South Africa - Evaluation of availability and quality of morbidity data in Routine Health Information Systems (RHISs) in hospitals

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Overview

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Overview

ABSTRACT
Information about the burden of disease (BoD) experienced by the population as well as that experienced by patients attending health services is a key component of the health information system, providing essential data for prioritising and planning health services and monitoring programmes. While there has been and continues to be significant work based on mortality (cause of death) information, there is also a great need for reliable, standardised morbidity information (causes of ill health and levels of functioning) and interventions (activities undertaken in response to ill health) to inform health service management and planning. Current sources of patient-level morbidity information in South Africa are fragmented in terms of: coverage between and within health facilities across the country; and completeness of information for individual patients.

In addition, the planned implementation of the National Health Insurance (NHI) system in South Africa necessitates a review of current routine health information systems (RHIS) for coded and codable clinical data in public sector hospitals to assess whether they can support an NHI, and to make recommendations for changes to ensure that NHI requirements can be met in future. This proposed study seeks to identify the requirements for coded data on patient diagnoses, functioning and interventions (i.e. coded clinical data) to support the needs of the NHI, morbidity surveillance, and BoD assessment in South Africa; to assess the availability of patient-level coded and/or codable data in public hospitals in South Africa; and to assess the quality of coded data for functioning, interventions and diagnoses in NHI pilot districts.

A cross-sectional study will be undertaken using a multi-method approach, which will include a facility survey of the availability of clinical data on patient diagnoses, functioning and interventions in RHISs in South African public hospitals - the Availability study; and an assessment of clinical data in routine inpatient medical records for quality in terms of accuracy and completeness - the Quality study. In addition, in-depth interviews with 25 key informants will be conducted to identify requirements for coded clinical data, and to obtain information on the patterns of use of electronic routine health information systems (eRHIS) in South African hospitals.

A national survey of a representative sample of 205 hospitals, stratified by province and levels of hospitals (tertiary, regional and district) will be conducted for the Availability study, in order to gain an understanding of the availability of routine health information systems (paper-based or electronic) in use, and the extent to which provision is made in such records for recording coded and/or codable data on diagnoses, functioning and procedures.

For the Quality study, data will be collected from approximately 5 780 routine patient level records in 45 public hospitals in 10 NHI pilot districts to assess the quality of the morbidity data in terms of the completeness of the patient medical records and discharge summary, and agreement between the inpatient medical record, discharge summary, ward registers, and patient level information on electronic RHISs (eRHIS), in public hospitals. 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 record, discharge summary, ward register) with the information captured on the electronic records for patients discharged during two one-month periods (March 2015, summer season and a peak for diarrhoeal cases, and July 2015, winter period).

Data completeness for the Quality study will be measured by assessing the proportion of discharge summaries that have all the expected required data fields completed by a clinical registrar (specialist in training), a general practitioner/medical officer or nursing staff such as patient ID, attending physician's signature, admission diagnosis, discharge date, discharge (final) diagnosis, condition on discharge, and procedures.

Descriptive statistics, Analysis of variance (ANOVA), Cohen's kappa coefficient, and multiple regression analyses would be conducted using STATA® Version 13. A general inductive approach will be used to analyse the qualitative data.

Results from this project will assist South Africa in strengthening morbidity information, firstly by developing a clear understanding of the available coded clinical data in routine information systems in the public health sector, the shortcomings in availability and quality of data, and how the relevant information systems should be developed to support the NHI and provide necessary information for morbidity surveillance and burden of disease assessment. Secondly, from a

burden of disease perspective, the project will support the establishment of a South African Country Collaboration with the Global Burden of Disease Study so as to make use of available morbidity information and develop synthetic estimates of DALYs and quantify the contribution of selected modifiable risk factors. This information will contribute to informing the prioritization of health promotion and disease prevention activities both within South Africa and internationally. Finally, results and, where possible, data will be made available online for further analyses and research. Public health, health informatics and population health programmes at universities will be alerted of available data with a view towards lobbying post-graduate student projects.

Key words: Data quality, morbidity data, discharge summary, routine health information system (RHIS), National Health Insurance (NHI), South Africa

Producers and Sponsors

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Sampling

No content available

Questionnaires

No content available

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