No relationships to disclose”
VISITING SLUMS

- Case study
- Research Community:
  - Situated on the swampy terrain and close to a municipal land allocating the disposal of the city’s garbage
  - Also commonly referred as *dumping ground*
- Divided into Authorized (Plot 1) and Unauthorized (Plot 2) plot system
EXISTING GOVERNMENT PROGRAMS IN SLUMS

• Government Programs
  - ICDS (Integrated Child Development Scheme), TPDS (Targeted Public Distribution System), MDMS (Mid-day Meal Scheme)
  - Address food insecurity and nutrition

• ICDS
  - Anganwadis
  - Qualification
  - Job Responsibilities

• Pivotal role by NGO’s
FINDING HEALTH CONCERNS

- Performed community needs assessment
- Conducted key informanmt interviews with
  - ICDS government officials
  - Anganwadi workers (AWW)
  - Non-governmental organizations (NGO's)
  - Private and governmental clinicians
RESEARCH QUESTION

What is the utilization of existing dietary practice, hygiene practice & preventive and acute care health services
– in children below 6 years
– based on authorized and unauthorized plots?
VARIABLES OF INTEREST

- Nutrition
- Utilization of health services (for preventive & acute care)
- Water & hygiene practices
- Hygiene education
MAPPING THE RESEARCH APPROACH

Government Health Services
- Municipal and government hospital
- Health Post
- ICDS
- Health camps encouraging immunizations

Anganwadi Workers, Community Health Worker

NGO’s- Sneha, Apnalaya, Nirmaya

Private doctors, alternative medicine and unlicensed practitioners

Utilization of public and private child health services for treatment

Dietary intake and nutritional status

Hygiene practices - sanitation

Utilization of public and private child health services for vaccination

Education to children

Information and supplements for malnourished children, pregnant women and adolescent girls

Referral services

Behavior Change Communication

External Environment – Dumping Ground

Social Determinants
METHODOLOGY

• Study population:
  – Families living in the slum with children below 6 years

• Recruitment:
  – Anganwadi’s children registry
  – Door-to-door interviewing with community health workers

• Used standardized questionnaire to interview parent/grandparent
• Survey instrument with 30 questions with 5 parts:
  – Background
  – Water
  – Nutrition
  – Vaccination
  – General Health
• Looked at 2 plots – A & B
• N = 72 children
# RESULTS

## Demographics

<table>
<thead>
<tr>
<th></th>
<th>Plot A</th>
<th>Plot B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Age of Children 0-6 years</td>
<td>3.8</td>
<td>3.3</td>
</tr>
<tr>
<td>% Males / % Females</td>
<td>43/57</td>
<td>51/49</td>
</tr>
<tr>
<td>Male : Female Ratio</td>
<td>0.76</td>
<td>1.05</td>
</tr>
</tbody>
</table>

## Nutrition

<table>
<thead>
<tr>
<th></th>
<th>Plot A</th>
<th>Plot B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average number of meals/day</td>
<td>3.1</td>
<td>3.5</td>
</tr>
<tr>
<td>% of children eating at school or Anganwadi</td>
<td>96.9%</td>
<td>88.5%</td>
</tr>
<tr>
<td>% of Underweight children below 6 years</td>
<td>22.9%</td>
<td>28.6%</td>
</tr>
</tbody>
</table>
## RESULTS

<table>
<thead>
<tr>
<th>Health care utilization (Immunization)</th>
<th>Plot A</th>
<th>Plot B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaccines given at/by public health post</td>
<td>83.8%</td>
<td>82.9%</td>
</tr>
<tr>
<td>Vaccines given at private health center</td>
<td>8.1%</td>
<td>14.3%</td>
</tr>
<tr>
<td>Vaccines given at both public &amp; private centers</td>
<td>8.1%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Households with vaccination record</td>
<td>72.2%</td>
<td>85.7%</td>
</tr>
</tbody>
</table>
# RESULTS

<table>
<thead>
<tr>
<th>Health care utilization (Acute care)</th>
<th>Plot A</th>
<th>Plot B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government (clinic/hospital)</td>
<td>2.7%</td>
<td>11.4%</td>
</tr>
<tr>
<td>Private - NGO</td>
<td>21.6%</td>
<td>5.7%</td>
</tr>
<tr>
<td>Private - Clinician</td>
<td>75.7%</td>
<td>82.9%</td>
</tr>
</tbody>
</table>
RESULTS: HEALTHCARE UTILIZATION BY INCOME LEVEL

Vaccination

- <=$100: 88.89%
- >$100: 88.90%

Acute Care

- <=$100: 69.44%
- >$100: 88.90%
## RESULTS: HYGIENE EDUCATION

<table>
<thead>
<tr>
<th>Sources of Hygiene Education</th>
<th>Plot A</th>
<th>Plot B</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANGANWADI</td>
<td>64.9%</td>
<td>74.3%</td>
</tr>
<tr>
<td>HEALTH POST</td>
<td>27.0%</td>
<td>48.6%</td>
</tr>
<tr>
<td>NGOS</td>
<td>43.2%</td>
<td>[VALUE]</td>
</tr>
<tr>
<td>PRIVATE DOCTOR</td>
<td>18.9%</td>
<td></td>
</tr>
</tbody>
</table>

Families receiving hygiene education: 89.2% for Plot A and 77.1% for Plot B.
Quarter of the total sample reported underweight children

Higher income families utilized services for acute & preventive services from public services
DISCUSSION

- Lower income used greater private facilities for acute care

- Government programs have made highest contribution to hygiene education, immunization coverage, meals for underweight children. However efforts needs to be made for access to acute care
HEALTHCARE UTILIZATION

- Top 3 Reasons for choosing government centers
  - Free of cost
  - Better quality of care for preventive services
  - Location and easy accessibility of services
HEALTHCARE UTILIZATION

• Top 3 Reasons for choosing private centers for Acute care
  – Better quality of care for Acute care
  – Access to services (esp. near dumping ground)
  – Long wait at government clinics/hospitals
CONCLUSION cont’d.

• Outreach efforts by AWWs workers at grassroots level on nutrition, preventive health and education among underprivileged children and families have yielded valuable outcomes

• ICDS program had positive effect on the maternal-child healthcare, especially in areas of need
CONCLUSION

• Most of the burden in such areas is shared by the community health workers and local doctors who work as a team despite limited resources, low income and inadequate training of AWWs.

• Programs such as ICDS could serve as a template for interventions in communities with higher rates of both infant and under-five mortality rates.
• Mili, D. Migration and healthcare: access to healthcare services by migrants settled in Shivaji Nagar Slum of mumbai, India. The health, 2. 2011.
• http://www.deccanherald.com/content/299447/mumbai-slum-kids-malnourished.html
QUESTIONS?

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