

UK and Canadian Gulf War Veteran Mortality: Using A Fellow Military Cohort as a Comparison Population

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Introduction

To compare 1990-91 Gulf War Veterans (GWV) survival outcomes with a comparable cohort, UK's Ministry of Defence and Canada's Department of National Defence combined data from their respective cohorts. The survival estimates/comparisons emanating from this collaboration will be novel as they will control for healthy worker/soldier effect (HW/SE).

Conclusion/Implications

Beyond evidence of a strong inter-sectoral research relationship between military nations, these findings also represent a feasible solution to controlling for the HW/SE. The ability to control for this will mean more accurate UK and Canada GWV mortality/survival estimates than either country can generate on their own.

Objectives and Approach

GWV cohort building and record linkage methods used by Canada and the UK are described in more detail elsewhere. To ensure comparability in mortality outcomes between cohorts, the following steps will be conducted prior to analysis:

- ICD-9 causes of death (COD) will be recoded to ICD-10; recoding by each country will be cross-validated by the other, to ensure high inter-coder reliability;
- CODs will be analysed at the ICD-chapter level;

Calculated age- and sex-specific rates will be directly standardized using the WHO 2012-2022 Standard Population. Cox proportional hazards will be used to compare survival between cohorts.

Results

We are currently in the process of completing this exciting cross-sectoral linkage study and expect to have preliminary results to present. To our knowledge, this will be the first time that mortality outcomes for two discrete Gulf War veteran cohorts (ascertained by record linkage) will be analytically compared, rather than comparing to the general population. These findings will not only provide a more recent evaluation of the health status of GWV in Canada, but will also be a rare opportunity to control for the HW/SE, using comparisons with non-equivalent cohorts (e.g., general population, other deployment) cannot achieve.

