R061: Northern Ireland Multi-morbidity Cohort (NIMC): Measures of multi-morbidity and its impact on mortality - QUB

Multi-morbidity is generally defined in accordance with the World Health Organisation (WHO) as the presence in one individual of two or more long-term health conditions. This approach has been widely used over the years and especially in the latter years by both the research and governmental community. However, this measure is also highly criticised for its limitation in understanding the effect certain health conditions have on individuals and for the mere count of health conditions.

This project is one part of a national programme funded by HDR-UK where six different longitudinal, curated data resources known as research-ready datasets across the UK will be prepared. This project aims to provide a clear conceptualisation of multi-morbidity, definitions of what morbidities to count and how to count them; reproducibility of findings across the multiple data sources; and consideration of longitudinal data to better understand trajectories of morbidity accrual and clustering. Patients will be followed up until they die, the end of the study (31 December 2019) or they leave the coverage area of the data sources. This UK-wide project collaboration includes scientists from many different institutions and disciplines, clinicians, and members of the public from across the UK to create a broader team science approach in addressing this complex subject. The findings will allow researchers and health care workers to better plan how to deliver care to people with various types of multi-morbidities.

The main aim of the project, in collaboration with researchers from across other 5 sites within the UK, to explore multi-morbidity in the UK at an unprecedented scale. This multi-morbidity research consist of linked data sources, consistent evidence-based morbidity definitions and rigorously developed multi-morbidity summary measures and will focus on:
1. Investigating the variation in multi-morbidity by geography and socio-demographic variables.
2. Examine clusters of disease and to explore which clusters have the greatest burden on individuals and health systems.
3. Analysis of disease trajectories will identify significant temporal sequences of diagnoses and recurrent trajectories.

This research project will provide robust, transparent methods for identifying the presence of disease based on administrative available data sources alongside defining the accuracy of each method and creating and promoting a definitive standard for measuring multi-morbidity.