



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



Spotlight on Special Topics

THE ASSOCIATION OF STRUCTURAL INEQUITIES AND RACE WITH OUT-OF-HOSPITAL SUDDEN DEATH DURING THE COVID-19 PANDEMIC

Moderated Poster Contributions

Saturday, May 15, 2021, 3:45 p.m.-3:55 p.m.

Session Title: Racial and Ethnic Disparities Prevail During the COVID-19 Pandemic

Abstract Category: 61. Spotlight on Special Topics: Coronavirus Disease (COVID-19)

Presentation Number: 1092-03

Authors: *Parth Makker, Laurence Epstein, Kristie Coleman, Moussa Saleh, Rachel-Maria Brown, Jeffrey Kuvin, Robert Roswell, Northwell COVID-19 Research Consortium, Stavros Mountantonakis, Northwell Health - Lenox Hill Hospital, New York, NY, USA, Northwell Health - Northshore University Hospital, New York, NY, USA*

Background: There are limited data describing the associations of race, ethnicity and structural inequities, measured by the social influencers of health, with increased out-of-hospital sudden deaths (OHSD) during the first wave of the COVID-19 pandemic.

Methods: Data on OHSD in New York City (NYC) were obtained from the Fire Department of New York for the time periods of March 1 - April 10 for both 2019 and 2020, then stratified by neighborhood zip codes. The ratio of the incidence of OHSD was compared to the same time period a year before to serve as a historical control. To assess associates of OHSD, neighborhood level zip code-specific sociodemographic characteristics for 8 491 238 NYC residents were obtained via the US Census Bureau's 2018 American Community Survey and the New York Police Department's crime statistics.

Results: During the first outbreak of COVID-19 in NYC (March 1 - April 10, 2020) the number of OHSD rose to 4,334 from 1,112 compared to the year prior. Of the univariate neighborhood level variables evaluated, proportions of: Black race, Hispanic/Latino ethnicity, single parent household, unemployed inhabitants, people completing less than high school education, inhabitants with no health insurance, people financially struggling or living in poverty, percent of non-citizens and the neighborhood population density were associated with increased rates of OHSD within zip codes. In multivariable analysis, neighborhoods with increasing proportions of inhabitants with less than high school education ($p < 0.001$) and increasing proportions of Black race ($p = 0.04$) were independent predictors for increases in neighborhood rates of OHSD.

Conclusion: Educational attainment and the proportion of Black race in NYC neighborhoods remained independent predictors of increased rates of neighborhood OHSD during the COVID-19 outbreak even after controlling for 2019 rates. To facilitate health equity, future research needs to focus on characterizing the impacts of structural inequities while exploring strategies to mitigate its effects.