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Building a patient safety toolkit for use in general practice

Despite 340 million primary care visits being made annually in the UK (British Medical Association, 2015), most of the literature on patient safety has focused on hospital-based services (Spencer and Campbell, 2014). To improve safety in primary care settings, we must know what methods, tools and indicators are available to measure and monitor patient safety. In collaboration with patient safety experts at the University of Dundee, we were able to identify a number of existing tools, many of these were adopted for use in the Patient Safety Toolkit.

The GP curriculum and the Patient Safety Toolkit

Professional example 2.02: Patient Safety and Quality of Care provides standards for maintaining high quality healthcare.

- GPs should understand 'how and when to apply tools and metrics to improve the quality of care'
- Ensure 'the practice has good systems in place to monitor the quality of care that they provide'.
- Techniques to look at patient safety may include 'clinical audit, significant event audit, and improvement methodology'.
- 'Patient safety incidents, near misses, and complaints are part of a jigsaw of information that can be used'

The Patient Safety Toolkit

We undertook two focused literature reviews to ensure that we included all relevant publications to date. The first identified tools, and associated outcome measures, used to assess safety in general practices (Spencer and Campbell, 2014). The second identified qualitative studies on the experiences of patients and/or health professionals on safety in general practice with a view to developing a new instrument for assessing patient views on patient safety (Ricci-Cabello, Goncalves, Rojas-Garcia, and Valderas, 2014). Our list of tools were then assessed in a two-round consensus process using the RAND Appropriateness Method to specify the key attributes of safe general practice (Bell, Spencer, Avery, and Campbell, 2014). From this RAND exercise and the literature reviews, we identified seven tools; two additional tools (PREOS-PC and Concise Safe Systems Checklist) were developed by our team to cover areas not addressed by pre-existing tools. The tools in the Patient Safety Toolkit are listed in Box 1.

The key aspects of patient safety that our toolkit addressed were: 1) identifying patients at risk of harm, 2) identifying gaps in safety systems, 3) safety culture, and 4) patient perspectives on safety. Our overall focus was on improving patient safety in general practice. Our work has led the Royal College of General Practitioners to host an online

version of the toolkit (Royal College of General Practitioners, 2015) as part of their 'Spotlight projects', which gives practices across the world access to the items in the toolkit and can help to educate practice staff about patient safety.

Tools in the Patient Safety Toolkit

The tools that we have included in our toolkit and their uses are listed below.

Trigger Tool

The Trigger Tool (Scottish Patient Safety Programme, 2015a) is an efficient way of performing a case note review to highlight areas of concern with respect to patient safety. The aim of the Trigger Tool is to learn from patterns of avoidable harm detected at the practice and thereby make changes to systems or clinicians' behaviours. The tool can be used to screen for patient safety incidents (PSIs) by using a number of 'triggers'. For example, the trigger '≥ 3 consultation in 7 days' would be a 'trigger' for the reviewer to undertake a more focused examination of the clinical record as multiple attendances might be associated with higher potential for iatrogenic problems.

Alternatively, it can be used more specifically to discover PSIs in a particular area of perceived risk. The practice may choose its own particular topic for audit (for example, patients over the age of 75 years), which can then be repeated at regular intervals. It is important that any significant PSI or harm events are evaluated and, where appropriate, action is taken to reduce future risk. Actions to achieve this might include conventional audit, significant event audit, practice meetings specifically to discuss the results, drafting of new guidelines or a change of procedure. Box 2 lists an example of the Trigger Tool in practice.

Medicines Reconciliation Tool

Patients are vulnerable during changes in care level particularly with respect to medication errors. The Medicines Reconciliation Tool (Scottish Patient Safety Programme, 2015b) assesses the safety of the interface between primary and secondary care and helps GPs measure the accuracy of medicine reconciliation following a patient's discharge from hospital. The items on the Medicines Reconciliation Tool are listed in Box 3.

