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Analysis of medication error in 80 healthcare institutions in the French northern region of Nord-Pas-de-Calais☆,☆☆

Analyse descriptive des erreurs médicamenteuses survenues dans 80 établissements de santé du Nord-Pas-de-Calais et déclarées à l'OMÉDIT entre 2010 et 2012

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Summary

Objective. The primary analysis had for its main purpose the description and characterization of 1871 medication errors reported by voluntary healthcare institutions to the Nord-Pas-de-Calais OMEDIT between 2010 and 2012.

Methodology. Medication errors were characterized, and the contributory or influential factors were ranked by using the new taxonomy from the Review of Errors in MEDication » (REMED V2 process) offered by the French Society of Clinical Pharmacy.

Results. Among 80 voluntary healthcare institutions, 65 reported 1856 out of 1871 medication errors. Overall, 2507 drugs were involved, and 6 groups of the Anatomical Therapeutic Chemical (ATC) classification system represented more than 90% of the medication errors. The errors of dose and medicine accounted for 72% in the cumulative frequency of drug errors reported. The prescription (39%) and administration (33%) were the two main initial stages of drug error occurrences in the medication use process. Medicines, practices and procedures, and healthcare professional

Résumé

Objectif. L'analyse a eu pour but principal de décrire et de caractériser les 1871 erreurs médicamenteuses (EM) déclarées par des établissements de santé (ES) volontaires à l'OMÉDIT Nord-Pas-de-Calais entre 2010 et 2012.

Méthodologie. Les EM ont été caractérisées et les facteurs contributifs ou influents ont été hiérarchisés en utilisant la nouvelle taxonomie de la revue des erreurs liees aux medicaments et dispositifs associés (REMED V2) proposée par la Société française de pharmacie clinique.

Résultats. Parmi les 80 ES volontaires, 65 ont déclaré 1856 des 1871 EM. Deux milles cinq cent sept médicaments ont été impliqués et six classes thérapeutiques « ATC » représentaient plus de 90 % des EM. Les erreurs de dose et de médicament représentaient 72 % en fréquence cumulée des EM déclarées. La prescription (39 %) et l'administration (33 %) ont été les deux principales étapes initiales de survenue des EM dans le circuit du médicament. Les domaines « Médicaments », « Pratiques & Procédures » et « Professionnels de

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areas might be the most involved in the diagnosis of contributory or influential factors associated with declared medication errors.

Conclusion. Even though the safety culture is being developed within healthcare institutions of the area, the objective in 2013 was to achieve an expansion of the number of healthcare institutions reporting as well as to increase the number of declarations used as returns of experience.

Keywords : Medication error, Drug "never events", Type of error, Achievement level of the error, Severity level detected, Initial stage of drug error occurrence, Contributory or influential factors

santé » seraient les plus impliqués dans le diagnostic des facteurs contributifs ou influents associés aux EM déclarées.

Conclusion. Même si la culture de sécurité commence à émerger au sein des ES de la région, l'objectif en 2013 est de parvenir à élargir le nombre d'ES déclarant ainsi que le nombre de déclarations faisant l'objet d'un retour d'expérience.

Mots clés : Erreur médicamenteuse, Évènements médicamenteux « qui ne devraient jamais arriver », Nature de l'erreur, Niveau de réalisation de l'erreur, Niveau de gravité constatée de l'erreur, Étape initiale de survenue de l'erreur médicamenteuse, Facteurs contributifs ou influents

Introduction

In its report *To Err is human: Building a safer health system* [1], published in 1999, the Institute of U.S. Medicine highlighted for the first time the problem pertaining to the quality of medical care in the North American health systems that persisted for half a century. Indeed, every year, there would be more than 7000 deaths by mistake in medications in the United States and serious medicinal complications were found in 3% of the hospitalizations. In France, these international data were confirmed during the National Inquiries on Adverse events associated to the Care (ENEIS), which were realized in 2004 and 2009 at the request of the National Executive management of Health and the Head office of the Organization of National Care (DGOS), to analyze the incidence of the serious adverse events (SAE) in the French establishments of health (EH), their avoidability, and to their immediate causes. The pooled results of these inquiries showed that approximately 30% of the SAE would be bound to a medicinal adverse event, among which approximately 50% would be avoidable, thus being similar to medicinal errors (ME). In 2009, the drug represented the third cause of avoidable EIG identified during the hospitalization (density of incidence of 0,7 per 1000 days of hospitalization [DH]) just behind the invasive acts and the infections associated with the care (density of incidence of 0,9 per 1000 DH), and by extrapolation it would represent 60,000–130,000 SAE/year related to the drug, among which 15,000 on 60,000 would be avoidable [2]. It is, thus, not surprising that the French decree of April 6, 2011, more particularly in its article 9, implements an organization in charge of the analysis of adverse events of ME or dysfunctions related to the patient medicinal care (PMC) in the management of the establishment. The decree also implements the planning of the actions that are necessary to improve safety (i.e. the implementation of a posteriori approach or reactive management of medicinal risks before October 2012) [3]. It is convenient to remind oneself that the collection and analysis of ME enable a partial validation of criterion 20a (quality approach of the PMC) of the HAS certification manual 2010 version published in January 2010 [4]. Concurrently, the analysis of the errors of prescription and/or administration of drugs as well as the retro-information of the staff is one of the criteria of the French Contract of Good use of Drugs, Products, and Services 2011–2013 of the French Nord-Pas-de-Calais region. This criterion modulates the rate of refund of the non-homogeneous stay group medicinal products in hospitals since 2012. This EH obligation to declare the SAE associated to the medical care represents the second of four axes of the National Program for the Inpatient Safety 2013–2017 launched by the French Minister for Health in February 2013 and coordinated by the DGOS [5]. Even though an office of ME was created in 2005 within the ANSM (French National Agency for Health and Drugs) to collect in France all the errors or the risks of ME indicated by the healthcare professionals [6], the regional initiatives of collection and analysis of the declarations of medicinal errors still remain marginal [7,8].

Materials and methods

Context

The Nord-Pas-de-Calais Regional Observatory of Drugs, Medical Devices, and Therapeutic Innovations (OMÉDIT) had set up a regional committee for medicinal errors in 2009. The first work of this committee was to consensually develop a regional form for the declaration of medicinal error (appendices 1 and 2) accompanied with a guide of filling. The voluntary EH that was about to participate in this regional approach had to appoint an investigator and make a commitment to transmit their anonymized ME declarations according to a rhythm determined in agreement with the Nord-Pas-de-Calais OMÉDIT [9].