

**Title**: Development of a trigger tool to identify adverse events and no-harm incidents that affect patients admitted to home healthcare

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**Journal**: *BMJ Quality and Safety Online,* 2017

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**Summary**:

Background

* Home healthcare is increasing ​
* New challenges with this setting are not as well understood ​
* Retrospective record review (RRR) is a tool that identifies adverse events (AE), no-harm incidents and their triggers​
* This study takes place in Sweden​

Study Goals

* Identify triggers with the highest predictive value ​
* Create trigger tool and verify that it works within home healthcare

Methods

1. Literature search and review coupled with interviews with healthcare professionals, patients, and family let to identified risk areas and relevant triggers
2. Developed list of 26 triggers – used modified Delphi process (face to face with Delphi panel)
3. Tested RRR with 35 triggers (n=60 records)
4. Used modified Delphi process (written and oral feedback from review teams)
5. Tested RRR with 38 triggers (n=600 records)
6. Used modified Delphi process (written and oral feedback from review teams)
7. Used modified Delphi process (face to face with Delphi panel)
8. Used modified Delphi process (written feedback from Delphi panel)
9. Final version of tool with 23 triggers

Results:

* High inter-rater reliability k=0.801
* ​Shortened trigger list to 23 from 38 with 3 categories (Care, medication, continuity and transition modules)​
* Will form basis for national safety tool ​
* Limitations:​
	+ Couldn’t always access the information due to fragmented record keeping​
	+ Not always reported ​
	+ Did not test final Trigger Tool

**Discussion Questions**:

* Some concerned over the validity of triggers that are also clearly adverse events and/or no-harm incidents
	+ Example: Readmission within 30 days of discharge
	+ Some AE’s could be triggers for other AEs
* How do you differentiate between important and actionable triggers?
	+ Seems to identify too many triggers to reasonably address/treat

Study Pros

* Methods – iterative process from small to large sample size
	+ Altered between solicited input and testing
* Applicable to hospital as a whole
	+ Retrospective
	+ Identifies critical problems to act on/monitor (similar to quality indicators)
* Value of capturing no-harm incidents
	+ Examples: unplanned re-intubation, unplanned return to the OR
	+ Common to have a no-harm incident multiple times, but this indicates that there is an underlying problem that could/will lead to harm in time

Applications to Home Healthcare

* In general, it makes sense to apply patient safety to homecare
* Application
	+ There may be different triggers/AEs/no-harm incidents for homecare than for inpatient settings
		- You could use the inpatient list as a starting point, and work with homecare to develop a new trigger list
		- Then, perhaps an inpatient trigger and a homecare trigger presenting together could indicate an AE.
	+ Some triggers listed are clearly useful, while some are very difficult to assess
* Depending on the hospital to homecare transition, homecare providers may not be able to determine the presence of triggers. More immediate needs (med rec, making sure the patient is safe in home) may arise

Potential limitations

* Difficult to apply tool at a patient level
* No sensitivity analysis
* Inherent bias when sampling
	+ Really you are only looking at records that are pre-disposed to AEs/no-harm incidents
* Results depend on to what extent the healthcare provider searches for, reports, and records AEs/no-harm incidents
	+ Example: Deep vein thrombosis (DVT) is an AE that, if you are looking for it, will nearly always present itself to some extent. The threshold for reporting this AE may differ from physician to physician
* Use of 1-4 Likert scale – implies that answers can either be positive or negative
* Study does not consider burden associated with tool
* Multiple typos and inconsistencies in references

Opportunities for Further Research

* Cost, consequence, and estimation of harm
* Scientific approaches to sampling
* Considering demographic data to create specialized list of AEs/no-harm incidents
* Scientific study of trigger tools
	+ How to measure a successful trigger tool
		- Correct estimation of harm
		- Added burden and cost