Using the questions outlined in Box 3, an audit of at least 20 patients aged 65 years and over following hospital discharge helps to assess how promptly and how accurately medication changes suggested by the hospital have been made. It also assesses the extent to which changes have been discussed with patients. This tool deliberately focuses on vulnerable patients who are likely to need alterations to medication when their care level changes, where there is a higher potential for mistakes to be made due to polypharmacy and comorbidity. An example of the Medicines Reconciliation Tool in practice is shown in Box 4.

Primary Care Safequest

The Primary Care (PC) Safequest (DeWet, Spence, Mash, Johnson & Bowie, 2010), allows practice staff to anonymously rate the perceived safety climate within their practice using an online questionnaire. Safety climate refers to the attitudes, values, perceptions, and behaviours that shape the practice team's commitment to safety. Higher scores indicate higher perceived practice safety among staff members with the thirty items falling into 5 dimensions, each measuring a different aspect of safety climate: 1) Workload 2) Communication 3) Leadership 4) Teamwork and 5) Safety Systems. PC Safequest is designed to be used by all the members of the general practice team, including GPs, GP Registrars, practice nurses, , practice managers, administrative staff and ancillary healthcare professionals. The report generated from the results of the questionnaire is then used to facilitate discussions on any issues identified as affecting the safety climate of the practice, and what can be done to improve this.

Our research, which will be published in a separate paper, showed that respondents provided lower scores on the Workload scale than on any other scale, indicating that time pressure is a significant safety issue. As the British Medical Association (British Medical Association, 2015) pointed out recently, GP Practices have been under enormous pressure with the number of consultations in England increasing from 300 million to 340 million in the last five years.

Manchester Patient Safety Framework (MaPSaF)

The aim of MaPSaF (Kirk, Parker, Claridge, Esmail, & Marshall, 2007; NHS Direct, 2015) is to promote awareness about patient safety culture amongst healthcare teams. It has been designed to help organisations understand how safety is perceived by staff and it allows practice groups to reflect on their safety culture. MaPSaF also stimulates discussion on the strengths and weaknesses of the patient safety culture within the practice and provides an assessment of safety culture to help the practice identify areas for improvement. It has 10 dimensions and rates organisations across 5 levels (moving from pathological to generative). The dimensions of the MaPSaF are shown in Box 5.

Patient Reported Experiences of Safety in Primary Care

The practice can use this questionnaire (Ricci-Cabello, Goncalves & Valderas, 2013) to collect information about patients' experiences, and any outcomes of patient safety problems in primary care. Following the administration of the survey, practices might identify changes that could be made to benefit patients and strengthen the patient-centred focus of health care at the practice. The domains of the PREOS-PC are shown in Box 6.

Prescribing Safety Indicators

The Prescribing Safety Indicators (Rodgers, 2013; Spencer, Bell, Avery, Gookey & Campbell, 2014) contain scenarios in which there is potentially inappropriate (and possibly unsafe) prescribing. A set of these indicators has been developed for use in general practices following a project commissioned by the RCGP. The PINCER trial (Avery, Rodgers, Cantrill, Armstrong, Cresswell, Eden et al., 2012) showed an improvement in prescribing safety when pharmacists worked with GPs using the indicators compared to standard feedback on prescribing error. The Prescribing Safety Indicators can be automated by using CHART (Care and Health Analysis in Real Time) software to identify at-risk patients who trigger a particular indicator. This software is commercially available via PRIMIS. The practices can also use these indicators to develop their own computer searches based on simple queries to identify patients at risk, in a manner similar to any audit within the electronic record. The Prescribing Safety Indicators are shown in Box 7.

Concise Safe Systems Checklist

The Concise Safe Systems Checklist identifies important aspects of patient safety that were not covered by any of the other tools. It focuses on the safety of practice systems and covers a variety of areas, such as dealing with laboratory test results and hospital correspondence. The Concise Safe Systems Checklist allows practices to think about those background systems which are important for patient safety, but are often overlooked. It is deliberately designed not to include items already covered by legislation or mandatory requirements. This checklist is designed to be quick and simple to use by the practice manager or a senior clinician. It is anticipated that the practice will use this checklist annually. Feedback from a sample practice is shown in Box 8.

