

Heat or heat waves? Does it matter which epidemiologists study?

Chair: Joel Schwartz, Harvard University, USA

Short description: There have been a large number of epidemiological studies on health impacts of heat waves, and more generally of heat. Rate of such publications has increased substantially recently, in particular in the context of impending anthropogenic global warming. To a large extent, publications have chosen a priori to focus on either heat waves (consecutive days of high temperature) or on temperature as a continuous covariate, with which health (usually mortality) is supposed smoothly related. A smaller number of publications have considered the two measures together, seeking to identify “wave effects” over and above any excess mortality that can be explained by a smooth function of temperature. At face value, there appears to be an important variation in conclusions, with some studies emphasizing impacts of waves, and other studies emphasizing smooth relationships between temperature and claiming to find little additional “wave” effects. The extent of real difference between or implications of these approaches is currently unclear. The aim of the symposium is to clarify the usefulness in epidemiological studies of focus on heat waves and on smooth functions of temperature (heat).

Presentations:

1. Introduction

Speaker: Ben Armstrong, LSHTM, London, UK

2. Investigating heatwave effects through multi-level modeling: the roles of heatwave variability and heatwave characteristics

Speaker: GB Anderson, M Bell, Yale USA

3. Accounting for model uncertainty in estimating the relative risk of mortality associated with heat waves.

Speaker: J Feder, R Peng, F Dominici, Hopkins/Harvard USA

4. Is there an additional health effect due to sustained heat during heat waves?

Speaker: A Gasparrini, B Armstrong, LSHTM, UK

5. The impact of heat and heat-wave episodes in European cities

Speaker: D Ippoliti, P Michellozzi, C Marino, M Leone; for EuroHeat, Lazio Regional Health Service, Italy

6. Heat vs. heat wave related mortality – are the susceptible groups coherent?

Speaker: J Röclov, K Ebi, B Forsberg, Umeå, Sweden; Carnegie, USA

7. Concluding remarks

Speaker: Joel Schwartz, Harvard, Boston, USA