Building a safety and improvement culture in primary care

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The evidence for patients suffering preventable harm in well-funded, technologically advanced healthcare settings staffed by highly educated clinical workforces is incontestable.[1] Consequently, making patient care safer is of international concern and a key priority of the World Health Organization and UK government.[1–3] However, improving patient safety is a multi-faceted challenge that will require a significant change in thinking and culture throughout the NHS.

This series of three articles highlights the scale and type of safety risks in primary care, while introducing you to a small selection of concepts and improvement tools that can begin to help us build and sustain a strong patient safety culture. This first article considers the nature of harm, the size of the problem and the human factors that can affect patient safety.

BOX 1. THE PATIENT SAFETY IN PRIMARY CARE PILOT INITIATIVE

The Health Foundation (see Resources) is funding the Safety & Improvement in Primary Care (SPIC) Collaborative. Phase 1 involves 20 GP practices in four Scottish health authorities. The aim is to up-skill the clinicians and staff in a range of safety and improvement concepts and tools, such as safety culture assessment, capturing the patient experience, PDSA (plan, do, study, act) cycles of improvement, Care Bundles and the Trigger Tool. The learning is applied to reduce harm to patients with heart failure and those taking high-risk medications.

Being well trained, caring about your job and working hard does not necessarily mean that you will never make mistakes. Complacency over safety in primary care will lead, albeit unintentionally, to patient harm

TOWARDS A SAFETY AGENDA

In primary care we already use a number of strategies to mitigate risk, improve clinical effectiveness and enhance safety, for example the Quality and Outcomes Framework, risk management, continuing professional development (CPD) and appraisal, clinical audit and significant event analysis (SEA). Alternative approaches to measuring and reducing harm are also being adapted and tested (Box 1).

We are also beginning to witness the first signs of a cultural change in our overall approach to quality and safety in healthcare. Previously the focus was very much centred on the skills and competence of the individual clinician – with the patient largely peripheral in this clinical risk management model. Today we are slowly moving towards a safety agenda that has a greater emphasis on systems thinking and design, teamworking and effective clinician–patient communication – all supported by a framework of accountability and regulation (Table 1).[4] Few would argue with this new direction or that it is overdue.

However, although these efforts are a step in the right direction, they do not detract from the fact that primary healthcare is still often unsafe – patients continue to be unintentionally harmed, often unnecessarily. If patient safety is to be taken seriously then a more explicit emphasis on up-skilling the primary care workforce to tackle and minimise avoidable harm is also needed. There is much we can learn from other healthcare systems and high-risk industries worldwide in altering perspectives and behaviours, and creating the right conditions to ensure that patient safety is valued as a real front-line priority.

THREATS TO PATIENT SAFETY

Patient safety can be defined as: '*freedom for a patient from unnecessary harm or potential harm associated with healthcare*'.[5]

TABLE 1. PATIENT SAFETY VERSUS RISK MANAGEMENT

Clinical risk management (past)		Patient safety (present)
Competence	⟶	Performance
Individual oriented	⟶	Team and systems oriented
Voluntary code	⟶	Regulatory framework
Clinician-centred	⟶	Patient-centred

However, our understanding of the scale and frequency of patient safety incidents in primary care is limited in comparison to incidents related to hospital medicine. We know that about 1 in 10 inpatients will suffer some form of unintentional harm. About half of these cases are thought to be preventable.[1,2] The equivalent evidence for primary care is unavailable because of a lack of systematic research in this area.

A few studies do, however, point to the potential size and nature of the safety problem. For example, in a small review of a sample of 500 randomly chosen electronic patient records, evidence of unintentional harm (mostly of low-to-moderate severity, but some serious) was found in 9.5% of cases. About 40% were judged to have been avoidable.[6]

A study of 286 SEA reports in a single region led to the omission of about one-third of reports at the outset because they were methodologically flawed. The implication is that many teams may have a major learning need in applying SEA effectively. Of the remaining reports, 25% involved patients being harmed as a result of their care with a further 60% outlining circumstances in which harm would have occurred if not prevented beforehand.[7]

Other studies have reported that 11% of prescriptions may contain a mistake; 5% of hospital admissions were caused by medication issues; errors may occur in 76 per 1,000 appointments; and that 76% of safety incidents are preventable, with most associated with system failures rather than poor clinical judgements.[8] A recent Australian study found that the incidence of reported errors per number of patients seen per year was 0.24%.[9] If we accept and extrapolate any of these figures, then with about 300 million annual primary care consultations in the UK, patient safety is being compromised in a relatively large number of cases (Table 2). Even if these findings are an exaggeration, there is still likely to be a considerable problem.

ROOM FOR IMPROVEMENT

A familiar refrain from community-based clinicians is that the quality and safety of patient care is already of a high standard.[10,11] The risks in primary care can also be downplayed as being of a different magnitude to the more serious issues encountered in acute hospitals. In addition

