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Enhance Patient Safety – Reducing Unintended Retention of Foreign Object related Adverse Events in a Multidisciplinary Approach

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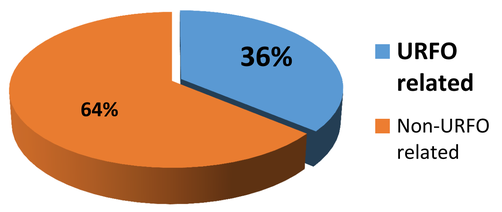
INTRODUCTION

The Unintended Retention of Foreign Object (***URFO***) refers to any item or foreign object related to any operative or invasive procedure that has been ***left inside a patient***.

URFOs can cause both physical and emotional harm to patients, and even death. It adds significantly to the cost of caring for patients, and may erode patients' confidence and trust in healthcare providers.

SingHealth Procedural Safety Workgroup (***SPSW***), one of the SingHealth Enterprise Risk Management Centres of Excellence (CoE), has been reviewing procedural related adverse events since operationalization in August 2014. URFO related adverse events accounted for ***36%*** of procedural related adverse events (*refer to Figure 1*). This category has been consistently the top procedural related adverse event.

Figure 1: Distribution of Procedural Safety related Adverse Events (2011 – 2016)



METHODOLOGY

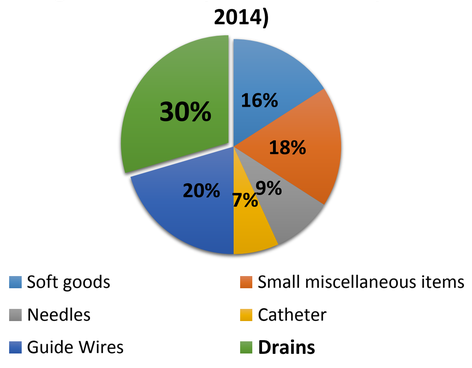
FORMATION OF URFO TASKFORCE

A URFO taskforce was formed in November 2014 to study the key causal factors and explore solutions to reduce URFO related adverse events.

The Taskforce, ***led by SPSW Chairman***, comprised members with various years of experience, seniority and expertise in ***Cardiology, Neurosurgery, General Surgery, Orthopaedic Surgery,*** *Operating Theatres (**OT**), Group Procurement Office (**GPO**)*.

ANALYSIS OF DATA

Figure 2: URFO by Retained Items (2011 – 2014)



The Taskforce reviewed and analysed URFO related adverse events over 2011 to 2014.

Dr***ains*** were identified as the top items retained. This became the focus area for the Taskforce.

Retained ***drains*** related adverse events were further analysed to gather information on the following: *brand, size , procedure performed, department involved, staff involved, and cause(s) of retention.*

Based on the information analysed, ***most of the retained drains were of small sizes*** (e.g 10 FR). Physical samples of different brands & sizes of drains used in OT and their product information were examined by the Taskforce, to better understand the properties and the usage of the drains.

A key causal factor leading to retention was **inadequate training** in (a) ***surgical wound closure*** after drain insertion, and (b) ***drain removal***.

ACTIONS TAKEN

RAISE AWARENESS AMONG DOCTORS

- ***Shared concerns and observations*** with Heads of various surgical disciplines
- Shared concerns and observations at departmental Mortality & Morbidity Review (M&M) meetings of various surgical disciplines
- During M&M meetings, drains of different brands and sizes were passed among doctors for them to feel and stretch for breakability.
- Encouraged doctors to ***use larger size of drain*** if they had to use one.

RAISE AWARENESS AMONG NURSES

- Met OT Nursing Officers, to encourage their nurses to ***inform surgeons of the various choices of drain sizes available***, rather than simply providing a standard drain.

ENHANCE TRANING PROGRAMME

To address the key causal factors with respect to training:

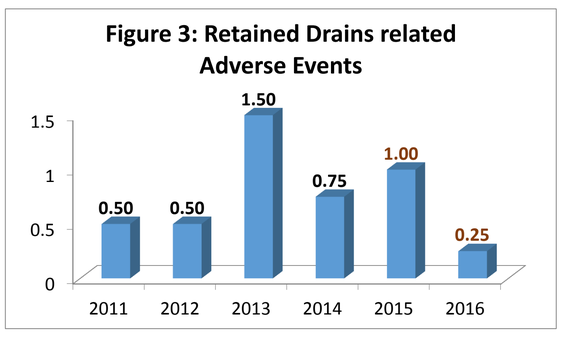
- Included ***drain insertion and removal training*** in the bi-monthly Surgical Skills Workshop for surgical House officers in 2015.
- SPSW will explore extending the training programme to other surgical disciplines.

RESULTS

Retained drains related adverse events at SingHealth were ***reduced by 75%*** in 2016 as compared to 2015 *(refer to figure 3).*

(We took 2015 data as 1 unit as the baseline for reference.)*

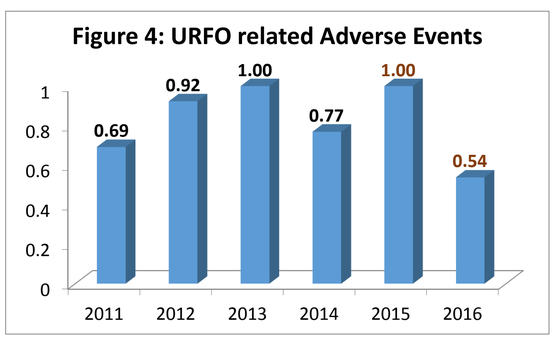
Figure 3: Retained Drains related Adverse Events



Overall, URFO related adverse events at SingHealth were ***reduced by 46%*** in 2016 as compared to 2015 *(refer to figure 4).*

(We took 2015 data as 1 unit as the baseline for reference.)*

Figure 4: URFO related Adverse Events



CONCLUSION

A focused multidisciplinary approach to reduce URFO adverse events has proven to be effective.

In subsequent years, the SPSW will continue to work with relevant stakeholders reducing of the number of URFO related adverse events on pursuing SingHealth's commitment of "***Target Zero Harm***".

Acknowledgement:
Special thanks to SPSW members, SGH's Division of Surgery, OT, Clinical Governance, and SingHealth GPO for their support to the URFO Taskforce.

References:
1. *Preventing unintended retained foreign objects, The Joint Commission Sentinel Event Alert, Issue 51, October 17, 2013*