Determinants of Health in Urban Settings

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Professor of Nursing
Yale School of Nursing
Conceptual Framework for Urban as a Determinant of Health

Municipal Business Civil Society

National International

Physical Environment Built Environment Social Environment Resource Environment Behavior

Individual and Community Health
Conceptual Framework for Urban as a Determinant of Health

Physical Environment
Built Environment
Social Environment
Resource Environment

Behavior
Individual and Community Health

Municipal
Business
Civil Society
National International
Urban Environments

• **Physical Environment:**
  – e.g., air, noise, climate, work environment, nature

• **Built Environment:**
  – e.g., land tenure, housing, transportation, water, sanitation, drainage

• **Social Environment:**
  – e.g., social networks, social support, social capital, social isolation, violence, extreme poverty

• **Resource Environment:**
  – e.g., health services, social services, food availability and access, education, work.
Conceptual Framework for Urban as a Determinant of Health

- Municipal Business Civil Society
- Physical Environment Built Environment Social Environment Resource Environment
- Behavior
- Individual and Community Health

National International
## Characteristics that define Cities

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<th>Approach</th>
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# Cities are Neither Good nor Bad

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Urban Environments as Determinants of Health

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Housing as a Human Right

Vancouver Declaration on Human Settlements

- "adequate shelter and services are a basic human right"
- "governments should assist local authorities to participate to a greater extent in national development".
- "the use and tenure of land should be subject to public control".
- “The right to adequate housing is a human right recognized in international human rights law as part of the right to an adequate standard of living”

UN Conference on Human Settlements, Vancouver, 1976. (HABITAT I)
Transition from Government as housing provider to facilitator and increasing reliance on the Private Sector for implementation of slum redevelopment - India

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<tr>
<td>SNP</td>
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<td>Yes</td>
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*four versions*: Government gives land, regulates, with subsidy to developer, homeowner, or household – households bear full costs minus subsidy; version 4 has no developer but self construction with subsidy.
Definition and Rationale: Public Private Partnership (PPP)

A public-private partnership is “a voluntary, stable collaborative effort between two or more public and private autonomous organizations to jointly develop products and services, sharing risks, expenses, and benefits.” (Ysa, 2007)

Rationale behind creating public-private partnerships is simple:

• The **private sector** typically has access to upfront capital and a track record of delivering products efficiently

• The **public sector** controls the regulating environment and, occasionally, crucial resources needed to implement a project, such as land
Pre-conditions involved in PPP

• **Many preconditions** must usually be met before sufficient risks are mitigated to render the venture appealing for the private sector.
  – a change in law must often times occur
  – accompanied by feasibility, social and environmental studies
  – willingness-to-pay assessments (Queroz, 1996).

• **Private sector must believe a positive return on investment is possible.**

• **Public sector** role involves risk mitigation measures to engender more favorable conditions ------this necessitates a rather sophisticated public sector, with a strong legal framework.
Model of PPP – Urban Transportation

**Role of Public sector:** conduct all analysis and studies to ensure feasibility

**Role of Private investor or concessionaire competitively solicited:** implement the project according to a negotiated project structure (B-O-T, B-O-O)*

Projects typically implemented through straightforward deals between
- individual land owners and the subject government agency
- the agency and the investor/concessionaire

[Transportation project can benefit from a separate entity that deals with potentially displaced residents]

*Building-Operate-Transfer, Building-Own-Operate*
Model of PPP - addressing slum conditions

Early housing projects resembled other infrastructure implementation without much coordination or interaction with the affected community.

- **Lesson**: Improved the slums - not necessarily the livelihoods of dwellers.
- **Lesson**: requires not only physical infrastructure improvements, but also opportunities for residents to become integrated citizens of society.
- **Lesson**: apply economic development to residents as well as projects

While the transportation project can benefit from a separate entity that deals with potentially displaced residents, slum upgrading requires a different dynamic involving various aspects of community and economic development.
From PPP to “Network Partnerships” for betterment of slums

Role of Public sector: conduct all analysis and studies to ensure feasibility,

Role Private investor or concessionaire competitively solicited: implement the project according to a negotiated project structure (B-O-T, B-O-O)

Enter the NGO/CBO: tasked with more socially-oriented goals, such as facilitating steps to integrate the settlement into its larger community.

