GLOBAL TRIGGER TOOLS
Identifying and Measuring Adverse Events

Women's Hospital, Hamad Medical Corporation

AUTHORS: Dr. Huda Abdulla Saleh (Executive Director of Quality and Patient Safety, Project Lead); Dr. Nada Salaheldin Mohamed Elamin (Associate Consultant) Dr. Tarek Abedalrahman Kanaan (Specialist); Ms. Kavitha B. Narayana (Staff Nurse); Ms. Layal Diba (Best Care Always Safety Facilitator); Ms. Kristina Magno (Quality Improvement Reviewer)

Introduction

Traditionally, is has been noted that healthcare teams and managers have sought to detect adverse events or safety incidents using the voluntary reporting methods. However, it was recorded that only 10% to 20% of errors are reported in this way and of those, about 9 out of 10 cause no harm to patients. A more effective method is needed to identify adverse events so teams can prioritize areas for improvement.

Trigger tools are used to help us identify the adverse effects and to recognize areas for improvement by auditing a small sample of patient notes regularly which is done in a monthly basis.

Background

The term 'trigger tool' was first coined in the USA in the early 1990s to describe a method used
to detect potential adverse drug events. The US Institute of Healthcare Improvement (IHI) refined this process and developed the global trigger tool to quantify adverse events more generally using a simple and replicable process.

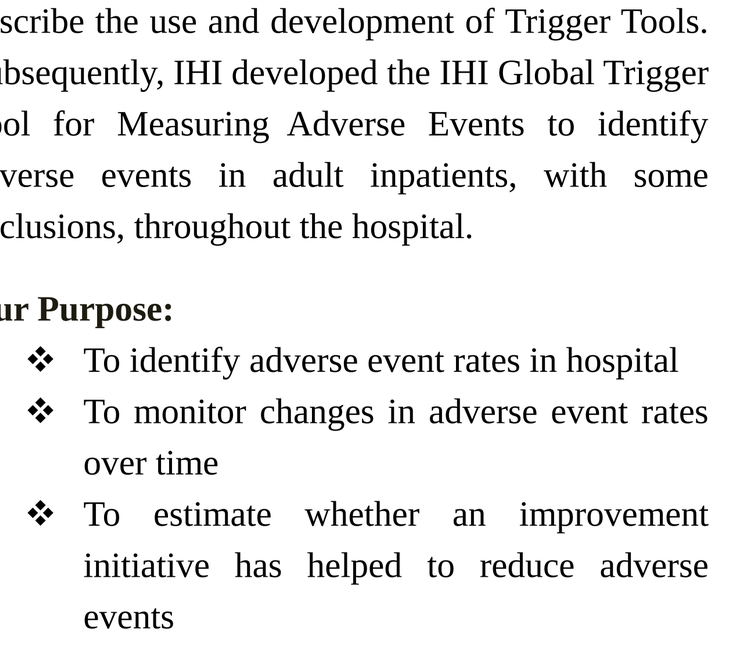
The use of triggers with manual record reviews was initially developed by the Institute for Healthcare Improvement (IHI) in 1999 to identify only adverse medication events; adaptation of the methodology for other areas of the hospital, such as intensive care, followed. Recent publications describe the use and development of Trigger Tools. Subsequently, IHI developed the IHI Global Trigger Tool for Measuring Adverse Events to identify adverse events in adult inpatients, with some exclusions, throughout the hospital.

Our Purpose:

- To identify adverse event rates in hospital
- To monitor changes in adverse event rates over time
- To estimate whether an improvement initiative has helped to reduce adverse events

Measures:

- Adverse events per 100 admissions
- Adverse events per 1,000 patient days



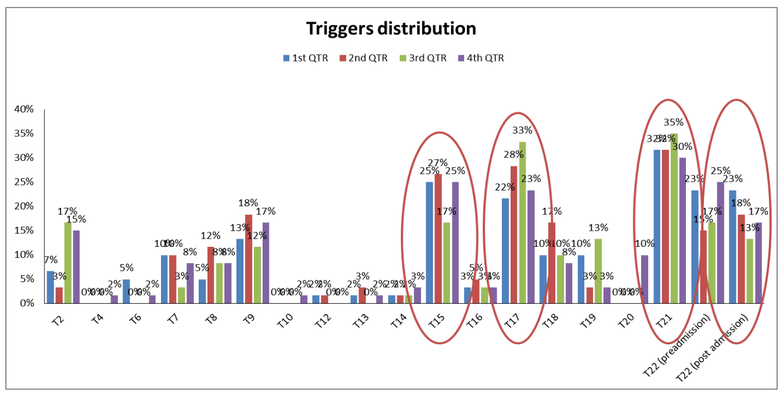
Actions Taken

- ❑ The team reviewed a total of 240 cases in 2016, 20 cases reviewed in a monthly basis for 12 months.
- ❑ Identified most common triggers that could lead to harm
- ❑ Identified adverse events and its severity criteria according to IHI Guideline
- ❑ Modified the list of Triggers according to Perinatal Criteria.
- ❑ Continue data collection and analysis of cases.

