EGU21-2198
https://doi.org/10.5194/egusphere-egu21-2198
EGU General Assembly 2021

Remote data collection methods to inventory COVID-19 interventions in low-income urban settlements

Faith Taylor[1], Manshur Talib[2], Amos Wandera[2], Joseph Mulligan[2,3], Vera Bukachi[2], John Drummond[1], Bruce Malamud[1], and Mark Pelling[1]

[1]King's College London, Geography, Geography, London, United Kingdom of Great Britain – England, Scotland, Wales (faith.taylor@kcl.ac.uk)

[2]Kounkuey Design Initiative, Nairobi, Kenya

[3]KTH Royal Institute of Technology, Stockholm, Sweden

In this PICO, we outline methods used to inventory the spatial distribution and characteristics of COVID-19 response activities ('interventions') in Kibera (Nairobi, Kenya). About 1/8 of the World's Population live in slums and informal settlements. For these people, COVID-19 has presented unique challenges for managing health and livelihoods within the constraints of high-density housing and poor-quality infrastructure. In addition, reliable spatial, demographic and health data is often limited for these areas. Between April and July 2020, using the Survey123 smartphone application, combined with social media searches and phone enumeration, we inventoried 270 individual COVID-19 interventions taking place in Kibera, an informal settlement of 2.67 km^2 and an estimated 187,000 to 1 000,000 inhabitants. Results show a large variety in the type of intervention (58 unique types) and organiser (>88 individual organisers), with 39% of interventions led by small scale organisations such as local NGOs and community groups. We found an uneven spatial distribution of interventions within Kibera, with some already underserved neighbourhoods having less access to COVID-19 relief. Many interventions are clustered around the limited open spaces with good accessibility by road, highlighting the need for better coordination between organisers, and the importance of open space for resilience building. Using isochronal service area analysis, we find that 80% of structures are within a 9-minute round trip of a handwashing station. However, 64% of structures have a 24-54 minute round trip to female sanitary supplies, illustrating gender differences in the impact and recovery from COVID-19. Our data is available online in an interactive map dashboard. Our survey results illustrate that rather than being seen as vectors of disease, low income urban neighbourhoods are part of the solution for managing pandemics, and highlight the importance of infrastructure upgrading and planning to build resilience to a range of shocks and stresses.