## Patient Experience and Nursing Satisfaction with A New Flexible Mesh Dressing : Surveying a cohort of Post-Operative Neurosurgical Patients

Singapore Healthcare Management 2019

> Serene Tan<sup>1</sup>, Pauline Soon<sup>2</sup>, Amy Chew<sup>2</sup>, Susan Matthew<sup>1</sup>, Rohaida<sup>2</sup>, JJ Goh<sup>2</sup>, Angela See<sup>2</sup>, Nicolas Kon<sup>2</sup>



#### Introduction

Long incisions pose challenges in approximating wounds edges evenly, distributing tension evenly across the wound and maintaining the integrity of the surgical site.



1 Tan Tock Seng Hospital (TTSH)

2 National Neuroscience Institute (NNI)

This can lead to poor wound healing and wound site infection (current rate of 6%)

Root cause analysis and pareto voting identified the top cause as: poor wound protection with our current dressing system.

- Dressing when stained/wet or when in contact with hair  $\rightarrow$  does not stick well
- Washing of hair or showering over wound sites is generally not encouraged in the first few days  $\rightarrow$  patient discomfort
- Dressing change required at every wound review  $\rightarrow$  potential pathway for bacterial contamination.
- Patients with cognitive impairment may also scratch the exposed wound  $\rightarrow$  wound infection / dehiscence.

Figure 1 Ishikawa diagram to identify risk factors of complex wound site infections.



#### Results

Gender: 8 female and 17 male patients Age range: 32-82 years old Dressing location: **chest** (12), **scalp** (12) and **neck** (5) (29 data points in total)

Highest patient satisfaction score : chest and neck wounds



#### Objective

We propose wound closure using a two-part closure system

(Dermabond<sup>®</sup> Prineo<sup>®</sup>) with the following aims:

- 1) Survey the satisfaction level in a small group of neurosurgical patients with this new form of post-operative dressing
- 2) Reduction in the rate of neurosurgical wound infection rates by

Lowest satisfaction score: scalp wounds (due to difficulty and pain during dressing removal)

# No surgical site infection with this cohort of patients in the 30-day post operative period.

(One male patient developed erythema over a subcuticular stitch site at the chest incision on Day 44 postoperation and a one-week course of Augmentin was prescribed. The erythema has since resolved on the next follow-up visit.)



### Discussion

Using this skin closure system has led to:

- better wound cosmesis when compared to staples
  allowed easier self-care for patients
- 30% within 12 months.

#### Methodology

Patients undergoing various neurosurgical operations (emergency or elective craniotomy, carotid endarterectomy and anterior chest implantation of deep brain stimulation battery) were included in study.

They were given a qualitative survey upon dressing removal to assess their satisfaction level with the new dressing. They were also followed up for 30 days post operatively for any signs of wound infection.

Disclaimer: The above product used for dressing was donated by Johnson & Johnson Pte Ltd as part of a clinical practice improvement project.

- allows direct wound inspection and reduces the need for dressing change (conventional dressing requires at least 2-3 changes prior to STO)
- alleviates the discomfort of not being able to shampoo or shower, for fear of wetting the wound

There is concern with the cost of the dressing (\$125/pc), which is significantly costlier than conventional dressing (\$16/pc - A1, non-sub rate).

Given the advantages, we need to explore how to reduce the cost for our patients.

Qualitative data revealed regular hair washing will ease removal. This finding has also prompted us to relook into nurse-led wound education for patients in greater details.