



Reducing incidences of patients from sustaining broken skin in Ophthalmic Day Surgery Setting

Singapore Healthcare Management 2018



Singapore National Eye Centre

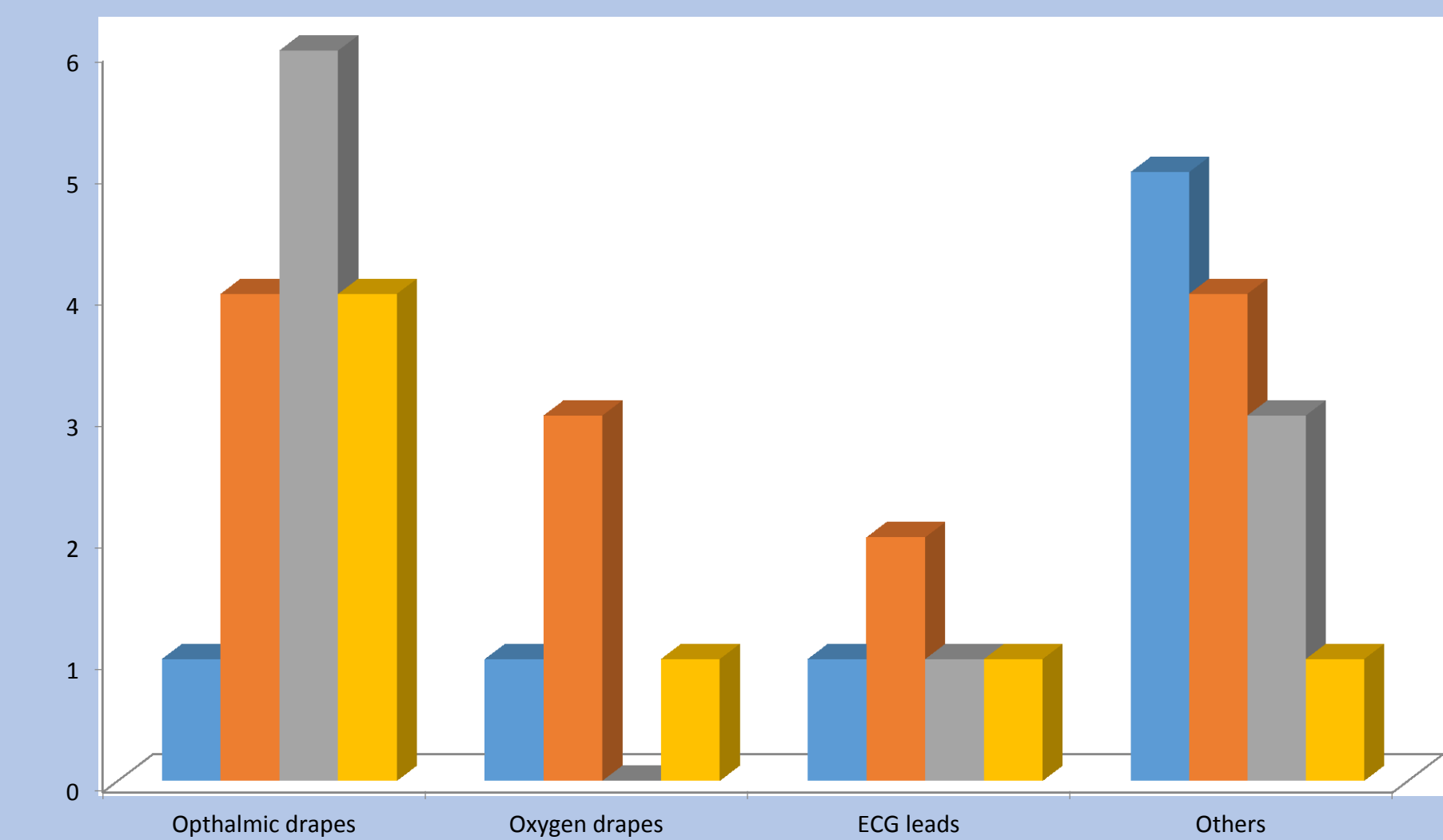
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Background