Safety Checklist for General Practice

The Safety Checklist for General Practice (Bowie, Ferguson, MacLeod, Kennedy, de Wet, McNab et al. 2015) was designed by NHS Education for Scotland in partnership with Health Improvement Scotland. This checklist identifies hazards across the wider work systems that may threaten patient safety, as well as those hazards that have an impact on the health, safety and well-being of all involved. It can be seen as a traditional checklist, but it also has a global monitoring role, and provides clarification of specific safety issues already covered by legislation and mandatory requirements. This checklist is designed to be used every four months. The dimensions of the Safety Checklist for General Practice are shown in Box 9.

Significant Event Audit

This guidance (Bowie, McCoy, McKay, & Lough 2005) enables primary care teams to conduct an effective Significant Event Audit (SEA) with the aim of improving care for all patients. SEA ensures that primary care teams learn from patient safety incidents and ‘near misses’ by

highlighting both strengths and weaknesses in the care provided. The guidance gives primary care teams a tool with which to develop a structured and effective SEA process and is embedded as an improvement tool within the practice. The guidance defines the process of SEA, outlines effective practices and demonstrates what can be achieved by using examples. It is good practice to report to the National Reporting and Learning System (NRLS) any patient safety incidents that could have or did harm a patient so they can be learnt from and any necessary action can be taken to prevent similar incidents from occurring in the future. The headings in a SEA are shown in Box 10.

Conclusion

Although there are weaknesses in the research base for primary care patient safety (diagnostic error, clerical error and follow-up test error are poorly represented) there are many tools ready to use in clinical practice. This is the first attempt to collect a range of resources from a world-wide perspective and adapt them for use in the UK. Our work has led the Royal College of General Practitioners to host an online version of the toolkit as part of their 'Spotlight projects', which will give clinicians across the world access to the items in the toolkit and will help to educate practice staff about patient safety. The Toolkit will be particularly helpful to new GPs and GP trainees by allowing them to monitor their performance early in their career. There is currently no funding incentive for performing patient safety work within General Practice, and in a time- pressured environment, it can be difficult to justify why this work is important for patients and practices. Further work is needed to determine whether the use of the toolkit results in improvements in rates of error in general practice, but GPs will be able to demonstrate clear benefits for individual patients and for their own practices at a local level by using these simple tools. Hopefully in doing, so they will be able to convince colleagues of the importance of their efforts and encourage practices to set aside time for patient safety improvements. We plan to publish the results from our evalution of the toolkit in a separate paper.

Key Points Box

- Patient safety is an important issue for general practices
- Patient safety is best addressed with a team approach
- The Patient Safety Toolkit is a collection of tools to measure and improve patient safety in general practice.
- Nine tools were included in the toolkit and covered a range of different aspects of patient safety including prescribing safety, safety culture, patient experiences, audit, and medicines reconciliation.

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Box 1. The Nine Tools in the Patient Safety Toolkit

- The Trigger Tool which identifies triggers to determine whether patients have come to harm
- The Medicines Reconciliation Bundle, which examines the safety of the interface between primary and secondary care in terms of medication reconciliation following a patient's discharge from hospital
- The PC-Safequest that assesses safety climate
- The Manchester Patient Safety Framework (MaPSaF) which measures safety culture
- The Patient Reported Experiences and Outcomes of Safety in Primary Care (PREOS-PC) which we developed for assessing patient reported experiences and outcomes of safety in primary care
- A set of Prescribing Safety Indicators which we updated and used to assess the safety of prescribing in general practices.
- A Concise Safe Systems Checklist, which was used to assess aspects of patient safety considered important by the RAND panel, but not covered by the other tools.
- The Safety Checklist for General Practice which identifies hazards that may threaten patient safety, as well as those hazards that have an impact on the health, safety and well-being of all involved
- Significant Event Analysis that enables primary health care professionals to investigate adverse events and near misses relevant to patient safety

