Reviewer’s report

Title: The association of cold weather and all-cause and cause-specific mortality in the island of Ireland between 1984 and 2007: a time-stratified case-crossover study

Version: 2
Date: 15 September 2014

Reviewer: Phil Staddon

Reviewer’s report:

Reviewed by Dr Philip L Staddon, University of Exeter Medical School

MAJOR - primarily all points in the concluding section, which could be strengthened.

p 13 conclusions:
has the impacts of temp on mortality changed over these 24 years? I would guess so.

conclusions:
no mention of the role of sudden drops in temperatures, increasing volatility; focussing solely on means misses a lot.

conclusions:
no comment on whether climate warming might help or exacerbate the problem - it might be nice to say something about the future to help policy makers.

There’s a few very recent papers and comment pieces which the authors may find interesting and worthwhile to include:


MINOR
p12 I think the link between cold deaths and age is quite clear - the majority of people affected by the excess winter deaths effect for example are over 65 yrs.
yes, there must be many other differences between Northern Ireland and the Republic which could account for this.

The point about housing stock and healthcare etc, is presented in a recent paper that you quote: reference 6.

what level of air pollution are we talking about in Ireland - I would guess very low compared to say London or Beijing...

'showed different trends' - so not significant?

not sure that the statement that cold weather mortality is a topical health issue is particularly revealing - this has been known for a long time

Regarding the analysis (all tables):
It is a shame that no test of change over time was carried out - how valid is it to perform averages over years if the relationship is changing?
I think more explanation of the rational for taking this approach in the analysis should be provided.

Level of interest: An article of importance in its field
Quality of written English: Acceptable
Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests: no competing interests