

CENTERIS - International Conference on ENTERprise Information Systems / ProjMAN - International Conference on Project MANagement / HCist - International Conference on Health and Social Care Information Systems and Technologies, CENTERIS / ProjMAN / HCist 2017, 8-10 November 2017, Barcelona, Spain

Information technology in the process of managing polypharmacy in elderly patients

Emilia Sarmento^{a*}, Carmem Leal^b, M^a João Monteiro^c

^aResearcher, PhD., ACES Douro i- Marão e Douro Norte, Vila Real, Portugal.

^bResearcher, PhD Professor, CETRAD, Universidade de Trás-os-Montes e Alto Douro, Vila Real, Portugal.

^cResearcher, PhD Professor, Universidade de Trás-os-Montes e Alto Douro, Vila Real, Portugal.

Abstract

Globally, health systems evolve to meet three fundamental objectives: increasing the quality of care, improving accessibility and reducing costs, which, while not mutually exclusive, can be very difficult to balance. In addition, the wastage in medications, in particular as regards polymedication in the elderly, is associated with the lack of quality of procedures implemented, and is also closely related to errors in health, representing a risk to patient's safety.

Polymedication is common in the elderly and that almost 50% of them take one or more drugs that are not adequate and/or necessary. So in this sense, we intend to present the negative consequences of polymedication and the interventions to improve the prescription of therapy.

A quantitative study was carried to 594 elderly people and we found that 98% of them have a low level of education, 87.4% receive a monthly income of less than 500 euros, 79% of the participants referred to have long-term health problems. The daily consumption of prescription drugs (more than three months) is 89.3% and only 36.6% refers to take less than 5 drugs.

According to results it is possible to conclude that drug waste is associated with lack of quality of the procedures implemented, representing a risk to patient safety. It is necessary to implement and develop (new) IT in order to improve health information management and pharmacological prescription.

© 2017 The Authors. Published by Elsevier B.V.

Peer-review under responsibility of the scientific committee of the CENTERIS - International Conference on ENTERprise Information Systems / ProjMAN - International Conference on Project MANagement / HCist - International Conference on Health and Social Care Information Systems and Technologies.

* Corresponding author. Tel.: +0-000-000-0000 ; fax: +0-000-000-0000 .
E-mail address: emiliasarmento25@hotmail.com

Keywords: Polypharmacy; Management; Information technology; Elderly.

1. Introduction

Globally, health systems evolve to meet three fundamental objectives which (while not mutually exclusive can be difficult to balance) are: increasing the quality of care, improving accessibility and reducing costs.

A current reasoning of strategic management is to evaluate what activities the organization can and should explore, under what conditions it should do it and how it can optimize the costs/benefits through computer systems as a support for clinical practice, in particular as regards to medical prescription. The question to be answered is the articulation of the strategic perspectives so that the services can better serve the elderly users, optimizing the practices regarding the pharmacological prescription.

Therefore, this study aims to contribute to a better management of health resources, regarding the importance of information technologies in the management of polypharmacy, especially in the elderly population.

A quantitative study was carried to 594 elderly people and we found that 98% of them have a low level of education, 87.4% receive a monthly income of less than 500 euros, 79% of the participants referred to have long-term health problems. The daily consumption of prescription drugs (more than three months) is 89.3% and only 36.6% refers to take less than 5 drugs.

The remaining of the paper is organized as follows: we began by presenting the sociodemographic profile of the elderly population, contextualizing some indicators, pharmacological prescription as well as the importance of information technologies in minimizing and controlling drug management in the elderly patients.

2. Sociodemographic profile

In recent years, and as a result of reduction in the birth rate and the increase in longevity, the youth population (0 to 14 years of age) and population of working age (15 to 64 years old) have been decreasing worldwide. According to Statistics Portugal¹ Portugal is the 4th EU 28 country with the highest proportion of elderly people. The elderly dependency ratio, which relates the number of elderly people and the number of people of active age (15 to 64 years of age), continuously increased since 1970, from 16 elderly people per 100 people of active age in 1970, to 31.4 in 2015².

As a consequence of this reality, there is an exponential increase in multimorbidity/comorbidities, with the use of multiple medical specialties and consequent medicalization. The approach to multiple chronic health problems and conditions of a single person, from the perspective of an index problem and comorbidities, becomes ineffective and inefficient as it considers most problems only in their relation to the index problem. In the opposite sense, the concept of multimorbidity empowers the holistic approach of all problems, taking into account the patient's (patient-centered) feeling and promotes the understanding of the interaction between physical, mental and social problems (complexity)³.

The World Health Organization (WHO) estimates that the cost to reduce the global burden of chronic diseases is 11.2 billion per year, reflecting an annual investment of 1 to 3 dollars per capita, with high mortality or Morbidity or the reflection of inadequate investments in cost-effective interventions for chronic diseases⁴.

Although the elderly population constitutes about 13% of the population (with a tendency to increase), it consumes more than 25% of the drugs dispensed in pharmacies, a percentage that tends to increase and is estimated to reach at least 40% in 2030, being this age group, Also responsible for more than 50% of the consumption of non-prescription medicines⁵.

Therefore, it is fundamental to analyze, the clinical results and the elderly's quality of life, after medical prescription, in order to monitor the global and effective health improvement.

Download English Version:

<https://daneshyari.com/en/article/6901506>

Download Persian Version:

<https://daneshyari.com/article/6901506>

[Daneshyari.com](https://daneshyari.com)