SNEC performs approximately 17,000 surgeries annually and 77% of our patients are elderly with an average age of 60 years. Most of these elderly patients have dry skin due to loss of oil glands, underlying health problems or medication therapy which resulted in fragile and poor skin conditions. Between 2014 to Aug 2017, we saw a total of 37 incidences of broken skin intra and post-operatively which translated to one incident per month. Our data discovered various products causing broken skin, such as ophthalmic surgical drapes, oxygen trident drape and ECG leads. We also found that highest incidences of broken skin present in patients with either bruises or thin skin and were on anticoagulant therapy.



PDSA 2.1

Team decided to increase staff awareness on broken skin between Feb to April 2018 using skin assessment to identify high risk patients

Evaluation for Fragile Skin Assessment for Pre-Operative Patients (Updated on 26th Feb 2018) (To be initiated at Dayward during assessment of patients before operation)

Patient's sticky label: _____ Date of Operation: _____
Name & signature of Dayward Nurse: _____

Fragile Skin Assessment Risk Factors (Please tick accordingly)

Does the patient present with fragile skin?

- Dry, thin skin
- Pre-existing
- Eczema / Psoriasis
- Bruising or any other skin conditions especially on four limbs and face

2. Is the patient:

- Bed-bound or Wheel-chair bound?

3. Is the patient on any regular anti-coagulant medications? e.g. Warfarin, Aspirin

For Day ward staff:
To proceed with following interventions if patient has any ONE of risk factor(s) above:
1. To do skin assessment as above.
2. To inform Recovery Staff that patient's skin is fragile.
3. To ensure staff to put up the Purple coloured—"Fragile Skin Risk Tag".
4. Post-operatively, handle patient with care during transferring and changing of clothes.

For Recovery staff:
If patient has been identified with fragile skin:
1. Ensure skin assessment form is attached to the case note.
2. Ensure Purple coloured—"Fragile Skin Risk Tag" is hung on the patient's trolley.
3. To be vigilant when applying ECG leads (avoid applying on the patient's chest area).
4. To be gentle when placing BP cuff on patient's arm.
5. Inform scrub nurse regarding patient's skin condition.
6. Post-operatively, be cautious and avoid cause to handle patient with care during transferring and changing of clothes.

For scrub nurse and circulating nurse:
When noted patient has fragile skin:
1. To ensure all the above interventions have been carried out.
2. To inform surgeon, anaesthetist and the team including attendant.
3. To be careful when removing ECG leads, ophthalmic drape, oxygen drape and BP cuff from patient after surgery is done.
4. To transfer patient gently and slowly as the force will cause skin traction.
5. Document patient's skin condition (Intra-Operative Nursing Record-Peri-operative note).

- * Educate Dayward and OT staff
- * Tagging of high risk patients
- * Carry out recommended action



Results – One incident of broken skin due to ophthalmic drape was reported but risk assessment was missed out.

What we learnt:

The inclusion criteria was too broad resulting in an excessively large pool of patients to be at risk (>300 patients) and thus staff can miss out due to high volume of cases.

PDSA 2.2 – Team revised the assessment form to combine the two highest risk factors May to July 2018.

Results – No broken skin was reported from the 32 patients identified. The new assessment method and flow will be monitored for sustainability until Oct 2018.

