



ORIGINAL ARTICLE

Reliability of the minimum basic dataset for diagnoses of cerebrovascular disease^{☆,☆☆}



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Abstract

Introduction: The minimum basic dataset is the largest available hospital care administrative database that is used in clinical studies and hospital management in association with diagnosis-related groups (DRGs). In 2011, the quality of the national MBDS in hospital discharges was audited, in order to assess its reliability. This paper presents a sub-analysis of the results from that analysis which are referred to cerebrovascular disease (CVD).

Methods: Using all discharge reports from the Spanish MBDS in 2009, a representative sample was obtained by stratified sampling and 11 209 records were evaluated. Outcome indicators were obtained to measure any differences observed between the national MBDS being evaluated and the hospital's original MBDS. Analysis of codes for CVD as a primary diagnosis was performed for ICD-9-CM diagnostic categories 430 through 438. We evaluated error rates in the selection and classification of main diagnoses, as well as in DRG assignment.

Results: There were 397 discharges of cases of CVD which included 21 different DRGs. Diagnostic coding showed a concordance rate of 81.87%; the selection error rate was 2.26% and the classification error rate was 15.87%. The error rate in the DRG was 16.12% and associated with the greatest impact on the mortality risk level.

Conclusions: While the errors we observed must be taken into account, data suggest that the quality of the MBDS for CVD is sufficient to ensure delivery of valid information. The hospital discharge registry serves as a valuable tool for use in studies of this disease.

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PALABRAS CLAVE

Calidad;
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 Grupos relacionados
 con el diagnóstico;
 Ictus;
 Registros

Fiabilidad del conjunto mínimo básico de datos en el diagnóstico de la enfermedad cerebrovascular

Resumen

Introducción: El conjunto mínimo básico de datos (CMBD) es la mayor base de datos clínico-administrativa hospitalaria disponible, empleada en estudios clínicos y en gestión hospitalaria, a través de los grupos relacionados con el diagnóstico (GRD). En 2011 se acometió una auditoría de la calidad del CMBD en las altas hospitalarias, a fin de evaluar su fiabilidad. Este trabajo constituye un subanálisis de los resultados, referidos a enfermedad cerebrovascular (ECV).

Métodos: De todas las altas del CMBD estatal del 2009, se obtuvo una muestra representativa, evaluándose 11.209 historias clínicas. Los indicadores de resultado se obtuvieron como medida de las diferencias observadas entre el CMBD evaluado y el CMBD original del hospital. El análisis de la codificación de la ECV como diagnóstico principal se realizó sobre las categorías diagnósticas CIE-9-MC 430-438. Se evaluaron las tasas de error en la selección y clasificación del diagnóstico principal, así como en la asignación del GRD.

Resultados: Se observaron 397 altas por ECV, incluyendo 21 GRD diferentes. La codificación mostró una concordancia del 81,87%, siendo la tasa de error de selección del 2,26% y de error de clasificación del 15,87%. La tasa de error en los GRD fue del 16,12%, con mayor repercusión sobre el nivel de riesgo de mortalidad.

Conclusiones: Si bien los errores observados deben ser considerados, los resultados obtenidos indican que la calidad del CMBD en la ECV permite garantizar la obtención de información válida. El registro de altas hospitalarias puede ser una herramienta valiosa a la hora de acometer estudios sobre esta enfermedad.

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Introduction

The minimum basic dataset (MBDS) is the largest administrative database on hospitalised patients, as well as the main source of information on morbidity in patients receiving care.¹ It includes copious information on different aspects of hospital activity that can be used to analyse variability in clinical practice² and care quality.³

The MBDS at discharge (MBDSD) consists of the hospital discharge records pertaining to the information service run by the Spanish National Health System (SNHS), which reports to the Ministry of Health, Social Services, and Equality. One of the reasons why these records are so valuable is that providing this information is compulsory for both private and public healthcare entities.

This database is used to generate different sets of official statistics, and it is also useful for numerous clinical research projects. Furthermore, its use of the diagnosis-related group (DRG) system, which sorts patients into homogeneous groups according to their clinical characteristics and use of resources, has served as a baseline for the development of indicators and operating standards, including costs and their relative weights, used by the SNHS as references.⁵ The dataset is very useful for performing comparative analyses in the context of hospital management. In the specific case of cerebrovascular disease (CVD), it has also been helpful for assessing healthcare quality,^{6,7} as well as the morbidity and mortality burden.⁸ In our setting, Matías-Guiu⁹ and Marrugat¹⁰ have supported using the MBDSD to study the epidemiology of this disease.

However, several Spanish and international studies have questioned the accuracy of discharge records as a valid data source for quality of care assessments.^{11,12} These studies recommend systematic evaluation and quality control of the records.¹³ Regarding coding stroke cases, earlier studies from other countries have revealed coding mistakes that could be identified in 15%-20% of the total discharge reports.¹⁴

By implementing the SNHS quality plan, the Ministry of Health, Social Services, and Equality has completed a series of actions aimed at improving information systems and including a quality audit of discharge data from the MBDS. A similar initiative was carried out by the former Spanish Institute of Health in 1993,⁴ in addition to different audits performed individually within the framework of the cost-based DRG weight estimations completed by the SNHS. Findings from an audit of healthcare data, carried out by the Canadian Institute for Health Information between 2005 and 2006 as part of a quality improvement programme, also served as a reference.¹⁵

The actions taken by the former Spanish Institute of Health, responsible for the MBDS, aimed at assessing reliability of the information and providing stakeholders with evidence on the quality of MBDSD records for the purpose of improving them.

The aim of this study is to perform a subanalysis focusing exclusively on CVD and based on the results for this group of diseases only obtained by the assessment mentioned above.

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