

# Planning for COVID-19: The view from 30,000 feet

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# After 11 months, what do we know for sure about COVID-19 and Cities?

- Population Density
- Crowding
- Inequality
- City Size
- Urban health advantage



# Population Density and Crowding

- Density does not directly impact COVID-19 transmission. Cities that are more dense have not been shown to have higher COVID-19 incidence than cities that are less dense, once you control for city size.
- The relationship between density and COVID-19 transmission is tied to crowding. This is shown in seroprevalence survey results in Mumbai and Delhi, from neighborhood-level results in New York and other U.S. cities, and also new unpublished results from seroprevalence surveys in Buenos Aires.
- City leaders should be concerned about crowding in public places including streets, crowding in businesses and workplaces, and also crowding in the home.



# Inequality

- In most metro areas, the virus has been concentrated in poorer neighborhoods and informal areas.
- Seroprevalence surveys in Mumbai and recent unpublished surveys show that the poorest areas have as much as ten times the incidence of COVID-19 as wealthier areas.
- These poorer areas are often not only short on floorspace per person, but also on public spaces – space in streets and roads, and public open spaces.
- Crowding in the home leads to transmission between members of a household; crowding on the streets and in public spaces also increases the odds of transmission outside of the home.
- Finally, there is also evidence that businesses tend to be more crowded in poorer areas.



# City Size

- Larger cities with global connections experienced the onset of the pandemic earlier than smaller cities
- Larger cities also tended to have higher density than smaller cities
- Both conditions made them predisposed toward more virus cases and fatalities
- Larger cities also have more resources – doctors, nurses, public health officials, hospitals, clinics, etc.
- In general, larger cities had fewer cases and deaths than would be expected, indicating that there is an Urban Health Advantage



# Measurement for COVID-19 Management

- Vulnerabilities in the built environment:
  - Square meters of street space and sidewalk space per person
  - Square meters of accessible public space per person
  - Square meters of built-up area per person (residential and non-residential)
- Vulnerabilities in services and infrastructure
  - Distance to clinics / Access to public health
  - Access to sanitary facilities
- Baseline data
  - Measurement of populations in informal settlements and impoverished areas
  - Identification of areas with high proportion of elderly/infirm/at risk



# Conclusion: COVID-19 Management

- Many vulnerabilities are “built-in” to our environment because of poorly designed regulations and a lack of planning
  - Lack of adequate housing
  - Shortage of public spaces and street space
- Strategies to manage these vulnerabilities
  - Increasing the supply of floor area, particularly residential floor area
    - Reducing the cost of construction by simplifying regulations
    - Legalizing and regularizing informal housing
    - Increasing the supply of land for development
  - Planning ahead for growth on the urban periphery
    - Laying out streets and roads
    - Laying out public open spaces



# Thank You!

Questions?  
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