Evaluation for Fragile Skin Assessment for Pre-Operative Patients (Updated on 4th May 2018) (To be initiated at Dayward during assessment of patients before operation)

Patient's sticky label: _____ Date of Operation: _____
Name & signature of Dayward Nurse: _____

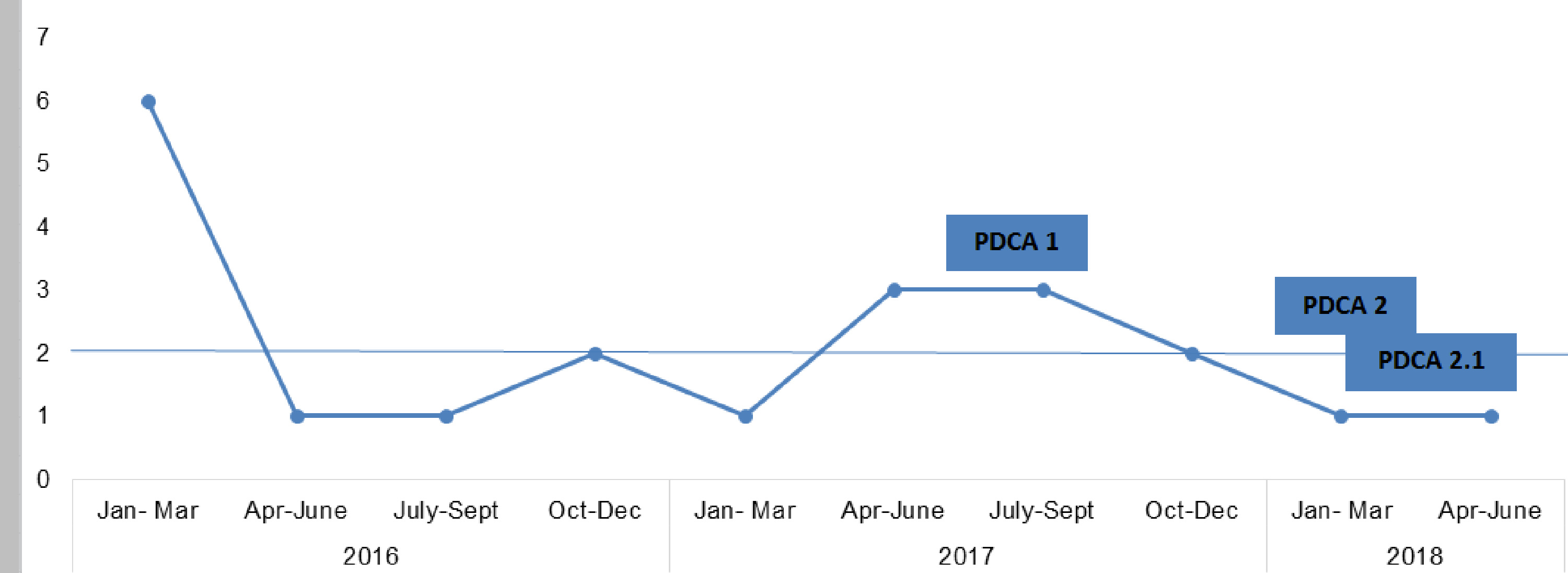
Fragile Skin Assessment Risk Factors (Please tick accordingly)

Does the patient have the following conditions:

- Dry and thin skin with bruises
- On anti-coagulant and present with bruises

To proceed with following interventions if patient has any ONE of risk factor(s) above:
1. To do skin assessment as above.
2. Recovery staff to put up the Purple coloured—"Fragile Skin Risk Tag".

Run Chart of broken skin 2016-2018



Objectives

To achieve zero broken skin incidents for 6 months and reduce patient's experience from discomfort and additional treatment for broken skin.

Methodology

A quality improvement methodology using PDSA cycle was adopted to understand the significance of the existing products in contributing to broken skin and testing of potential interventions. Multi-voting was conducted to focus on oxygen trident drape after comparing the adhesiveness of all 3 products as it was the most difficult to remove.

