

LEARNING & IMPROVEMENT [No.3]

Trigger Review of Electronic Patient Records in General Practice

Summary

- Occasional trigger review provides the GP team with important opportunities to identify patient safety-related learning needs and direct improvement efforts.
- By screening small samples of the records of high risk groups of patients, the team can detect and learn from 'incidents' or 'latent risks' that may be hidden in the records.
- Searching for specific high yield 'triggers' - such as 'abnormal blood results' or a 'recent out-of-hours visit' – leads to a speedy and structured method of detecting incidents of interest and making judgements on what action should be taken.
- A typical review lasts about 2-hours which enables you to screen 20 records and reflect on the findings.
- The focus is on identifying avoidable harm or other incidents of interest, not individual errors. Harm is defined as: *'...anything that happens to a patient as a result of interaction with healthcare services (environment, workers, and treatment) that you would not want to happen to you or your relatives'*
- Trigger review participation can be used as evidence of engaging in improvement activity for GP appraisal and specialty training, and may attract a payment as part of local or national contractual arrangements.

What is Trigger Review?

- Trigger review is simply a method of audit that involves the systematic evaluation of a small batch of patient records by a clinician (GP or a GP Nurse) - usually around 25 in total and perhaps a lot less depending on what you find that is of interest.
- A 'Trigger' is a pre-defined prompt or sign in the record (Box 1) that *MAY* indicate that a patient safety incident has occurred – roughly defined as any incident, however minor, where a patient was harmed or may have been (a near miss).
- Administrative staff can potentially support the process by identifying relevant patient groups by conducting searches of the practice information system. Some staff may also be able to identify relevant 'triggers' in the records which may save time for clinicians.
- Once a trigger(s) is detected this is a signal for the reviewer to undertake a more in-depth review of the record to determine if evidence of a safety incident exists.
- For example, an INR>5.0 (a trigger) was detected by a clinical reviewer - further review of the record found evidence of the patient having suffered a bleed and being admitted to a local hospital (a patient safety incident).
- If a safety incident is uncovered, the reviewer makes a professional judgement on whether it was avoidable or not, how severe it was and if it originated in primary care or elsewhere.
- This helps the team to pinpoint those incidents where learning and improvement are a greater priority, which may be necessary where a number of incidents are detected and the team does not have the capacity to deal with them all.

BOX 1

Examples of previously tested and published triggers and their clinical rationale ³

Trigger	Rationale
Timing of consultation	3 or more contacts with the practice in any given period of a (this can include telephone calls, consultations with Practice Nurse/ GP or home visits)
Place of consultation	Any home visit, whether by the GP or by a Practice Nurse from the practice serves as a trigger
Frequency of consultation	10 consultations for the period of review (12 months)
Changes to medication	Has any "repeat medication" been added or cancelled in the period under review?
Hospital admission/discharge	Has the patient been admitted to a hospital (minimum one overnight stay) for any intervention, management or procedure?
Adverse drug events/allergies	Has a new "read code" for allergy/adverse drug event been added to the record in the 12-month period under review?
Abnormal blood results	Specific abnormalities in U&E, LFT, INR and FBC levels serve as a trigger

Why is it Important?

- Currently safety incidents are reported by patients, identified directly by clinicians or highlighted by colleagues as part of routine practice. However, some incident types are not detected so easily.
- Systematically reviewing medical records for previously undetected incidents and threats can provide the care team with a whole new perspective on patient safety.
- It also offers valuable opportunities to take PRE-EMPTIVE action before harm can occur or pinpoint learning needs where patient safety was avoidably compromised.

What Types of Patient Safety Incidents Are Found?

- The types of safety incidents and risks typically uncovered tend to differ in general terms from those highlighted by complaints, significant event analyses and other methods.

