

SOUTHAMPTON UNIVERSITY HOSPITALS NHS TRUST

Benefits from final Business Case for the implementation of a Trust-Wide ePrescribing System

BENEFITS

1.1 In general:

There are a number of clear benefits around the introduction of ePrescribing systems with the majority of benefits being defined as follows:

1.1.1 Prescribing and Administration Medication Errors

Evidence has shown that eprescribing reduces rates in both prescribing and medical administration errors therefore by providing:

- Vital patient-specific information, such as *overdose warnings*, drug interactions, and allergy alerts, can be presented in the course of prescribing, so that potential Adverse Drug Reactions that would otherwise go unrecognised can easily be avoided.
- By flagging *pre-existing medical conditions* or concurrent medications that would preclude use of certain drugs in individual patients. Messages can be triggered when patient drugs need reviewing or starting
- Highlighting interactions with particular drugs once the timing of the drug administration is given.
- Audit trails highlighting if alerts are overridden and by whom and when.
- *Automated alerts from test results*

Please note that the items highlighted above in *italics* will not be available on delivery of the system but will be achieved as part of a development programme within the life of the project.

1.1.2 Legibility and Completeness of Prescriptions

Evidence has shown:

- Considerable improvement in the legibility and completeness of prescriptions has proven to:
 - Reduce prescribing and administration errors
 - Reduce the requirement for pharmacist's intervention due to the links to the formularies, protocols and pathways.

1.1.3 Electronic Prescription Data

Evidence has shown that:

- A closed-loop ePrescribing, dispensing and barcode patient identification system has proven to:
 - reduce prescribing and medication errors with the increased confirmation of patient identity before administration.
 - increase in time spent on medication related tasks.
- ePrescribing can expedite refill requests, once patients are entered into the system.
- ePrescribing can facilitate data exchange to enhance teamwork between clinicians and professionals who represent other parts of the medication management system.

1.1.4 Drug History

- Provision of a full ePrescribing history across the Trust

1.1.5 Decision Support

Evidence has shown that ePrescribing has contributed to safety and patient care by providing:

- Accurate, unbiased, and up-to-date drug databases, which constitute essential tools as the number of approved medications continues to increase.
- Prescribers on-screen prompt for drug-specific dosage information, with reminders to ensure that look-alikes and sound-alikes are not confused.
- Enabling practitioners to stay abreast of changes in formularies.
- Reduce healthcare costs through time and efficiency savings and by encouraging prescribers to consider lower-cost drug options
- Improved quality of prescribing due to the availability of electronic decision support at the point of prescribing

1.1.6 'Safer Medicines Report'

In the 'Safer Medicines' Report to TEC on 12th March 2008 it was reported that prescribing errors make up 23% of the medication errors reported on incident forms. Prescribing errors are caused by poor knowledge of the patients' drug history, poor knowledge of drugs and their doses and poor handwriting. In addition patients are prescribed therapeutic duplicates often when they have 2 or more drug charts.

The potential for ePrescribing in the reduction of prescribing errors is huge. Analysis of prescribing errors at SUHT in 2008 showed that as many as 60% could be prevented by an ePrescribing system but the actual impact would depend on the level of decision support.

A comparison study at Winchester Hospital showed that 18% of SUHT pharmacist identified prescribing errors would be prevented with the current ePrescribing system. It is essential to note the ePrescribing systems does not currently have the required decision support mechanism or software capable of managing high care or intensive care patients.

Appendix A attached outlines details of benefits achieved pre and post ePrescribing experienced by other Trusts to date.

1.1.7 Specific financial benefits

- Improvement in efficiency by reducing both prescribing and medication errors will lead to reduced
 - Legal costs
 - Compensation costs
 - Insurance premiums
- Reduction in Pharmacy time on wards due to reduced interventions and easier review of prescriptions and data collection,.
- Reduction in prescribers time re-writing drug charts and transcribing medication for discharge.
- Over time easily accessible, accurate, drug history of all patients attending the Trust.
- Improved stock management and waste reduction on wards and within pharmacy
- Reduction in messenger time between clinical areas and pharmacy
- Detailed clinical coding of drug treatments.
- Medicines Management – reduction in non-formulary, high cost drug stock holding.
- Increase collection of private patients drug costs
- Reduce patient stay through automatic stopping of antibiotics, increased compliance with VTE prophylaxis and missed dose reduction.

- Reduction in C.Dif rates through automatic stopping and alerts on high risk antibiotics.
- Expenditure on Drug Charts will be eliminated
- Reduction in review time of prescriptions by doctors and the multi-disiplinary team, as the prescription can be viewed at more than one place at a time.
- Reduced Drs time in rewriting drug charts and drug information sourcing.
- Reduced LOS and readmissions due to medication errors.

Details of the Trusts savings are outlined in Appendix C.

1.1.8 Clinical governance and cost effectiveness

The above benefits will improve clinical governance and cost effectiveness by:

- Avoiding death and morbidity due to medication errors
- Significantly reducing the number of near misses due to medication errors
- Improving patient identification by clearer, electronically readable wristband. This will enable positive identification of the patient regardless of the patient's mental/physical state of health
- Improving control of individual patient's medication management
- Eradicating handwritten TTO's and out-patient prescriptions trust wide with a full integration into the eDischarge Summary.
- Mitigating the following risks which are currently on the Trust's risk register:
 - 224 Medication Errors
 - 594 Pharmacy support for Obstetrics & Gynaecology
 - 855 Medicine Management
 - 548 Injectable Medicine NPSA Alert