

Lucie Burgess- Awarded October 2018

Statement of impact from MRC Flexible Supplement Fund award

I was awarded funding to attend the GIS for Public Health course held by the Small Area Health Statistics Unit at the MRC-PHE Centre for Environment and Health, Imperial College London. I spent a week at the St. Mary's Paddington site in July 2018, learning how to use advanced geospatial techniques for assessing environmental exposures and mapping patterns of disease, using the ArcGIS mapping software. I learnt how to develop exposure proxies when limited data are available; exposure assessment techniques, such as postcode weighting; health risk assessment, such as calculations of attributable risk; geocoding and proximity analysis, such as assessment of exposure to traffic-related air pollution; network analysis, such as exposure along a road network; and an introduction to the PostGres SQL database spatial extension. Most excitingly, I learnt how to communicate stories through maps and create professional visualisations that can enhance the understanding of my research. These tools are highly relevant to my PhD research as part of the Urban Mind project which aims to measure, model, understand and map the relationship between mental health and polyenvironmental sources of risk in the built and social urban environment. In particular, I learnt about spatial interpolation techniques including kriging and inverse distance weighting which I plan to use to develop a generative map of mental health in London, using the Urban Mind data interpolated to unsampled locations. The course was also a valuable networking opportunity, with participants mapping public health all over the world including Rwanda, India, Indonesia, the US and Europe. I am grateful to the MRC for funding specialist training at one of the world's leading institutes which has inspired new directions in my PhD.