Improving metadata quality assessment in public health and epidemiology

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The increase in generation of, and access to, public health and epidemiology data necessitates robust mechanisms to produce data documentation - metadata. Metadata often describes research data and the process through which the data was collected. Secondary use of clinical data sourced from electronic health records can greatly benefit from access to metadata and other such documentation.\textsuperscript{1} However, metadata quality assessments often fail to form a routine part of metadata administration.\textsuperscript{2} The aim of this work is to review different methods of metadata quality assessment and improve understanding of current practices in public health and epidemiology research.

The review focused on identifying pre-existing methods of metadata quality assessment including approaches to defining quality dimensions.

A total of 11 approaches to metadata evaluation were identified during the review with totality, accuracy and accessibility being the three most commonly identified principles of quality. A review conducted in 2013 by Tani and Candela\textsuperscript{3} was also identified.

Results of the review indicate whilst there are pre-existing approaches to metadata quality assurance, scope remains for public health and epidemiology-specific guidance. The next step is to circulate a web-based survey aimed at stakeholders in public health and epidemiology to identify current challenges and areas of improvement. This will inform development of a conceptual model to support improved metadata quality assessment.