

R059: SARS-CoV-2 related deaths: an in-depth examination- QUB

It is estimated that there have been over 500,000 Covid-19-related deaths world-wide and over 40,000 in the UK where the death certificates mentioned Covid-19. However, both the overall number and levels of attribution are uncertain. Death records are subject to both undercount e.g. where undiagnosed Covid-19 has been either a direct (underlying) or indirect (contributory) cause of death, and coding variation leading to overestimation e.g. where death occurs in subjects who have tested positive for Covid- 19. Covid-19 death certification probably largely reflects testing levels leading to both variation and undercount in non-specialised and non-hospitalised settings. On the other hand, concurrent utilisation of other health and care services has been greatly reduced, perhaps presaging a wave of higher case fatalities for otherwise treatable conditions. Finally, the following economic cataclysm will also have very significant longer-term consequences for health and mortality rates.

The proposed project will use linked routine data within the BSO, to quantify and characterise the true mortality burden of Covid-19 in NI. The aim will be to produce the most accurate estimate of Covid-19 mortality burden by comparing actual deaths during the exposed periods to the expected numbers developed from modelling of mortality patterns and trends for different society parameters over the previous years.

The overarching aim is to undertake a detailed examination of the numbers and causes of death during and after the pandemic to estimate the short, intermediate and longer term effects of Covid-19 on the mortality rates and patterns in Northern Ireland.

Specifically:

1. To quantify the impact that Covid-19 has had on overall and cause-specific mortality rates in NI
2. To quantify the short, intermediate and longer-term mortality consequences of, and the responses to, the pandemic.
3. To identify individual, group, institutional, and area-level modifying factors.