TABLE 2. EXAMPLES OF COMMON RISK AREAS IN PRIMARY CARE

Risk area	Example(s)
Clinical team disease diagnosis and management	Missed or delayed diagnosis of cancer, terminal care pain management, difficult diagnosis, incomplete history/examination
Clinician's personal skills/behaviour/knowledge application	Lack of knowledge of practice/hospital protocols, poor clinical task delivery, clinician avoidance of addressing a difficult situation, lack of clinical leadership of patient review
Communication	Substandard communication internally or between practice and patient, or between practice and hospital/out-of-hours/other agencies), failure to gain consent
Administration	Poor task delivery, ineffective administrative system/protocol, complaint, breach of protocol
Medication	Error writing/prescribing/administering (wrong drug dosage/formulation prescribed), no system/protocol to check for out-of-date emergency tray/bag medicines
Results/investigations/tests	No sample tracking/record, delay in checking blood test results, incorrect results given to patient, results not acted upon
Record-keeping	Failure to check notes adequately, failure to record in notes
Equipment and workspace	Ineffective emergency buzzer system for staff to identify location of emergency, inadequate search facility on computer system
Patient confidentiality	Breach of confidentiality, wrong records accessed
Staff safety	Staff injury, unsuccessful procedure for dealing with clinical waste, re-sheathing needles, not all clinical staff immunised against hepatitis B

the interventions and treatments that are provided every day inevitably carry a risk of side-effects or being less than efficacious, which may cause further self-limiting illness or prolong minor distress. It is argued, therefore, that harm can be an unintentional but foreseeable consequence of clinical care, which is largely accepted by clinicians and patients alike as part of shared decision-making.

No one would dispute that these types of unfortunate circumstances are often a consequence of the complexity and uncertainty of routine clinical practice – we are rewarded for managing risk. However, this should not lead us to be complacent about or obscure the patient safety issue in primary care – the challenge is much greater than is often alluded to. Indications from existing evidence, although limited, point to error and harm being commonplace and often 'avoidable'. To illustrate this point, reflect on the following examples taken from an organisation's incident database, and consider whether similar incidents have

happened in your surgery recently.
- Inadvertent prescribing of the wrong drug dose leading to a patient suffering severe headache and nausea and calling an out-of-hours GP.
- Inoculating the same child twice with measles, mumps and rubella vaccine, causing the parents unnecessary distress, worry and anger.
- A patient picking up a prescription for amitriptyline also being given a prescription for amitriptyline not picked up from the month before. He overdosed, resulting in hospital admission.
- A patient complaining of anxiety symptoms was prescribed propranolol to help with physical symptoms. The GP did not notice a previous history of asthma. The patient became dyspnoeic and wheezy overnight, and was admitted to hospital and diagnosed with beta-blocker-induced asthma.
- A 49-year-old patient was admitted to the local hospital with a second

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myocardial infarction. Review of his records showed that he was not on appropriate medication.

In coming to terms with the potential scale of the safety problem and in understanding what is meant by 'harm', consider the following definition: '… *anything that happens to a patient as a result of interaction with healthcare services (environment, workers, treatment etc.) that you would not want to happen to you or your relatives…*'.

HUMAN FACTORS

'*One day in the 1970s, Professor James Reason was making a pot of tea while his cat was clamouring to be fed. He efficiently opened the tin of cat food and put it in his tea pot. The two components got mixed up. Both the teapot and the cat's feeding dish afforded the same opportunity – putting "stuff" in.*' [12]

The example above outlines a classic case of absentmindedness. If we translate the same principle to the workplace and our everyday interactions with practice systems, we can begin to see how and why many significant events may happen. When we are tired, overloaded with tasks, distracted or less vigilant than normal then it is inevitable that our interactions with imperfect processes and technologies in a complex clinical environment will lead to mistakes.

However, it is only recently that our understanding of human fallibility in the workplace has begun to move on from the 'perfectibility' model of previous decades. This implied that being well trained, caring about your job and working hard would mean that errors were largely avoided. Evidence now demonstrates that this thinking is counterproductive.[12] Just as in the aviation and petrochemical industries, we now accept that human fallibility in healthcare is inevitable and that the constant pursuit of individual performance perfection – which often drives clinical training – is futile and impossible. To make healthcare safer we need to recognise the potential for system and human error, and train clinicians to understand and learn from failures to guard against re-occurrence.

Understanding human factors is, therefore, vital in comprehending error causation and safety issues. For example, a major reason for primary

care teams undertaking ineffective SEA investigations is because of a failure to fully determine how and why the incident happened.[13] If practice teams had a greater awareness and knowledge of the human, social and systems factors that often combine to cause significant events then the standard of subsequent investigations, learning and improvement might be enhanced further. Similarly, being more aware of human behaviour, abilities and limitations is also critical when developing effective practice protocols, and designing internal processes and tasks to minimise risks.

'Human factors' as a discipline is now belatedly being taught for some clinical professions at undergraduate and postgraduate level. However, it is relatively easy to gain a basic understanding as part of routine staff training and CPD arrangements. The internet contains a number of freely accessible teaching resources on the role and implications of human factors in healthcare.[12,14,15] A lunchtime educational session for all of the practice team (or individually) on the basics of human factors would be an important first step in the collective appreciation of how mistakes are made, systems can fail and safety is compromised.

CONCLUSION

Patient safety in primary care is a major concern. Existing improvement strategies are helpful, but need to be more focused on reducing preventable harm. As a first step to building a safety culture, the primary care workforce needs to acknowledge the potential scale of the safety problem and better understand how systems fail and mistakes are made. ●

The other articles in this short series on safety in primary care will be:
- Reporting and learning from harmful incidents
- Leadership and implementing a safety culture

RESOURCES

- **Patient Safety First**
  www.patientsafetyfirst.nhs.uk/content.aspx?path=/
- **The Health Foundation**
  www.health.org.uk

LEARNING POINTS

- Recognise the scale and nature of the patient safety problem in primary care
- Understand the impact of human factors on safety

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