These 3-way partnerships involve interdependent, adaptable relationships between various actors based on trust (at times in lieu of contracts).

Private participation may be best positioned when stemming from “enlightened self interest” - vested stake in the project exists.
Ahmedabad, India
Case study on PPP for urban slum housing

Program of free housing for slum dwellers.

Question: how incentivize the private sector to take up slum redevelopment which otherwise is not profitable for them?

• Private developers can purchase slum land from the government at 25 percent of the fair market value of the land.
• Redevelop the land with incentivized **Floor Space Index (FSI)**
On the other hand.....What is required of the Developer...

- The developer will clear the land, temporary shelter and transportation, then rehouse the eligible slum dwellers free of cost in multistory-building tenements (269 sq ft carpet area)
- Requires consent of 75 percent of the slum dwellers in the community
- Determine Eligibility: Only slum dwellers who have documents to prove that they have been living in the slum prior to the cut-off date of January 1, 2000, are eligible for the free housing. The rehabilitation buildings are on a part of the land occupied by the slum (in situ).
1. Introduction

In-situ slum redevelopment schemes, as per the "Regulations for Rehabilitation and Redevelopment of the Slums 2010" (henceforth referred as 2010 regulations) have started in Ahmedabad city in around 12 slums and are at various stages of implementation. Prepared on similar lines of the Slum Rehabilitation Scheme (SRS) in Mumbai, these regulations were released in 2010 with the objective of in-situ redevelopment of slums (irrespective of their ownership) through private sector involvement and capturing value of land, through allowing increase in the Floor Space Index (FSI) or Floor Area Ratio (FAR). The FSI / FAR increase allowed utilization of the same land better by increasing occupancy on the land. In a way, FSI / FAR increase is part of attempts to increase land supply in the cities. It is also a measure to incentivize the private sector to take up slum redevelopment activity, which otherwise is not profitable for them. However, until the 2012 amendments of the SRS regulations, which offered more relaxations in terms of usage of FSI to the developers, it failed to bring in a good response from the developers in the State.

Map 1: Location of Slums under SRS in Ahmedabad.

The 12 approved sites vary in their location in the city (Map 1), size, their ownership, community composition, housing quality, presence of an external agency such as a non-governmental organisation (NGO) and level of basic services. Ironically, the

1. Approved by the Ahmedabad Municipal Corporation (AMC).

Table 1: Settlements selected under SRS.

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of Settlement</th>
<th>Location</th>
<th>No. of Hutments</th>
<th>Name of Developer</th>
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<tr>
<td>1</td>
<td>Bhikhadevano Vado</td>
<td>Ambawadi</td>
<td>271</td>
<td>HN Safal</td>
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<tr>
<td>2</td>
<td>Rushinagar &amp; Talawadina Zumpda</td>
<td>Ambawadi</td>
<td>789</td>
<td>HN Safal</td>
</tr>
<tr>
<td>3</td>
<td>Abhujina Kuvana Chhapa</td>
<td>Ambawadi</td>
<td>55</td>
<td>B- Safal</td>
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<tr>
<td>4</td>
<td>Kailashnagar</td>
<td>Sabarmati</td>
<td>43</td>
<td>B- Safal</td>
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<tr>
<td>5</td>
<td>Bavajina Chhapa</td>
<td>Kankaria</td>
<td>194</td>
<td>B- Safal</td>
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<tr>
<td>6</td>
<td>Bavajina Chhapa</td>
<td>Kankaria</td>
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<td>B- Safal</td>
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<tr>
<td>7</td>
<td>Mangal Talawadina Chhapa</td>
<td>Vasna</td>
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<tr>
<td>8</td>
<td>Lakhudi Talawadi</td>
<td>Naranpura</td>
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<tr>
<td>9</td>
<td>Sanjaynagar*</td>
<td>Anil Starch</td>
<td>188</td>
<td>Dropped at latter stage</td>
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<tr>
<td>10</td>
<td>Salatnagar</td>
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<td>11</td>
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<td>12</td>
<td>Gulbai Tekra</td>
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<td>400</td>
<td>Harshayu Infrastructure Services</td>
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Slum Redevelopment Scheme –
Private Developers working with a 3 year deadline

- **Multiple stages of government clearances**: verify number of eligible, areas of common plot, built up areas, FSI, physical (e.g., water, lighting) and social infrastructure (e.g., schools, welfare center).

