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ORIGINAL ARTICLE

Evaluation of medication reconciliation in a trauma unit☆

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KEYWORDS
Reconciliation;
Traumatology;
Discrepancies;
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Medication history

Abstract
Introduction: The aim of this study was to assess the rate of discrepancies in medication reconciliation on admission patients in a trauma unit, and identifying potential risk factors associated with these discrepancies.
Materials and methods: A cross-sectional, observational study was carried out to identify reconciliation errors in a tertiary hospital during the period from May 1 to July 16 of 2012. Medication history of the patient was compared with home medication data collected on admission, to identify reconciliation errors. These were classified according to the type and severity of the discrepancies. Statistical analysis by logistic regression was performed, using the presence of discrepancies as dependent variable.
Results: The study included 164 patients, and reconciliation errors were found in 48.8%, of which 14.4% were considered highly relevant. Around two-thirds (66.7%) of the patients admitted to the emergency department showed unjustified discrepancies compared to 44.8% in scheduled patients. In total, 153 reconciliation errors were identified, being omitted drug the most frequent type of discrepancies (72%). The risk of discrepancies increases by 33% for each drug added to the usual home treatment.
Conclusion: This study demonstrates the lack of quality in home medication recording in patients admitted to the trauma unit.

PALABRAS CLAVE
Conciliación;
Traumatología;
Discrepancias;
Errores de conciliación;

Evaluación de la conciliación de la medicación en una Unidad de Traumatología

Resumen
Introducción: El objetivo del estudio fue evaluar la tasa de discrepancias en la conciliación de la medicación realizada al ingreso de los pacientes en una Unidad de Traumatología, identificando los posibles factores de riesgo asociados a los errores de conciliación.

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Historia farmacoterapéutica

Material y métodos: Se trata de un estudio observacional transversal realizado en un hospital de tercer nivel durante el periodo comprendido entre el 1 de mayo y el 16 de julio del 2012, en el que se elaboró un listado del tratamiento domiciliario del paciente contrastándose con la historia farmacoterapéutica recogida al ingreso en dicha unidad, para identificar los errores de conciliación. Estos se clasificaron en función del tipo y la relevancia de la discrepancia. Se realizó un análisis estadístico por regresión logística, utilizando como variable dependiente la existencia de discrepancias.

Resultados: Ciento sesenta y cuatro pacientes fueron incluidos en el estudio, hallándose errores de conciliación en el 48,8%, de las cuales el 14,4% fueron considerados muy relevantes. De los pacientes ingresados de forma urgente, el 66,7% presentó discrepancias frente al 44,8% en pacientes programados. En total, se identificaron 153 errores de conciliación, siendo el tipo más frecuente el de omisión de algún medicamento (72%). Se detectó que por cada fármaco añadido al tratamiento domiciliario habitual el riesgo de presentar discrepancias aumenta en un 33%.

Conclusión: Este estudio pone en evidencia la falta de exhaustividad en la recogida de la historia farmacoterapéutica de los pacientes al ingreso en la Unidad de Traumatología.

Introduction

According to data from the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), medication errors represent one of the main causes of death and permanent loss of function among hospitalized patients. Nearly half of these errors are associated with care transition and changes in the person responsible for the patient, and it has been calculated that over 50% of admitted patients have at least 1 non-justified discrepancy between their medication prior to admission and hospital prescription. In Spain, it has been estimated that between 23% and 37.4% of adverse effects (AE) found among admitted patients are related to their medication.[1–6]

The reconciliation of medication is a formal and protocolized process which consists in compiling a full list of the medication taken by a patient prior to hospital admission and comparing it with the drug therapy prescription after a care transition, admission into hospital, following a change in the person medically responsible or upon hospital discharge. It has been proven as a key process in the prevention of AE caused by medication errors, as it has managed to reduce these errors by up to 70%.[4,5]

The present study aims to assess the collection of pharmacotherapeutic information carried out during hospital admission as a key step in medication reconciliation of patients at the Traumatology Service of a tertiary hospital. In addition, the study also aims to determine the possible risk factors associated to reconciliation errors.

Methods

This was an observational and transversal study, conducted at the Traumatology Service of a tertiary hospital over the period between 1 May and 16 July, 2012.

We included all patients aged over 18 years of age who were admitted at the Unit during the study period, whose hospital stay was over 24 h and who presented chronic drug treatment at the time of admission. We excluded those patients whose medical history could not be obtained.

Patients were analyzed 24–48 h after admission, performing a review of their pharmacotherapeutic history prior to admission, using the following sources of information: clinical history of the patient, evaluation file completed upon admission by nursing staff, daily medication administration chart, recent discharge reports, Emergency Unit reports, information from prescriptions invoiced by the pharmacy office to the Aragon Healthcare Service through the Farmasalud® database and the Pharmacy Service Management program (FarmaTools®), where both the medication prescribed during admission and the records of dispensation of hospital medication through the unit to outpatients were reviewed.

Using the information gathered, we compiled a list of home treatment for each patient excluding drugs for the treatment of acute processes, such as antibiotics and analgesics, dietary supplements and medicinal plants, as well as all drugs not financed by the National Healthcare System, for which no information could be obtained. This list was compared with the treatments recorded upon admission at the Traumatology Service in order to identify any possible discrepancies.

For each patient, we registered the following variables: demographics (gender, age), information related to care (type of admission: scheduled/urgent, hospital stay), clinical (diagnosis, comorbidities), pharmacotherapeutic and reconciliation (professional carrying out the reconciliation, number, type and severity of the discrepancies, number of drugs involved in the discrepancies and therapeutic groups).

This study only analyzed non-justified discrepancies, that is, errors of reconciliation; classifying them based on the type of discrepancy (according to the criteria of the