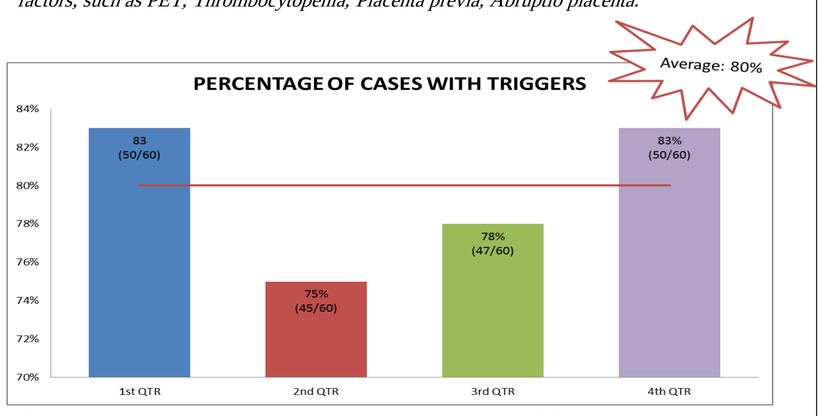
List of Triggers

Perinatal Module Triggers	
T1	Apgar < 7 at 5 min.
T2	Admission to NICU and > 24 hours
T3	Maternal/Neonatal Transport
T4	Terbutaline
T5	Naloxine
T6	Infant Serum Glucose <50
T7	3rd or 4th Degree Lacerations
T8	Prolonged Deceleations
T9	Blood Transfusion
T10	Platelet Count < 50,000
T11	Abrupt Medication Stop (e.g. epidural)
T12	Hypotension/Lethargy (MOM e.g. OD on Mag SO4)
T13	Transfer to a Higher Level Care, including ICU in-house
T14	Unplanned Return to Surgery
T15	Estimated Blood Loss > 500ml
T16	Specialty Consult
T17	Administration Of Oxytocic Agents Post-delivery (such as oxytocin, ergonovine, methylergonovine, and 15-methyl-prostaglandin)
T18	Instrumented Delivery
T19	Administration of General Anesthetic for Delivery
T20	Cord Gases Ordered
T21	Gestational Diabetes
T22	Other

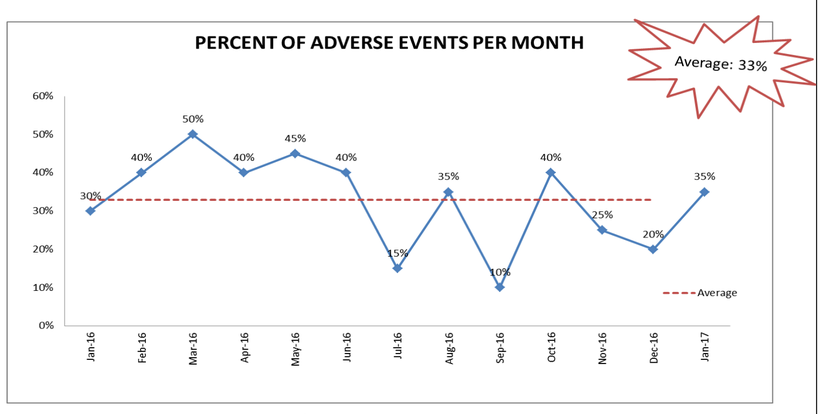
Results



This chart is showing an elevated number of the trigger related to diabetic patients (T21) during the three quarters followed by (T17) administration of Oxytocic Agents Post-delivery other than the oxytocin, then (T15) estimated blood loss >500ml and lastly (T22) Other factors; such as PET, Thrombocytopenia, Placenta previa, Abruptio placenta.

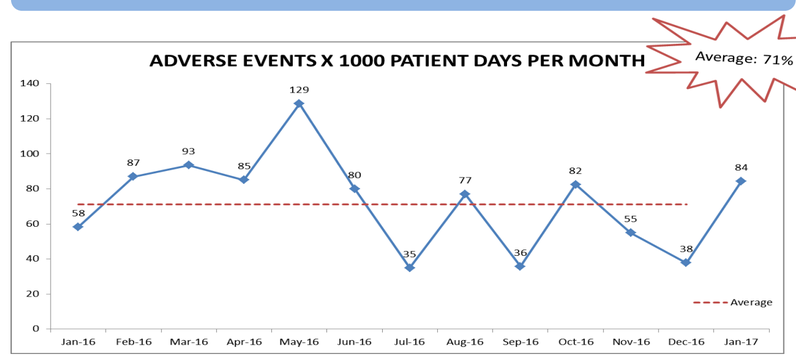


The above graph shows the overall cases reviewed for year 2016. Total of 240 cases reviewed (60 per quarter) and a total of 192 cases identified with triggers

