

Project Title

Traditional Skin Cleansing Versus One-Step Surgical Skin Cleansing Applicator

Project Lead and Members

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Organisation(s) Involved

Ng Teng Fong General Hospital

Aims

This project aims to test the use of a one-step surgical cleansing applicator from September 2018 to March 2019 in saving cost and time during skin cleansing for Orthopedic Spine cases in the OT

Background

See poster appended/below

Methods

See poster appended/below

Results

See poster appended/below

Lessons Learnt

The use of a one-step surgical cleaning applicator saves cost and time during skin cleansing preparation for surgery as compared to traditional skin cleansing preparation

Conclusion

See poster appended/below

Project Category

Care & Process Redesign

Keywords

Ng Teng Fong General Hospital, Care & Process Redesign, Service Design, Quality Improvement, Surgical Cleansing Applicator

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TRADITIONAL SKIN CLEANSING VERSUS ONE-STEP SURGICAL SKIN CLEANSING APPLICATOR

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- SAFETY
- PRODUCTIVITY
- PATIENT EXPERIENCE
- QUALITY
- VALUE

Define Problem/Set Aim

Opportunity for Improvement

Traditional skin cleansing involves Operating Theatre (OT) Nurses preparing a sterile cleansing trolley containing gauze, gallipots, and sponge-holders. Sterile cleansing solution is then poured into the gallipots before skin cleansing for surgery.

There is evidence that using a sterile one-step surgical skin cleansing applicator can reduce cost and time spent on preparation for skin cleansing.

Aim

This project aims to test the use of a one-step surgical cleansing applicator from September 2018 to March 2019 in saving cost and time during skin cleansing for Orthopedic Spine cases in the OT.

Establish Measures

The processing of sterile gallipots and sponge holders, manpower involved, and cleansing solutions cost incurred for each case is \$49.40. The processing and manpower time to prepare a traditional skin cleansing trolley is 241 minutes per case.

Analyse Problem

With traditional skin cleansing, the processing and manpower time in CSSD is **233 minutes**.

CSSD: Processing of Cleansing Set	Processing Time (min)	Manpower Time (min)
1. Prepare and soak.	15	5
2. Arrange and prepare for washing.	0	20
3. Washing.	50	0
4. Unloading.	0	5
5. Prepare for packing.	0	5
6. Assembly and packing.	0	4
7. Prepare for sterilization	0	2
8. Arrange load in carriage	0	2
9. Sterilization	93	0
10. Incubate Biological Indicator and cooling	30	0
11. Storage	0	2
Total Time (min)		233

The preparation time in OT is **8 minutes**.

OT: Preparation of Cleansing Set	Preparation Time (min)
1. Gathering requisites	1
2. Laying out sets	1
3. Opening gown and sets (outer packaging)	1
4. Scrubbing	0
5. Gowning up	0
6. Opening sets (Inner packaging)	1
7. Placing of instruments (gallipot & sponge holder) on cleansing trolley	1
8. Counting and laying out of gauze	1
9. Pouring solutions	1
10. Pushing cleansing trolley into theatre	1
Total Time (min)	8

The costs incurred with traditional skin cleansing is **\$49.40**

Processing, Manpower and Cleansing Solutions Cost/ Case	Cost
CSSD	\$37.54
OT	\$6.91
Solutions (Cetrimide 1% Solution, Povidone Iodine 10% in Aqueous Solution)	\$4.94
Total Cost	\$49.40

Select Changes

One-Step Surgical Skin Cleansing Applicator

A one-step surgical skin cleansing applicator is a sterile consumable which has a sponge with cleansing solution that flows down when the cap of the applicator is pressed.



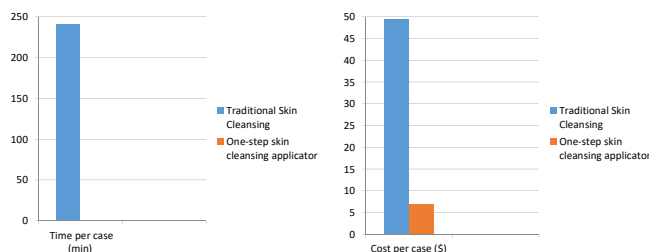
Test & Implement Changes

The time needed to prepare the one-step applicator is **1 minute** and the cost incurred is **\$6**.

Preparation of one-step surgical skin cleansing applicator	Preparation Time (min)
Break applicator and wait for cleansing solution to flow to the sponge	1
Cost of one-step surgical cleansing applicator	\$6

Time and cost saved per case after implementation of the one-step applicator is **240 minutes** and **\$42.60**.

Savings Per Case	Calculations	Results
Time saved	241 minutes - 1minute	240 minutes
Cost saved	\$49.40- \$0.86 (manpower cost/min) - \$6 (cost of cleansing applicator)	\$42.60



Spread Change/Learning Points

Key Learning points

The use of a one-step surgical cleansing applicator not only saves cost and time during skin cleansing for surgery, but also received positive feedback from OT nurses and surgeons regarding the ease of preparation and use of the applicator as compared to traditional skin cleansing preparation.

Recommendation for future change

Other disciplines in the OT can consider using one-step surgical cleansing applicators for skin preparation in surgery.