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The relationship between General Practice metrics of multi-morbidity and secondary healthcare utilisation in Wales, UK

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Objectives

Multi-morbidity and polypharmacy are increasing and inter-related phenomena but are poorly understood. The aim of this study is to contribute to the understanding of these issues, measure the changing prevalence's of multimorbidity/polypharmacy and explore the relationship between multi-morbidity as recorded in primary care and the use of outpatient services.

Methods

The Secure Anonymised Information Linkage (SAIL) Data-bank facilitated linkage techniques to create population based e-cohorts of de-identified Welsh residents. Individuals were registered to a SAIL providing General Practice (GP) for at least 360 days in 2000 and 2014. Categories of morbidity were created using the 13 Read drug code chapters. In an initial cross sectional exploratory analysis proportional odds and cumulative logit models were used to relate GP recorded morbidities to outpatient attendance patterns in the same year.

Findings

The GP e-cohorts included 1.6 million (2000) and 2.1 million (2001) people, with 56.6% and 73.4% having ≥ 1 recorded morbidity for 2000 and 2014, respectively. In 2014, groups with 5+ morbidities were most prevalent (61.3%) in 85+ year olds and least (2.7%) in 5-9 year olds. Some 35% of individuals attended ≥ 1 outpatient specialty in 2014; 22.4% in 5-9 year olds and 63.2% for 80-84 year olds.

Results from preliminary models showed the number of GP recorded morbidities was strongly related to increasing outpatient attendances at different specialties, OR=15.3 (95%CI:15.1-15.4) of being in a higher outpatient attendance category for the 5+ morbidity group relative to the zero morbidity group.

Conclusion

Preliminary analysis has shown large increases in GP recorded multimorbidity across Wales over fifteen years and strong relationships and NHS service utilisation in cross-sectional analyses. Further work will include creating more refined definitions for multimorbidity metrics, linkage to hospital admission data, comparisons across healthcare settings and the development of longitudinal models.

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