- **Efforts to convince residents to consent**, allay fears, cooperate in collection and verification of documents for eligibility

- **Residents** (or beneficiaries) see free cost housing as **too good to be true**. Question if this is a ploy to evict.

- **NGO invited by Developers** to negotiate with beneficiaries – e.g., to create identity cards, to assure cost of relocation and transportation during demolition, and actual of building new units.

- **Delays, litigation** (e.g., legal heirs to plot on which slum was located)
Slum Redevelopment Scheme - Limitations

• Operation of the model starts from the direct negotiation between slum dwellers and developers. **Unregulated competition** between developers.

• **No specific standards on the quality of rehabilitation buildings.** Will the rehabilitation buildings will become “vertical slums.”

• **Cut-off date for eligibility of rehabilitation** - ineligible population left to stay in unauthorized manner in slums or settle in a new slum after their previous slum is demolished by the government.

• **The current model provides free housing to slum dwellers, and developers have to load the cost of rehabilitation on the saleable component.** Discourages construction of housing at various price levels and ultimately leads to the increase of housing prices on the formal market. Prices out the middle class.
Floor Space Index (FSI)
To provide free housing for slum dwellers
Luxury Buildings on same plot – Mumbai, India

Rehabilitation Housing
Free

Luxury apartments
$3-5 Million
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Make a slight detour on
Innovations in Sustainable Housing Design

• Megacities currently account for 9% of urban population. Continued growth in population size; continued expansion.

• “Secondary Cities” – growth in the next 20-50 years

• Private of the PPP can bring innovation

• Innovation includes sustainable technologies
Moving from conventional to circular economy

• **Conventional economy:** “take, make, waste”
  – construction waste = 535 M tons of debris
  – food waste = 60 M tons (half of all produce thrown away)

• **Circular economy:** continual feedback loop
  – recycle as much as possible, throw away as little as possible, use as few resources as possible

• Applying circular thinking could mean:
  – less produce in landfills if it’s used to make building materials
  – making building materials that are recyclable to divert construction waste from dumps.
  – some materials could grow like crops - eliminate excess waste entirely
Introducing mycelium—the mushroom root—to agricultural waste. When the mycelium reaches out to the waste to digest it, it forms a matrix of white fibers that grows to become a solid material.
Biomason – “Biowaste” building materials

• BioMason “grows” bricks without the use of clay or heat.
• It harnesses the natural process for producing coral
• Inject micro-organisms to make calcium carbonate crystals around sand
iSchack – South Africa
Off-grid housing

The iShack Project is using solar electricity to demonstrate how green technologies can be used appropriately to:
• incrementally upgrade informal settlements and slums
• build local enterprising capacity and resilience within the community.
PPP within the Conceptual Framework for Urban as a Determinant of Health

- Municipal
- Business
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- Physical Environment
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- Resource Environment

Behavior

Individual and Community Health
Direction: Slum Housing with PPP

• 40 million more slum dwellers worldwide in 2012 than in 2010
• “Private markets clearly can’t provide universal housing in any way approaching efficiency”
• “Governments are often hostile to the poor”
• “The only alternative is collective action at the grassroots level”

Justin McGuirk,
*Radical Cities: Across Latin American in Search of a New Architecture*, 2015
3 – “Ensure healthy lives and promote well-being for all at all ages”

11- “Make cities inclusive, safe, resilient, sustainable”
Acknowledgement


• Darshini Mahadevia, Hena Bhatia, Bharti Bhonsale. Slum Rehabilitation Scheme: Amedebah: Role of an External Agency. Center for Urban Equity, CEPT University, 2014

• Yue Zhang (University Illinois Chicago). Building a Slum Free Mumbai, Urban Sustainability Laboratory, Wilson Center, 2016

• Justin McGuirk, Radical Cities: Across Latin American in Search of a New Architecture, 2015