Reverse Innovation in Healthcare: SDGs Bring Global Health to Detroit

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• Global to Local in a Health System
  • Community engagement: SDG workshop
  • Community-identified issue: Water shutoffs
  • Global parallels: Nepal water access

• Structure for Learning: Reverse Innovation Fellow

• Reverse Innovation Program
  • Our Values
  • Definition: In healthcare, Reverse Innovations are innovations adopted first in poor (developing) countries before being adopted in advanced economies.
UN SDGs in Detroit

- Explore the creative application of the United Nations Sustainable Development Goals (SDGs) relating public health to the social challenges facing the City of Detroit
- One-day Workshop
- 55 attendees
- 4 Breakout Workgroups
  - Hunger and Food Security (SDG 2)
  - Health and Wellbeing for All (SDG 3)
  - Sustainable Water and Sanitation (SDG 6)
  - Urban Development and Safety (SDG 11)
UN SDGs FINDINGS

- Weak, un-prioritized existing infrastructure
  - *Detroit must (re)build and reclaim a robust public health infrastructure*

- Detroit too often portrayed as vulnerable, powerless
  - *Take pride in resilience and history of organizing*

- Stressed by racialized post-industrialization
  - *Translocalism: Detroit can learn lessons from other cities around the world and vice versa*

- Main Issue: Water Shutoffs
• City of Detroit imposed shutoffs in 2014\(^1\)
  • April ‘14 - $5.6 million contract with Homrich

• Between Jan 1, 2015 - Feb 12, 2016: 15,086 shutoffs for nonpayment\(^2\)

• GHI & WtP\(^1\) found:
  • Families displaced (EPA says 2.5% income-to-water bill max; Detroit >10%)
  • Neighborhoods destabilized (Northwest, Northeast sides heavily affected)
  • Water bill debt \(\rightarrow\) Tax foreclosures
  • Those who were diagnosed with a water shutoff-associated illness were **1.42 times more likely** to live on a block that has experienced a water shutoff. \([X^2(2)=80.495, P<.001]\)
  • Those patients who came from blocks that were shut off were **1.55 times more likely** to be diagnosed with a water shutoff-associated illness. \([X^2(2)=66.013, P<.001]\)

\(^1\) Mapping the Water Crisis: The Dismantling of African-American Neighborhoods, 2016, *We the People of Detroit Community Research Collective*

\(^2\) Detroit Water and Sewerage Department, Shutoffs for Nonpayment, February 12, 2016
Nepal Water Access

- Clean water access: ~40% of Kathmandu’s population
  - 150 tons of daily waste; half dumped into fresh water sources (e.g. river)
- Sanitation: ~27% of Nepalese population
  - 44k child deaths per year – waterborne illness
- Development Aid Paradigm
  - Privatization of water infrastructure
  - Tourism → Private wells
- Deep Inequity
- Innovative Solutions
• MPH graduate student from University of Michigan
  • Cultural competence
  • Understanding of Detroit’s challenges
  • Passion for reciprocity & reverse innovation

• Identify Water Access & Policy Strategies
  • 3 months with Detroit partners
    • Shutoffs
    • Policies
  • 3 months with Nepal partners
    • Access
    • Infrastructure

• Deliverable: White paper, strategy documents, policy briefs
CONCLUSION

• Reciprocity. Humility. Iteration.

• Still identifying how to situate a healthcare system…

• Reverse Innovation Program
  • Vision: Our vision is of a healthy and thriving Detroit inspired by global ideas and innovations.
  
    • Mission: GHIRI brings promising innovations from abroad to Detroit that address systemic health inequities.