

An evaluation of computerised prescribing systems – Hospital Electronic Prescribing Pilot Assessment (HEPPA)

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Aim

To pilot the feasibility of prospective and retrospective evaluations of computerised prescribing in hospitals.

Objectives

1. To test an overall evaluation framework;
2. To pilot a prospective evaluation of the ServeRx (computerised prescribing and administration) system at Charing Cross Hospital;
3. To pilot a retrospective, notes based review of prescribing errors before and after computerised prescribing at Queens Hospital, Burton upon Trent;
4. To compare, in the same patients in Charing Cross Hospital, four methods of detecting prescribing error (prospective detection by pharmacists, retrospective detection from the medical notes, use of Trigger Tool methodology, and spontaneous reporting);
5. To establish the practical issues in retrieving information from the notes and from the different computer systems, sites and ward types;
6. To describe the decision support software in each system, and assess aspects of it;
7. To establish the nature and accessibility of data required for an economic evaluation of computerised prescribing.

The presentation will focus on objectives 4 and 5.

Methods

As part of the wider study, qualitative and ethnographic assessments are being carried out in the form of interviews of key groups involved in the adoption and use of the systems. The findings of this qualitative study will be used in the final evaluation to help draw wider conclusions from the quantitative evaluation. In addition, a retrospective study in Burton aims to assess the feasibility of identifying the incidence of prescribing errors from a retrospective review of the notes at a general hospital before and after the introduction of computerised prescribing.

The presentation will focus on the study being carried out on the ServeRx system – a trial system currently installed on one surgical ward at Charing Cross Hospital. This ‘closed loop’ system comprises computerised prescribing, ward-based dispensing and bar-coded administration. Methodologies have been developed to investigate the impact of ServeRx on the safety, quality and efficiency of medication prescribing, dispensing and administration on a UK hospital ward. In total around 120 medical notes will be retrospectively reviewed both pre- and post-ServeRx implementation. Throughout the study, the project team will be developing and comparing different measures for calculating the incidence of error, and the harm resulting from it.

Progress to date

As part of the HEPPA project, a detailed retrospective review form has been designed for detecting prescribing and administration errors from medical notes. In addition, a Trigger Tool form has also been designed and both are currently being used for data collection of errors in Charing Cross hospital patients admitted to a surgical ward before and after implementation of the ServeRx system. About 190 notes have been reviewed to date (around 75% of the target).

Once this data collection is complete, the effectiveness and suitability of both data collection methods will be analysed. The data will be compared with prospective data, and incident reports (collated from the current spontaneous reporting system) in the same patients. The data collected will also be analysed, with a particular focus on any change in the quantity and/or nature of prescribing and administration errors before and after the implementation of the ServeRx system.