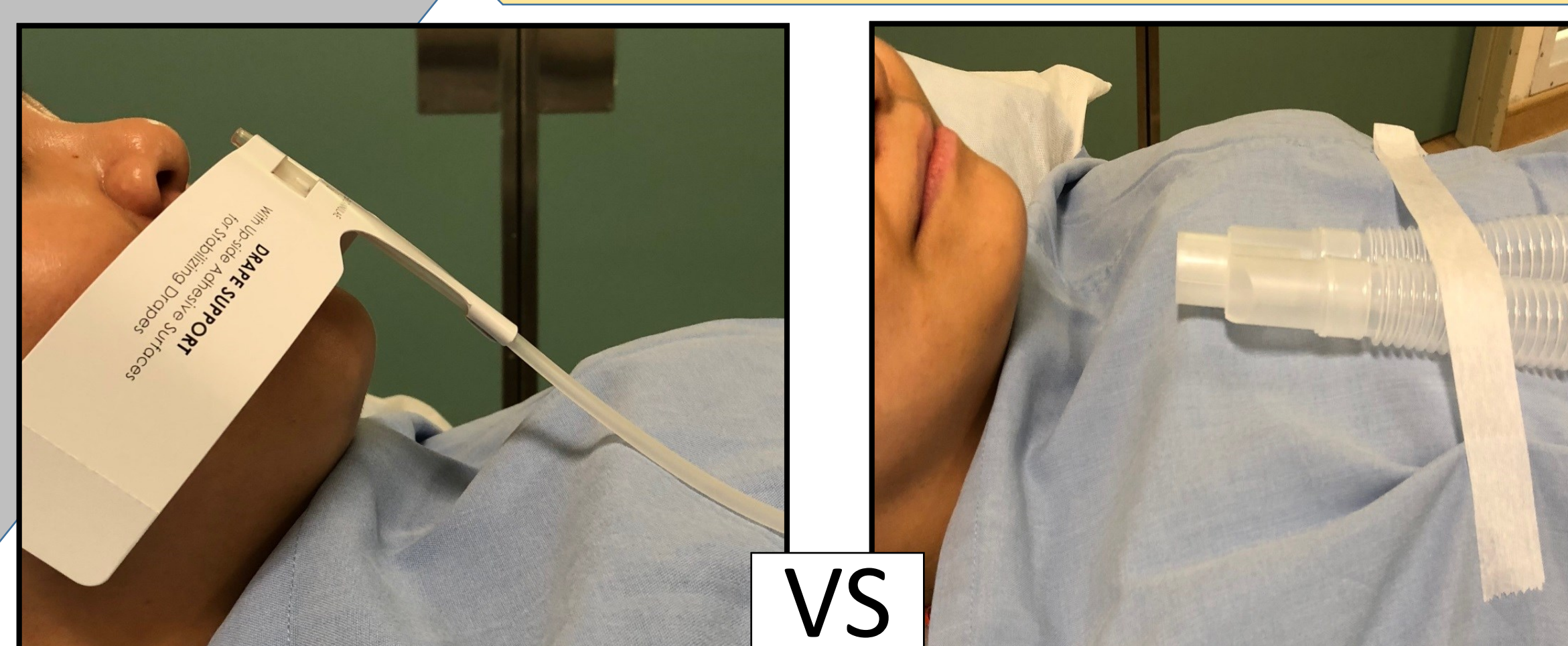
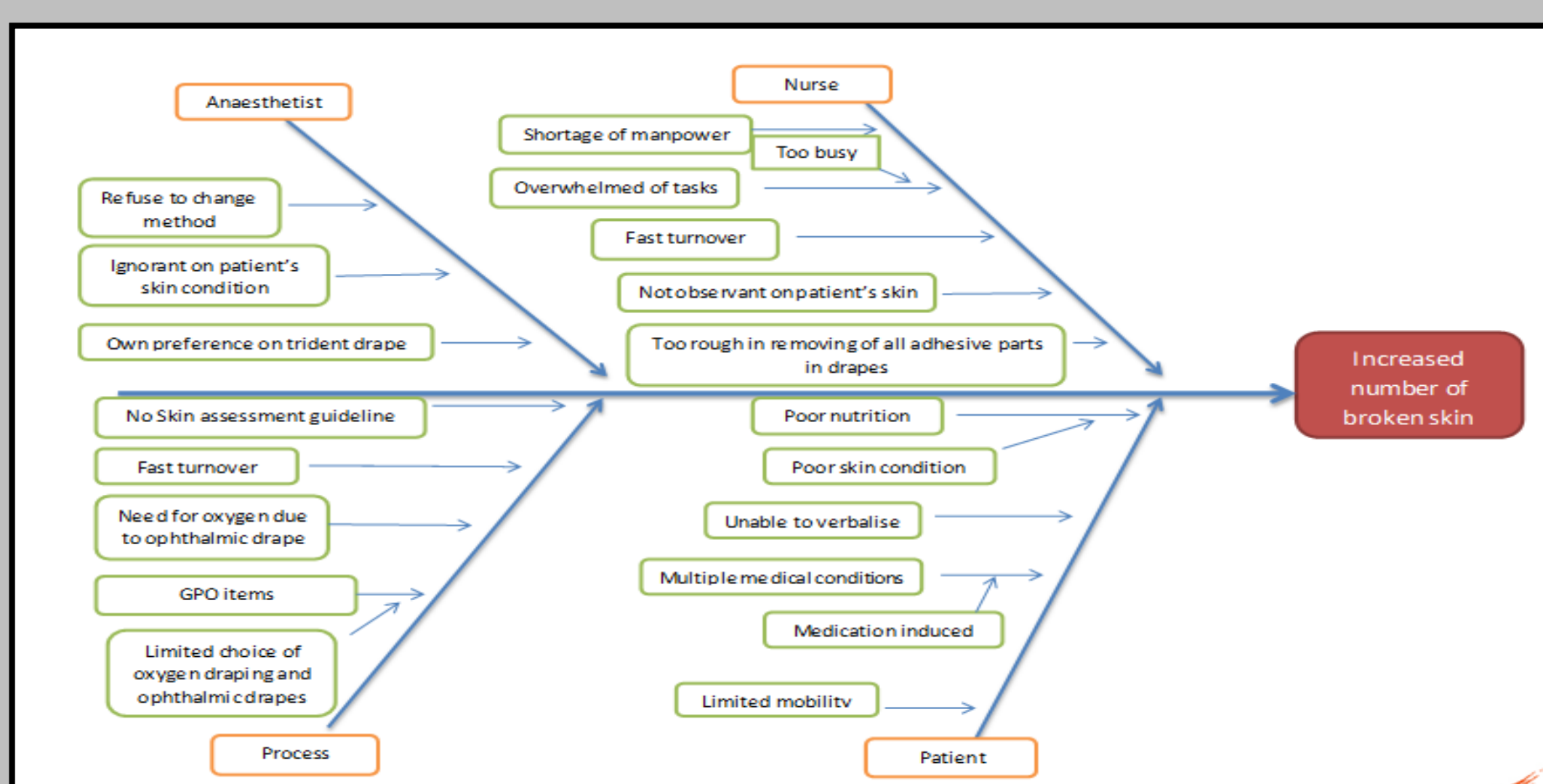
PDSA 1 - Team brainstormed to survey the best alternative method for oxygen delivery between Aug 17 to Jan 2018

Results One incident of broken skin due to oxygen trident draping

What we learnt:

New intervention was safer as it has no contact with patient's skin, but was discontinued for the following reasons:

- Oxygen saturation was not stable from new delivery method as the tube was not secured in close proximity to the patient's face under ophthalmic drape
- Anaesthetist's negative feedback on the new method of oxygen delivery
- Other interventions can also cause skin tears



Conclusion:

A simple assessment checklist can provide a useful guide to identify patients at risk of broken skin. Collaborative communication structure can be cost-effective and easy to implement with positive results.

ACKNOWLEDGEMENT

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