



Associations between the Prevalence of Severe Acute Respiratory Syndrome

Andreas Darwin*

Department of Environmental Health Sciences, Mailman School of Public Health, Columbia University, New York, Unites States

DESCRIPTION

We sought to ascertain whether elevated risk of testing positive for coronavirus disease 2019 (COVID-19) among pregnant people who were routinely screened at delivery was associated with long-term ambient concentrations of fine particulate matter (particulate matter with an aerodynamic diameter less than or equal to 2.5 μm), and whether Socioeconomic Status (SES) modified this relationship [1]. Between March and December 2020, we used obstetrical data gathered from New-York Presbyterian Hospital/Columbia University Irving Medical Centre in New York, New York, including information on Medicaid use (a proxy for low SES) and COVID-19 test results [2]. We used residential addresses to link predicted 2.5 μm concentrations for the years 2018 and 2019 to census tract-level population density, household size, income, and mobility (as determined by mobile device use) [3].

Environmental and health risks typically follow a social gradient. People who are exposed to higher levels of ambient air pollution are also poorer and sicker at baseline, making them more prone to contracting COVID-19 [4]. Since observations made at the area level may not apply to the individual level, this makes earlier analyses susceptible to the ecological fallacy and raises the possibility that people with lower Socioeconomic Status (SES) may be more susceptible to COVID-19 as a result of environmental exposure [5]. Lower SES has been linked to a greater COVID-19 test positivity rate at the zip code level in New York City.

Does exposure to higher levels of air pollution over a longer period of time enhance the risk of developing COVID-19? In order to respond to this query, noncausal routes connecting air pollution to COVID-19 must be taken into account. In instance, if people with low SES are exposed to higher amounts of air pollution and are less able to isolate themselves, this could result in increased exposure to COVID-19. We employed US Census tract-level mobility data, but we accept that individual-level mobility, occupational, or other exposure data would further

minimise bias caused by this erroneous channel. Prior research have not sought to account for the mobility pathway, which is closely linked to SES.

CONCLUSION

Retrospective cohort research was done on women from New York City who gave birth at the New-York Presbyterian Hospital/Columbia University Irving Medical Center between March and December 2020. Maternal race/ethnicity, age, Medicaid use (a proxy measure of low SES), and residential address were all available from electronic health record data, which we utilised to correlate exposures to air pollution and census-tract-level exposures. These variables are indicators of individual-level SES.

3,318 people from 702 census tracts in New York City made up our analytical sample. At birth, 5% of women tested positive for COVID-19, 8% did so at some point (i.e., at any point during pregnancy), and 48% used Medicaid. Medicaid and non-Medicaid users had comparable long-term 2.5 μm concentration averages with a mean of 7.4 $\mu\text{g}/\text{m}^3$. Although there were noticeable changes in mobility generally. We observed few differences based on Medicaid utilisation. However, individuals who used Medicaid were more likely to test positive for COVID-19 at birth or at any point during the pregnancy than those who did not (7.2% vs. 2.9% at delivery and 10.8% vs. 5.1% during pregnancy, respectively). Hispanics made up the majority of the 261 people who ever tested positive (70%), followed by non-Hispanic Black and non-Hispanic White (both 10%). 69% of the 58 symptomatic people who tested positive (22%) and used Medicaid.

REFERENCES

1. Bolyen E, Rideout JR, Dillon MR, Bokulich NA, Abnet CC, Al-Ghalith GA, et al. Reproducible, interactive, scalable and extensible microbiome data science using qiime 2. *Nat Biotechnol*. 2019;37(8):852-7.

Correspondence to: Andreas Darwin, Department of Environmental Health Sciences, Mailman School of Public Health, Columbia University, New York, USA E-mail: darwina@newyork.edu

Received: 24-Nov-2022, Manuscript No. TPMS-22-18971; **Editor assigned:** 28-Nov-2022, Pre QC No. TPMS-22-18971 (PQ); **Reviewed:** 13-Dec-2022, QC No TPMS-22-18971; **Revised:** 20-Dec-2022, Manuscript No. TPMS-22-18971 (R); **Published:** 27-Dec-2022, DOI:10.35248/2329-9088.22.10.282.

Citation: Darwin A (2022) Associations between the Prevalence of Severe Acute Respiratory Syndrome. *Trop Med Surg*.10:282.

Copyright: © 2022 Darwin A. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

2. Coutinho CP, Dos Santos SC, Madeira A, Mira NP, Moreira AS, Sá-correia I et al. long-term colonization of the cystic fibrosis lung by burkholderia cepacia complex bacteria: Epidemiology, clonal variation, and genome-wide expression alterations. Front Cell Infect. 2014;1:12.
3. N.A. El Aila, N.A. Al Laham, B.M. Ayesh Nasal Carriage of Methicillin resistant staphylococcus aureus among health care workers at al shifa hospital in gaza strip. BMC Infect Dis. 2017; 28.
4. Backman TW, Girke T. SystemPiper: NGS workflow and report generation environment. BMC Bioinform. 2016;17(1):1-8.
5. Hornuss D, Lange B, Schroeter N, Rieg S, Kern WV, Wagner D et al. Anosmia in covid-19 patients. Clin Microbiol Infect. 2022;26(10):1426-1427.