HSMA Session 3A: Learning Objectives

Part 1: An Introduction to Geospatial Problems in Health

Students should be able to:

- Explain what kind of healthcare/policing/social care problems can be tackled using geospatial data? (routing, scheduling, location-allocation, general understanding of your service users)
- Give real-world examples are there of these techniques being applied to the kind of problems HSMAs are likely to tackle?
- Know what common problems encountered with these kinds of tasks (regional borders, raw vs standardised demand, limits of force)
- Explain the following geographical terms and concepts: latitude, longitude, northing, easting, CRS, BNSSG, projection, OA, LSOA, MSOA, postcode, trust, ICB, choropleth
- Explain the reasons behind choosing different projections
- Identify common geographical data format (GeoJSON, GeoPackage) and explain the benefits of each

Part 2: Geographic Visualisation using QGIS

Students should be able to:

- Navigate QGIS and know the functions of the key tools
- Create a new project and set up a basemap and CRS
- Add point data to a project
- Filter data
- Filter geometry
- Show and hide categories of points from the layer panel
- Troubleshoot CRS issues and understand why a CRS may be chosen
- Import different kinds of data (delimited flat files, GeoJSON, GeoPackage, ESRI shapefiles)
- Create a choropleth from data stored within a shapefile
- Explain the different ways of categorising and colouring data
- Explain the importance of considering data standardisation