

BMTRY 763 Tutorial 3

Focussed Clustering on R

We can examine both case event and count data for focused clustering . Here we will examine only count data. The file *falkxysmr(bios794).txt* is available. The variables in this file are:

Grid reference

Male expected rate

Female expected rate

Deprivation score

Count

Smr

X centroid

Y centroid

For the 26 census enumeration districts (eds) within central Falkirk, Scotland.

- 1) A putative source of hazard (a foundry) is located at 2.57900, 6.14400.
 - a) Derive a basic model for the relation between the source and ed disease outcomes
 - b) Develop R code for the model and fit the model, making note of any significant results.

- 2) A second source is thought to be at 2.57809, 6.14212
 - a) Derive a suitable model for both sources
 - b) Develop R code for that model and fit the model. Making note of any significant results.

- 3) Add the deprivation variable to the analysis and examine the effect of this addition.