

Title

Information System for Pharmaceutical Management using drug-related problems classification

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Target

The target of this article is the presentation of the PRM software tool focusing on information technology side. PRM is a software tool intended to manage drug-related problems (DRP) in patients.

Summary

Chronic conditions impact on health systems is becoming more and more important as approximately 10% of patients receive 70% of total health system costs. Life expectancy increase is pushing up chronic conditions prevalence and thus patient polypharmacy treatments. Consequently, DRP percentages are rising up. To face this new front, health systems are setting policies in order to manage related clinical and economical aspects.

The Conselleria de Sanitat de la Comunitat Valenciana (CS, the regional public health system belonging to the regional government of the Spanish eastern region with 5.2M people) launched a program in order to review treatments of more than half million patients with polypharmacy including more than 5 drugs in order to check them were adequate. This was called REFAR program. More than 22.000 patients in specialized care, 300.000 patients in primary care and 4.500 patients in geriatrics are under review at the moment. In the operation of the program were involved primary care, hospital and geriatrics clinical staff supervised by pharmaceutical staff.

The starting point of the program was a data mining analysis in data hosted in both the regional electronic health record and computer prescribing order entry databases. These two systems are the main result of the health information technology program called Abucasis launched by the CS ten years ago.

The Abucasis project offers different corporate applications over 3,400 primary care centers, specialty care centers, hospitals and pharmacies, being used by about 20,000 users between clinicians and managers. 6,951,660 medical histories of patients are housed, of which 5,129,388 are active and correspond to the population covered. In order to improve patient and key DRP management at a tactical and operational level, a data mining project was launched as part of the prescription program (GAIA), aimed to managers and clinicians.

This project results in an application called PRM tool, which provides information for health management useful for the prioritization of patient's DRP according to clinical risk. This paper provides an approach to the development, implementation and maintenance of the tool emphasizing the maintenance phase and the updating of databases and outpatient clinical data. It is also described the process of integration, the classification system, the integration of the application as part of the electronic medical record and the electronic prescription systems, the technologies used to develop PRM and how it is used in a drug screening program to review treatments of a population of 5,129,388 inhabitants.

Conclusions

Patient systematic review of DRP stated by regional and national governments are a realistic option but they required the lead and total commitment of clinical staff at all levels in the organization and also support by information technology systems as data mining analysis and software tools. Previous requirement is the availability of electronic health record and clinical prescribing order entry systems with a high volume and quality of patient clinical information filled and managed by clinical staff

Participants

This program has been leaded by Dirección General de Farmacia y Productos Sanitarios de la Agencia Valenciana de Salud (AVS) de la Conselleria de Sanitat de la Comunitat Valenciana.