Health LinQ – Using routine health data to link to better patient care

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Abstract

Australia is one of few countries that have comprehensive, high-quality, population data on many aspects of health and health care. Administrative health data have several advantages over community surveys, or data derived from individual clinical settings. They provide accessible and timely longitudinal data for an entire jurisdiction without the intrusion and cost of additional data collection, and so can be useful for both research and chronic disease surveillance. The Australian Government has provided $30 million to establish the Population Health Research Network (PHRN), with representation from all States and Territories to facilitate population health research through data linkage. The Queensland Centre for Health Data Services (QCHDS) is the Queensland node and trades under Health LinQ. The centre involves 4 Queensland universities, Queensland Health and the Australian e-Health Research Centre. Functions of the QCHDS include: 1) Facilitating access to linked datasets involving Queensland Health and national data; 2) Developing methodologies for data linkage and analysis; 3) Capacity building around data linkage; 4) Participation in the national coordination of data linkage and research. This talk describes the procedures for, and applications of, health data linkage. Researchers can either define cohorts for study within the administrative data or link them to their own data. Linkages are by probabilistic and deterministic matching using iterations of Link King and Febrl software packages, with robust protocols to preserve patient confidentiality. Access to the following data has been achieved: hospital morbidity, mortality, peri-natal, mental health data, as well as vital statistics. Privacy of linked data is protected by using a broken chain of information.

Data custodians provide demographic information without any health service data for linkage. A unique key is attached to the health service data before being handed through Health LinQ to the researcher. The researcher now has access to linked data without receiving any of the identifying demographic information. Current projects include preventable deaths from physical illness in psychiatric patients and an evaluation of whether the increased tax on alcopops has reduced alcohol-related health service use such as admissions to hospital or visits to emergency departments.

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