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Development of a Data Collection Tool for MbHIS-QUAL: Evaluation of the Quality of Morbidity Data in Routine Health Information Systems (RHISs) in Hospitals

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Abstract

The quality of morbidity data in multiple routine inpatient records in a sample of South African hospitals is being assessed in terms of data accuracy and completeness. Extensive modification of available data collection tools was required to make it possible to collect the required data for the study.

Keywords:

Health Information Systems, Data Accuracy, South Africa

Introduction

The evaluation of the quality of data in routine health information systems (RHISs) is an important component of assessing their potential to provide data to support planning, surveillance and patient care. The MbHIS-QUAL study is currently underway to assess the quality of morbidity data in routine inpatient records in South African public hospitals. While there have been multiple frameworks developed for collecting the actual data required for assessing the quality of data in RHISs, none of those identified was appropriate for this study. The closest model of the required data arose from guidelines for the structure and content of patient records [1], rather than from tools such as PRISM, which focus on the performance of RHISs at facility or higher organisational level [2].

Methods

The data collection tool for the MbHIS-QUAL study is being used to collect data from a sample of approximately 5780 routine patient records. The quality of the morbidity data in the records will be assessed in terms of accuracy and completeness. Data accuracy will be assessed at the hospital level by comparing information on patient functioning, procedures, and diagnoses recorded on paper-based systems (including routine patient medical records, discharge summaries, and ward registers) with the information captured in the electronic records for patients discharged during the study periods. Data completeness will be measured by assessing the proportion of discharge summaries that have all the required data fields completed by a clinician.

Results

Based on the guidelines for review of patient records defined by the Academy of Medical Royal Colleges [1] and other similar guidelines, the following data fields will form the basis of the review: patient ID, attending physician's signature, admission diagnosis, discharge date, discharge (final) diagnosis, condition on discharge, and procedures.

Even when using the guidelines for record reviews, further detailed work was required to determine actual data items to be extracted from the records, and some data items are still to be defined on the basis of actual data found in routine patient records. Some examples of issues addressed are listed below:

- To ensure patient confidentiality, the patient ID is replaced by a study ID assigned by the research team.
- The 'attending physician' could be a medical specialist, or a specialist in training, or a general practitioner, depending on the hospital and the level of staffing.
- There is currently no standard for recording 'condition on discharge' in patient records. A free text field has been defined to allow for recording any available data related to the condition of a patient which is present in the record.
- Data on diagnoses and procedures are not necessarily coded. Provision is therefore made for recording both free text and codes for these data elements.
- A maximum of three (3) procedures will be recorded for each study patient.

Conclusions

The conversion of published guidelines and tools to an appropriate and practical data collection tool for the MbHIS-QUAL study required significant effort. Further details of the data collection tool are available from the authors.

Acknowledgements

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