Dear Sir/Madam,

7/4/2018

Please find attached my article, “The Shape of the Troubles: Developing an Impulse-decay model for representing the effect of conflict-attributable excess deaths after 1972 in young adult males in Northern Ireland”.

This article introduces a new model structure for estimating the number of excess male deaths attributable to the conflict in Northern Ireland, which requires only rudimentary demographic data – on numbers of deaths and population size by age and year – in order to be produced. This means the same model structure can be applied to estimate the deaths attributable to civil conflicts across the world, including in countries without direct means of estimating deaths by cause.

The paper also clearly describes the origins of the newly proposed model structure, through exploratory data analysis of age-year specific mortality rates in Northern Ireland compared with other populations. The unusual pattern of excess deaths evident in Northern Irish mortality records becomes clearly evident when their mortality records are visualised on a Lexis surface, and when Lexis surfaces comparing mortality rates by age and year in Northern Ireland are compared with those of age-period matched populations elsewhere in Europe. The paper thus further illustrates the benefits of this exploratory data visualisation approach for comparing mortality and other risks across populations defined by geographical place, and for the generation of novel, place-specific models appropriate for capturing the fundamentals of mortality/risk structure evident across age and time in different geographically demarcated populations.

The exploratory data visualisation approach advanced in the paper is also highly amenable to being rendered as an interactive data visualisation. Although an example of this is not submitted specifically within Manuscript Central, examples of this are available within the github repository code which the submission is linked to. I would be happy to produce such a submission if this manuscript reaches revision or acceptance stage.

Yours sincerely,

Dr Jon Minton