

# Patient Safety and Clinical Decision Making

*A symposium held on 19 January 2011 at the Royal College of Physicians of Edinburgh*

## **IMPROVING QUALITY AND SAFETY: THE SYSTEMATIC APPROACH**

Dr S Watson

*Consultant Nephrologist and Associate Medical Director for Patient Safety, NHS Lothian*

The international patient safety movement aims to abolish avoidable deaths and harm in healthcare. It is an inspiring and challenging ambition which has caught the imagination of patients and those who care for them.

System- and organisation-wide patient safety programmes came into being in the past few years. They have, metaphorically, passed through their infancy and those participating in them are growing in confidence and effectiveness. As a result, patient safety activities are exerting an increasingly beneficial influence on the culture of healthcare organisations and measurably reducing harm. However, these achievements have been hard won, are incomplete and by no means secure. In particular, national economic difficulties pose both challenges and opportunities for quality improvement in its widest sense. We need to anticipate and develop strategies to embed patient safety within the day-to-day business of healthcare – in other words, to develop a true safety culture.

This is a challenge for individuals, organisations and governments. This presentation will discuss the past, present and future development of a patient safety culture, with particular reference to NHS Lothian, a large and complex healthcare organisation.

## **IMPROVING QUALITY OF CARE AND SAFETY FOR THE INDIVIDUAL**

Dr R Paterson

*Consultant Intensivist, Scottish Patient Safety Fellow*

This talk introduces continuous quality improvement concepts and how they relate to improving healthcare for the individual. In healthcare and many other industries quality is synonymous with reliability. A high-reliability organisation is one with safe, effective and efficient processes with minimum defects.

Healthcare represents a complex system in which it is not appropriate to directly apply systems that have worked in business and industry. However, the methods and principles which created these systems may be applied to create high-reliability healthcare.

To make sustained improvements in healthcare, we must first understand why we are trying to improve, and the effect that this has on leadership and engaging healthcare providers – no successful marketing programme succeeds by telling us what we want, but rather why we want it.

No system or process is able to alter itself. However, with in-depth knowledge of that process it is possible to know what changes are required to make an improvement. Gaining this knowledge through measurement of process and outcome is discussed.

The role of patient-centred care in continuous quality improvement is explored and how a focus at the level of the interaction between patient and healthcare provider has led to system-wide transformation in other health systems.

In conclusion, local examples of how these techniques have led to improvement, and the consequent cultural effects, are discussed.

## HUMAN FACTORS AND PATIENT SAFETY: THE CLINICIAN'S PERSPECTIVE

Dr R Patey

Consultant Anaesthetist, Aberdeen Royal Infirmary

This presentation will define 'human factors' and describe how the relationship between quality improvement and patient safety in healthcare.

Drawing on experience in anaesthesia, other healthcare specialities and settings outside healthcare, and using audiovisual examples, the particular importance of the non-technical skills of individuals and teams for best practice (e.g. team working, decision making, situation awareness and communication) will be illustrated and discussed.

## LOOKING BEYOND HUMAN ERROR TO ITS CAUSES AND PREVENTION

Prof H Thimbleby

British Professor of Computer Science, Swansea University

Before Pasteur and Lister, 'germs' were invisible and nobody understood infection and the need for asepsis. Likewise, human error is invisible and poorly understood and perhaps as devastating, particularly when combined with IT systems and complex devices, such as infusion pumps and ventilators. This talk will show some of the hidden aspects of error and how device design exacerbates it, as well as some approaches to reduce error rates.

## TOWARDS SAFER PRESCRIBING

Prof PA Routledge

Professor of Clinical Pharmacology (School of Medicine), Cardiff University

First, the prescriber must decide if a medicine is indicated. Then they must discuss the possible benefits and risks with the patient and write an appropriate prescription. Poor prescribing covers misprescribing, underprescribing, overprescribing and medication errors. Medication errors can also occur when the prescription is dispensed and administered.

Medication errors are a failure in the (drug) treatment process that leads to, or has the potential to lead to, harm to the patient and includes an act of omission or commission.<sup>1</sup> Medication errors may occur due to mistakes (errors in planning), slips (errors in execution), or lapses (errors in execution due to memory failure). They may also occasionally occur due to violations (deliberate deviations from safe operating practices, recommendations or guidelines, but with no intention of adverse consequences).<sup>3</sup>

An adverse drug reaction (ADR) is a response to a drug that is noxious and unintended and occurs at doses normally used in man for the prevention, diagnosis or treatment of disease or for the modification of physiological function. Medication errors may sometimes cause ADRs, but more often are detected before they can cause serious harm.

Dornan and colleagues made five main recommendations in relation to avoiding medication errors.<sup>2</sup> The first related to modifying the clinical working environment (e.g. the adoption of standardised prescription charts), and the other four to improvements in undergraduate and postgraduate (including inter-professional) education. Thus continuing education is a key component in improving prescribing.

### References

- 1 Australian Council for Quality and Safety in Healthcare. *Second national report on patient safety: Improving medication safety*. Sydney: Australian Council for Quality and Safety in Healthcare; 2002. Available from [http://www.health.gov.au/internet/safety/publishing.nsf/Content/F0FD7442D1F2F8DDCA2571C6000894FF/\\$File/med\\_saf\\_rept.pdf](http://www.health.gov.au/internet/safety/publishing.nsf/Content/F0FD7442D1F2F8DDCA2571C6000894FF/$File/med_saf_rept.pdf)
- 2 Dornan T et al. *An in depth investigation into causes of prescribing errors by foundation trainees in relation to their medical education*. EQUIP study. London: GMC. Available from [http://www.gmc-uk.org/FINAL\\_Report\\_prevalence\\_and\\_causes\\_of\\_prescribing\\_errors.pdf\\_28935150.pdf](http://www.gmc-uk.org/FINAL_Report_prevalence_and_causes_of_prescribing_errors.pdf_28935150.pdf)
- 3 Reason J. Human error: models and management. *BMJ* 2000; 320: 768–70.