

Chapter 64

Users' Perception towards the "Safe Medication through Pharmacovigilance and Compliance Monitoring (Pharmacov)" Service

George E. Karagiannis

Royal Brompton Hospital, UK

Athina Lazakidou

National Technical University of Athens, Greece

Lida Tzachani

Royal Brompton Hospital, UK

Dimitra Iliopoulou

National Technical University of Athens, Greece

Vasileios G. Stamatopoulos

*Foundation for Research and Technology-Hellas,
Greece*

Maria Petridou

University of Nottingham, UK

Michael A. Gatzoulis

Royal Brompton Hospital, UK

ABSTRACT

A feasibility study was conducted to evaluate the acceptability and effectiveness of the "Safe medication through pharmacovigilance and compliance monitoring (PharmacoV)" service, an Internet-based interactive information tool that assists physicians in identifying potential Adverse Drug Events (ADEs) or contraindications when they are prescribing medicinal products to patients. The users' perception was assessed by the means of a structured questionnaire containing Likert type responses ranging from 1 to 5. Five hundred eighty nine (n=589) healthcare professionals were enrolled during an eight (8) month trial of the service in London, UK during 2007. The vast majority of the healthcare professionals who participated in the study was very enthusiastic about the PharmacoV concept and perceived clear benefits in terms of accessing drug information. The authors' results suggest that a well-designed intervention study is possible. This will allow the evaluation of the feasibility, acceptability and effectiveness of the intervention in the context of the different European healthcare systems, and may gradually shape an optimal health care system. Their study is limited to the specific extend that the pilot trial of the service could not be implemented as part of the routine clinical practice of the participating physicians mainly because of the need to continuously update the service functionality during the execution of the study.

DOI: 10.4018/978-1-4666-6339-8.ch064

INTRODUCTION

Pharmacovigilance (abbreviated PV or PhV), also known as Drug Safety, is the pharmacological science relating to the collection, detection, assessment, monitoring, and prevention of adverse effects with pharmaceutical products. Patient safety is a key dimension in the provision of quality healthcare and has become a major issue for all healthcare systems today. Adverse drug events (ADEs) are one of the most frequent types of adverse events affecting hospitalised patients, causing one (1) out of five (5) injuries or deaths per year to hospitalized patients (Leape et al., 1991; Brennan et al., 1991) and the fourth leading cause of death, according to the FDA (Monahan et al., 1990) & (Chan et al., 2001). It

is not a coincidence that more than a quarter of a million patients in the United Kingdom and two to three million in the United States are admitted to hospitals showing harmful effects after taking drugs (BMA, 2006). Most health care organisations rely on spontaneous reporting, which cannot detect all adverse events. The use of electronic data can identify instantly the possible presence of ADEs (Wilson et al., 2004; Szarfman et al., 2002). Although Honigman et al. (2001) have investigated the use of EMR in detecting known ADEs, there have been no studies of data mining using EMR. Pharmacov [X] is an internet based information tool that assists physicians to identify potential adverse events or contraindications of drugs when they are prescribing drugs to patients. The application provides a multimodal web in-

Table 1. Main features of the service along with user interface capabilities

Key System Features/Modules	User Interface Capabilities
Drug information	Searches for and retrieves information for a specific drug from its Summary of Product Characteristics (SPCs). Search can be performed by using the drug's brand name, its generic name and/or the manufacture's name.
Compare drugs	Provides the ability to the user to select two or more drugs and compare them against different criteria. These criteria correspond to all the relevant sections of a drug's SPC.
Drug prescription	The system displays an electronic prescription form. The requested information to be filled in or selected from a drop down list by the user concerns patient data (e.g. age, weight, gender), current diagnosis (es), suggested drugs to be taken, already administered drugs. It also provides warnings for drug Interactions and contraindications.
Prescription statistics	Provides cost and statistical analysis relating to prescriptions dispensed by the service users (not active in the pilot trial).
Reporting suspected adverse drug reactions	Download and upload 'Report on suspected adverse drug reaction' form; send electronically (via email) the form to the responsible regulatory agency; add comments typing them in a text-free field; email comments to the regulatory agency. E.g. In the case of a UK based user, he/she can download the Yellow Card form, complete and then submit it to The Medicines and Healthcare products Regulatory Agency (MHRA).
Tools	While prescribing drugs to the patient, the user-physician can access the following information: a) Calculate Body Surface Area (BSA) for medication doses using various formulas (Mosteller, DuBois, Haycock, Gehan&George, Boyd). b) View reference ranges for medical tests (not active in the pilot trial). c) View paediatric charts (e.g. Boys/Girls stature for age or weight for age percentiles).
Internet Forum	Enables the user to hold discussions, share experiences, post content etc over the internet. Pharmacov uses the Community Server developed by Telligent.
External search	Access external search engines like Google and PubMed and useful web sites.
User Profile	Enter personal information e.g. demographics, organisation details, address etc; modify log in details to the service.
Logout	Allows registered users to log off and automatically exit the service.
Multilingual service	The user interface is currently available in 4 different languages [Greek, English, Czech and German]. Additional user interface languages can be added on demand.

5 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/users-perception-towards-the-safe-medication-through-pharmacovigilance-and-compliance-monitoring-pharmacov-service/116272

Related Content

Economic Profit vs. Social Benefit: An Approach to the Pharmaceutical Industry

M. Mercedes Galán-Ladero and M. Ángeles Galán-Ladero (2021). *Management and Marketing for Improved Competitiveness and Performance in the Healthcare Sector* (pp. 24-44).

www.irma-international.org/chapter/economic-profit-vs-social-benefit/285800

The American Healthcare System

(2015). *Flipping Health Care through Retail Clinics and Convenient Care Models* (pp. 1-9).

www.irma-international.org/chapter/the-american-healthcare-system/115792

Modeling and Automated Examination of Communication Processes in Integrated Health Information Systems: A Systematic Approach

Samrend Saboor, Alexander Hörbstand Elske Ammenwerth (2015). *Healthcare Administration: Concepts, Methodologies, Tools, and Applications* (pp. 466-483).

www.irma-international.org/chapter/modeling-and-automated-examination-of-communication-processes-in-integrated-health-information-systems/116229

Patient Advocacy and the Policy Making Process

(2020). *Managing Patients' Organizations to Improve Healthcare: Emerging Research and Opportunities* (pp. 24-44).

www.irma-international.org/chapter/patient-advocacy-and-the-policy-making-process/246993

The MAMICare Project: Monitoring Maternal and Child Health in Rural Areas

Juan C. Lavariega, Gustavo A. Córdova, Lorena G. Gómez and Alfonso Avila (2018). *Handbook of Research on Emerging Perspectives on Healthcare Information Systems and Informatics* (pp. 483-497).

www.irma-international.org/chapter/the-mamicare-project/205140