Preventable Safety Incidents

Elderly housebound patient admitted to hospital with a fragility fracture after several accidental falls. Hypotension from multiple antihypertensive agents was implicated. No contact with any practice team member for seven years previously.	Allergy not coded
Patient prescribed Warfarin presented with symptomatic anaemia. INR was therapeutic and had been checked regularly but his haemoglobin had not been checked during the previous three years.	Co-prescribed multiple drugs – counteracting/ unnecessary
Patient admitted as a hospital emergency and found to have hyperkalaemia. Further review found that a blood sample two weeks before had been reported as haemolyzed but that the test had not been repeated	Follow-up/Referral didn't happen
Patient re-consulted with an allergic reaction to a prescribed antibiotic. Further review found a similar incident years before that had not been coded.	Not stopping medication that should have been

Evidence for Trigger Review

- Trigger review is an evolving method in primary care and has been tested by a number of practice teams involved in the Pilot Safety and Improvement in Primary Care Programme in Scotland and by GP Trainees.
- Most patient safety incidents uncovered by this method will be familiar to the majority of primary care clinicians – it's just that they remain undetected for now.
- Most detected incidents are of low severity or are 'near misses' – but offer valuable opportunities for learning and minimising future risks.
- Feedback from those teams and others suggests:
 - The triggers used are *valid* i.e. they can be detected and may be indicative of safety incidents if these actually occurred.
 - The process is *acceptable* i.e. GPs and Nurse who tried it report that it is of value professionally, educationally and to making patient care safer.
 - The process is *feasible* i.e. GPs and Nurses were generally able to apply the method and learn from it. Issues around time taken and the opportunity cost associated with the method require further study.
 - Trigger review can lead to *improvements*. GPs and Nurse reported a range of actions and improvements undertaken as a result of participation. They also report that it links well with significant event analysis and clinical audit.

Examples of Potential Patient sub-Populations to Review	1. Specific, Shared Patient Characteristics	2. Chronic Disease Areas	3. High Risk Medications
	Nursing Home Patients	COPD	Insulin
	>75 years	Stroke/TIA	Morphine
	Last 25 Attending Out-of-Hours	CVD	Warfarin
	Last 25 Hospital Referrals	Diabetes	NSAIDs
	Housebound patients	Heart failure	Diuretics (x2)
	Last 25 Hospital Admissions	CKD	>5 Repeat medication items
	4. Combinations of Groups 1 to 3		
e.g. Patients over 75 years, taking 5+ medications, who attended in previous 12-weeks; nursing home patients prescribed NSAIDs; patients with heart failure and who are prescribed 2 or more diuretics.			
5. Choose Your Own Sub-Populations			
e.g. Patients discharged after emergency hospital admission (review the period before and after admission); a random selection of any 25 patients registered with the practice.			

*Patients' susceptibility to patient safety incidents vary widely and are influenced by many factors e.g. age, frequency of consultation, co-morbidities and the number and types of prescribed medications. The rationale for choosing a specific sub-population of patient records to review is that it increases the likelihood of detecting patient safety incidents. There is no single 'right' group to choose. In practice, the selected patient groups will mainly depend on the reviewers' preference and review aims.

"...it has been a fantastic tool", "...the trigger tool is probably one of the most important things that we are looking at in the safety improvement in primary care".

"...[it was useful in] finding things before they have gone drastically wrong",

"picking up on areas where the practice can improve things or change things"

"[it was a] good way to look at your risk and risk management and with regard to clinical things in general practice".

"[I] began to get a real proper handle on how it fitted in to the big scheme of things and how it could be a really useful tool in the practice".

"[We identified] one or two huge near misses that would never have otherwise been unveiled to anybody ever but had very significant learning".

"a reaction to an antibiotic hadn't been recorded, two instances were found of things not being coded and potentially, somebody could have been really harmed by it"

"[we found an] adverse drug reaction to an antibiotic where they had had the same reaction before and it hadn't been documented".

Further Educational Guidance and Documentation can be Downloaded @ [www.?](http://www.nes.scot.nhs.uk)

References

1. Bowie P, Halley L, Gillies J, Houston N & de Wet C. Searching primary care records for predefined triggers may expose latent risks and adverse events. *Clinical Risk* 2012 18:13—18; doi:10.1258/cr.2012.011055
2. De Wet & Bowie P. Screening electronic patient records for preventable harm: a trigger tool for primary care. *Quality in Primary Care* 2011; 19:115-25
3. De Wet C & Bowie P. A preliminary study to develop and test a global trigger tool to identify undetected error and patient harm in primary care records. *Postgraduate Medical Journal* 2009;85 176-180

NHS Education for Scotland:

We are a Special Health Board, responsible for the development and delivery of education and training for all those who work in NHSScotland in delivering services to patients that are person-centred, safe, effective and evidence-based.

www.nes.scot.nhs.uk