

Improving Patient Safety: Safe Prescribing, Medicines Management & Medicines Administration

Case studies in e-Assessment.

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Abstract

In a 'typical' hospital approximately 7,000 individual doses of medicines are administered to patients each day and up to 40% of nurses time is spent on administering medicines. (The Audit Commission, 2001)

In 2004 the Department of Health published 'Building a Safer NHS for Patients – Improving Medication Safety' which provided a review of the causes and frequency of medication errors, highlighted drugs and clinical setting that carried particular risks and identified models of good practice to reduce risks.

The report's authors recommend that to reduce the risks of drug administration NHS Trusts should 'ensure that the staff administering drugs understand the indications, risks, precautions and contra-indications to each medicine and are competent to perform any calculations necessary'.

In 2005 the NPSA published the first results of incidents reported via its National Reporting and Learning System (NRLS). This information suggested that 10% of all untoward incidents reported across the NHS were medication related and the NPSA highlights a concern that 'learning how to administer medicines is not well taught – particularly practical aspects'.

There are two principal areas of concern regarding patient safety and medication:

- Safe Prescribing practice
The remit of doctors and consultants
- Medicines Management and Administration
Primarily the concern of nurses and other medical practitioners

Pharmacists have a remit that covers both these areas and provide guidelines and checks.

Both competency testing and training are required to address the problem of potential drug prescription and administration errors. However, staffing levels and irregular working hours mean that class contact would be expensive and/or logistically impractical. Thus a scored formative e-assessment solution providing detailed context-sensitive feedback has been adopted to cover both the competency testing and training elements.

The e-assessments outlined in the examples presented cover the areas of Safe Prescribing, Medicines Management and Medicines Administration and are currently live in a significant number of NHS Trusts.

Objectives, level and intended audience

The principal objectives to be addressed by the e-assessments were:

- To improve the management and administration of medicines by ensuring that the staff administering drugs understand the indications, risks, precautions and contra-indications to each medicine and are competent to perform any calculations essential for safe dosage.
- To demonstrate each individual's fitness to practice.
- To identify key areas for individual personal development or training.
- For overall quality assurance in the management and administration of drugs

The intended audience includes nurses, midwives, pharmacy staff, all other healthcare staff dealing with the care and administration of medicines in Acute Hospitals, Primary Care Hospitals, Community Health and Mental Health NHS Trusts.

The assessments are set at a level suitable for in-practice, qualified staff as part of their continuing professional development.

Methodology

- A suite of scored formative e-assessments with context-sensitive feedback covering: Medical Calculations, Use of the BNF, Administration & Documentation, Patient Safety, Medicines Code and Management of Controlled Drugs was prepared by experienced pharmacists and medical practitioners (design team) taking account of the range of skills found within the target audience and variations in practice across target groups.
- The e-assessments should be suitable for diagnostic testing, competency testing and training.
- All questions and whole assessments peer reviewed.
- Assessments trialled by representative target user-groups. Selected trials observed by members of the design team to refine useability and network compatibility.
- Assessments reviewed by the design team and final modifications made as a result of the feedback from trials, including some for enhanced accessibility.
- Assessments live on the networks of the Acute, Primary Care Hospitals, Community Health Care and Mental Health Trusts in the area.

Results

Medicines Management Assessments live from Nov 1st. Results to be reported.

Mentors and Line Managers will follow up individuals whose competency scores are low and may apply additional mentoring or training where appropriate

Lessons learned

From the design process:

Design time can be protracted if number of experts is large, but once consensus is reached quality can be high.

Pre-testing is essential to the refinement of the product and suitability for the target audience especially where users have of variable levels of computer literacy.

Technical:

Allowances need to be made with respect to bandwidth and firewall issues when working with NHS Trusts. e-Assessments must be capable of restarting at the user's last position if the network connection is broken mid run.

References:

The Audit Commission, 2001 A Spoonful of Sugar: Medicines Management In NHS Hospitals.

Chief Pharmaceutical Officer, 2004 Building a Safer NHS for Patients: Improving Medicines Safety. Department of Health.

The National Patient Safety Agency, 2005 Building a memory: preventing harm, reducing risks and improving patient safety. The first report of the National Reporting and Learning System and the Patient Safety Observatory.