

International Journal of Population Data Science

Journal Website: www.ijpds.org



Swansea University
Prifysgol Abertawe

Using consented health record linkage in a longitudinal cohort study

Tingay, Karen¹, Akbari, Ashley¹, Bandyopadhyay, Amrita¹, Bedford, Helen², Brophy, Sinead¹, Cortina Borja, Mario², Fitzsimons, Emla³, Griffiths, Lucy², Healy, Melanie¹, Johnson, Jon³, Setakis, Efrosini³, Walton, Suzanne², Dezateux, Carol², and Lyons, Ronan¹

¹Swansea University Medical School, Swansea University

²Institute of Child Health, University College London

³Centre for Longitudinal Studies, Institute of Education, University College London

Objectives

The aim of this project is to address important issues relevant to children's health. This will be done by enhancing information collected in the longitudinal, UK-wide Millennium Cohort Study (MCS) by linking participating children to their routine health records. These issues include: health service implications of early life onset of obesity and overweight; timeliness of immunisations; association of infections with asthma and allergic disorders in childhood; and burden of disease due to childhood injuries.

Approach

The MCS comprises information on the social, economic and health-related circumstances of children surveyed at ages 9 months, 3, 5, 7, 11 and 14 years. At the age 7 interview, 12517 (89.1%) of the 14043 adults with parental responsibility consented for information from their child's routine health records to be released to the MCS (a).

Routine health records have been requested for Wales, England and Scotland to be linked to MCS responses within the Secure Anonymised Information Linkage Databank at Swansea University. Data will be analysed using weights for non-response, non-consent and non-linkage and the linkage reported according to the RECORD guidelines (b).

Results

To date, all 1881 MCS children with valid consent who live or have lived in Wales have been linked by assigning an Anonymous Linking Field (ALF) to each individual which can be mapped across multiple datasets without risk of identification (c). Of these children, 1365 (72.3%) had experienced at least one hos-

pital admission by the age of 14 years. Risk of admission by each of the survey ages for boys and girls separately will be calculated adjusting for non-response at different sweeps. These children have also been linked to their immunisation records ($n = 1872$), Emergency Department attendances ($n = 1276$), and available GP records ($n = 1151$) to enable analyses in fulfilment of the project objectives.

Conclusions

Routine health records are a potentially valuable enhancement to longitudinal studies, allowing evaluation of questions of relevance to public health and health services, and the completeness and consistency of records from these different sources to be addressed.

References

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*Corresponding Author:

Email Address: k.s.tingay@swansea.ac.uk (K. Tingay)

