

A HOSPITAL PHARMACY PATIENT INFORMATION SYSTEM

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Part 1. Abstract

Hospital pharmacy operations primarily consist of the logistics of supply, budgeting and the provision of clinical services to wards, staff and patients. The focus of this project will be on part of these operations, namely ward pharmacy supply and clinical services, otherwise referred to as medicines management. In most hospitals, all records of processes carried out on wards by pharmacy staff are handwritten. The procedures followed are fairly robust, but slow and susceptible to errors of various kinds, with the information gathered not easily available to other staff members.

Part 2. Introduction

The system will enable pharmacy staff to use networked mobile devices and desktop terminals to document their ward activities. The system would be used to enter the details of patients, including their current ward, medication history and current medications, allergies, doctors, current levels of supply, planned date of discharge and potential clinical issues. The entries would be immediately submitted to a central database that could be queried by pharmacy staff in other areas of the hospital and would be available to ward staff on subsequent ward visits. In this way, some of the inefficiencies and risks inherent in the paper based recording system should be reduced. The system will be implemented as a web application with web framework called Ruby on Rails.

1. BACKGROUND

Despite being extensive users of electronic information systems most hospitals still operate primarily with paper based recording and storing of clinical information. The evidence for the improvements in patient care where electronic systems have been implemented is extensive. Not only is there evidence of the predictable improvements in speed and reliability of storage and processing of information, but significant reductions in morbidity and mortality as well[?].

Since the inauguration of the NHS Connecting for Health initiative in April 2005, the push to use technology in hospitals has increased and is a high priority for not only the United States, but also the NHS in the UK and worldwide. An area identified by the Department of Health and the Audit Commission as being a priority for further development is Medicines Management - a broad term which refers to all aspects of the use of and logistics involved with medicines in hospitals and the community.[?] The term is also used within hospital pharmacy to refer to the part of the process that is carried out by pharmacy staff on wards. This is where the focus of the project will be.