Hixon Center for Urban Sustainability

CASE STUDY

Unequal Pandemic Impacts in New York City

Healthy City

Climate Issue: Global Pandemics

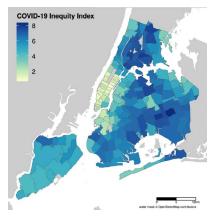
- Future pandemics are anticipated, in part as a result of the complex impacts of climate change and global urbanization
- The effects of disease outbreaks are felt unevenly across urban populations
- The science shows that social disadvantage can limit capacity to socially distance, causing health disparities
- The COVID-19 pandemic has yielded disproportionate impacts on communities of color in New York City (NYC)
- Mapping social inequality and neighborhood infection rates can inform targeted mitigation efforts.

Impossible Social Distancing

- NYC subway use rates from Spring 2020 suggest that lowincome communities and communities of color are less able to socially distance
- These residents often work in sectors with limited remote working opportunities. This increases their risk of infection
- Many residents also live in multigenerational households, increasing the risk of infection for vulnerable elders
- Compounding inequalities, such as lack of health insurance, exacerbate residents' vulnerability
- These social disparities can be combined into a measure of overall infection-related neighborhood disadvantage.

Mapping to Mitigate Pandemic Impacts

 Developing an index to map neighborhood disadvantage against infection rates can inform mitigation efforts.



Effective mapping can lead to targeted action in neighborhoods that are hardest hit by disease spread, including:

- Strategically directing community health outreach programs and mobile testing units
- Prioritizing in-person workers for vaccination
- Improving healthcare access by providing financial assistance to uninsured individuals
- Targeting direct economic support.

IN A NUTSHELL

- Given the inevitability of future pandemics we should learn from the unequal impacts of the COVID-19 pandemic
- Social disparities disadvantage low-income communities and communities of color, shaping health impacts across cities
- Mapping neighborhood disadvantage against infection rates can inform mitigation efforts
- Expanding access to healthcare while improving residents' economic security may reduce infection disparities and build long-term resilience.

WHAT CAN YOUR CITY DO?

DEVELOP an inequity index to understand which populations may be disproportionately burdened by disease spread

ENHANCE health and safety measures in widely used public spaces like the subway

INCREASE healthcare access to reduce pandemic impacts in disadvantaged neighborhoods

EXPAND financial assistance to residents of color and minorityowned businesses for long-term economic security

ADDRESS structural racism through tailored health and social equity initiatives.

To find out more information on this fact sheet, contact Dr Daniel Carrión at daniel.carrion@yale.edu. Case study based off Carrión D, Colicino E, Pedretti NF, Arfer KB, Rush J, DeFelice N, Just AC. Neighborhood-level disparities and subway utilization during the COVID-19 pandemic in New York City. Nat Commun. 2021 Jun 17;12(1):3692. doi: 10.1038/s41467-021-24088-7. PMID: 34140520; PMCID: PMC8211826.