Box 2. An Example of the Trigger Tool in Practice

- Urban/rural practice with 12,000 patients
- Population aged >75 years
- 25 records reviewed (Aug-Nov 2013)
- 10 PSIs identified (most involve monitoring of medications)
- 80% are preventable and originate in primary care
- 1 incident of severe harm involving a medication related fall – SEA conducted
- 2 hours of GP time to collect data and 1 hour for all clinical staff (usual lunchtime meeting)
- Changes to medication review templates and education of clinical staff about which medications require monitoring

Box 3. The Medicines Reconciliation Tool

1. Is the Discharge Summary processed and with the GP within 2 working days of receipt by the practice?
2. Were any changes to the medications required?
3. If changes to the medications were required, was a documentation of the changes present?
4. How many working days did medicines reconciliation take?
5. Did a discussion with the patient/carer occur?
6. Was the discussion with the patient/carer clinically necessary?

Box 4. An Example of the Medicines Reconciliation Tool in Practice

- Complete audit cycle (2013 – 1 month after migrating to *Docman* and 2015 – re-audit)
- 30 Discharge Summaries for the over 75's in a mixed urban/rural practice
- Set-up problems with *Docman* identified and staff training issues exposed
- Medicines reconciliation is only completed correctly 63% of the time (and this does not improve on re-audit)
- Average time to complete meds rec is 7 days
- The practice recognises an issue with clinical and administrative processing of discharge summaries and makes steps to change systems

Box 5. The Ten Dimensions of the Manchester Patient Safety Framework

1. Commitment to overall continuous improvement
2. Priority given to safety
3. System errors and individual responsibility
4. Recording incidents and best practice
5. Evaluating incidents and best practice
6. Learning and effecting change
7. Communication about safety issues
8. Personal management and safety issues
9. Staff education and training
10. Team working

Box 6. The 10 Domains of the PREOS-PC

1) Safe Environment
2) Safe Perception
3) Trustworthiness
4) Harm (general health, pain, mental health, etc.) and
5) Experiences of Patient Safety Problems, which is divided into 6 dimensions:
    a) Frequency of Safety Problems
    b) Preventability
    c) Professional Responsibility
    d) Patient's Responsibility
    e) Patient's emotional response
    f) Practice response

Box 7. The eight most important prescribing indicators.

1. Patients with a history of peptic ulcer who have been prescribed a non-selective NSAID without gastroprotection
2. Patients with asthma who have been prescribed a beta-blocker
3. Patients aged 75 years and older who have been prescribed an ACE inhibitor or a loop diuretic long-term who have not had a computer-recorded check of their renal function and electrolytes in the previous 15 months
4. Proportions of women with a past medical history of venous or arterial thrombosis who have been prescribed the combined oral contraceptive pill
5. Patients receiving methotrexate for at least three months who have not had a recorded full blood count (Outcome 5a) and/or liver function test (Outcome 5b) within the previous three months
6. Patients receiving warfarin for at least three months who have not had a recorded check of their INR within the previous 12 weeks
7. Patients receiving lithium for at least three months who have not had a recorded check of their lithium levels within the previous three months
8. Patients receiving amiodarone for at least six months who have not had a thyroid function test within the previous six months

Box 8. Feedback from a sample practice.

- ‘Non-collection of prescriptions’ and ‘review of vulnerable patients after discharge’ were the most likely checklist items to require a change in system.
- What practices said about the checklist; ‘straight-forward’, ‘simple’ and ‘easy to complete’
- One GP gets to the heart of the matter; “I think it’s useful just to go over it with the team even, rather than just tick it yourself and assume it’s all done”

Box 9. The six dimensions of the safety checklist for general practice.

1. Medicines management such as ‘Controlled drugs’
2. Housekeeping such as ‘Stocking of clinical rooms’
3. Information systems such as ‘Data protection’
4. Registration checks such as ‘All staff have access to ongoing patient safety-related training opportunities’.
5. Patient access and identification such as ‘Standardised patient identification verification’
6. Health and safety such as ‘Building safety and insurance’

Box 10. The headings in the significant event audit.

- What happened?
- Why did it happen?
- What has been learned?
- What has been changed?