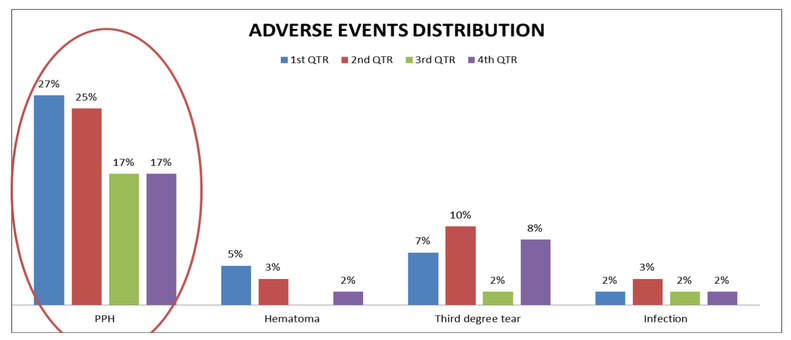


The above graph shows the total of 240 cases reviewed (20 per month) in 2016. 82 cases identified with adverse events/harm with an average of 6-7 cases reported per month.

Results cont…

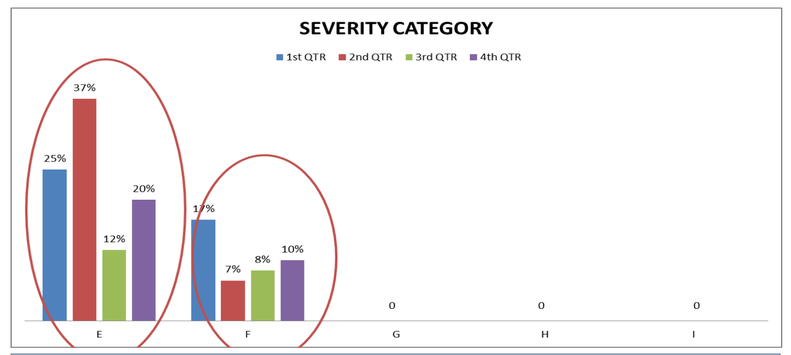


The above graph shows the rate of Adverse events per 1000 patient days (monthly) a total of 240 cases reviewed (20 per month) in 2016. 82 cases identified with adverse events/harm with an average of 6-7 cases reported per month.

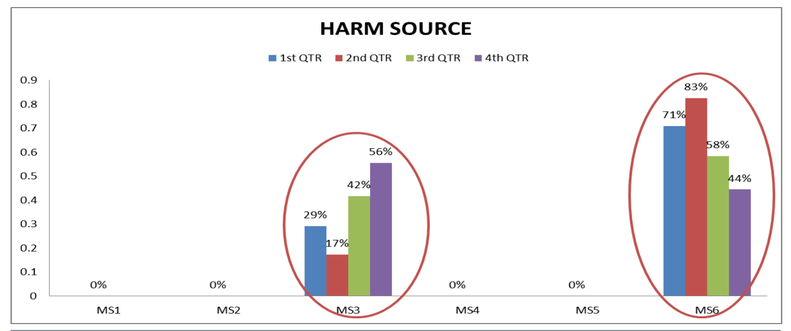


Categories:

1. *PPH cases – average of 21% (51/240)*
2. *Third or fourth degree tears – average of 7% (16/240)*
3. *Hematoma – average of 3% (6/240)*
4. *Infection – average of 2% (5/240)*



Severity Category	
Code	*Description*
E	*Temporary harm to the patient and required intervention*
F	*Temporary harm to the patient and required initial or prolonged hospitalization*
G	*Permanent patient harm*
H	*Intervention required to sustain life*
I	*Patient death*



Harm Source			
Code	***Microsystem***	***Code***	***Microsystem***
MS1	*Pre/ post natal Wards*	*MS4*	*Emergency Department*
MS2	*NICU Ward*	*MS5*	*Other*
MS3	*Operating Theatre*	*MS6*	*Labor room*

Achievements

- ❖ Women's Hospital completed one year review of data using the Global Trigger Tools guideline
- ❖ The team was able to identify the most common triggers that resulted to harm. Identified harms were classified according to the severity criteria and level of harm and actions were taken accordingly.

References

- ❖ Innovation Series: IHI Global Trigger Tool for Measuring Adverse Events (Second Edition) http://www.ihi.org/IHI/Topics/PatientSafety/SafetyGeneral/Tools/IHIGlobalTriggerToolforMeasuringAEs.htm
- ❖ Evidence Scan: Global trigger tools © 2010 Health Foundation