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International Journal of Population Data Science

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International Journal of Population Data Science

What is an admission? A standardised approach to classifying inpatient episode data from multiple jurisdictions

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Introduction

Inpatient datasets in the UK are primarily organised by episodes (periods of care under an individual consultant), while researchers often want to measure admissions (periods of stay in hospital). We developed a standardized method for identifying admissions in inpatient data, while accounting for differences between the four UK nations.

Objectives and Approach

All UK inpatient datasets include date variables, permitting chronological sequencing of episodes. They include flags describing whether an episode is a transfer of care, although structures and definitions differ. Data quality is variable leading to concurrent and overlapping episodes, duplication and "orphan" or "childless" transfer episodes, where no originating or destination episode can be identified.

Our objective was to define a method for classifying individual episodes into a continuous period of stay in hospital, which would be consistently applicable to the analysis of inpatient datasets of all four UK nations, while prioritising clinical meaningfulness. Three permutations were considered.

Results

For each permutation, episodes for an individual were linked when they related to the same individual and met the following criteria:

a. Zero or one day gap between episode end and subsequent episode start

b. Evidence of transfer according to admission method or discharge destination variables

c. Episode overlapping or completely nested within another episode

Permutations:

1. a and b

2. a only

3. a and c

Permutation three was adopted, as it was felt to be the most clinically meaningful approach, was not dependent on accurate recording of transfers and captured nested or overlapping episodes, which may occur for example when a patient is in a long-stay psychiatric or elderly care ward but requires care from a different specialty. Importantly it permitted consistent analysis of episodes across all UK nations.

Conclusion/Implications

The output of this work provides a useful guide for the classification of inpatient episodes into more clinically meaningful periods of care, and is applicable to the inpatient datasets of all four UK nations. It describes important issues to consider when classifying episodes of care, particularly relating to data quality.