



Redesign of Patient Operation Gown

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Background

Received feedbacks from patients and staffs that previous patient gown has too many ties. It caused confusion and difficulties in accessing invasive lines such as subclavian central line, urinary catheter and wound drainage tubing. Patients with extensive arm dressing were unable to fit their arms into the sleeves. It also compromised patient's modesty when patients were ambulating.

To address the problems, nurses from various departments such as intensive care units (ICUs), major operating theatre and surgical wards together with Linen Supplies Unit (LSU) and Communications Department have redesigned the patient gown.

Mission Statement

To improve patients' satisfaction rate on the new patient gown from 50% to 80% in surgical wards and intensive care units over 6 months.

To improve nurses' satisfaction on the functionality of the new patient gown from 50% to 80% in surgical wards and intensive care units over 6 months.

Problem Analysis

Both patients and staff provided feedback were gathered and identified using the Ishikawa Diagram:

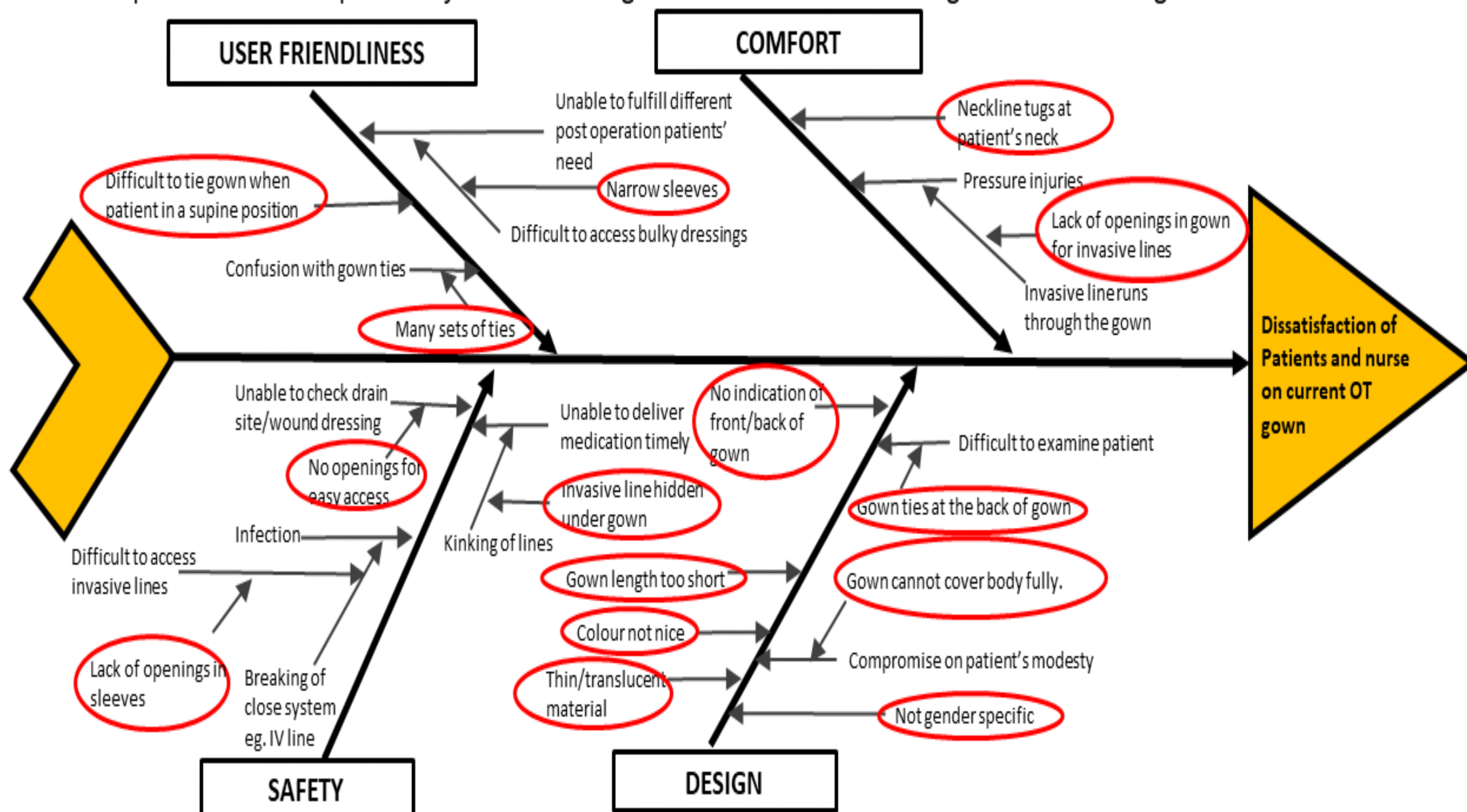


Figure 1: Cause-and-Effect Diagram

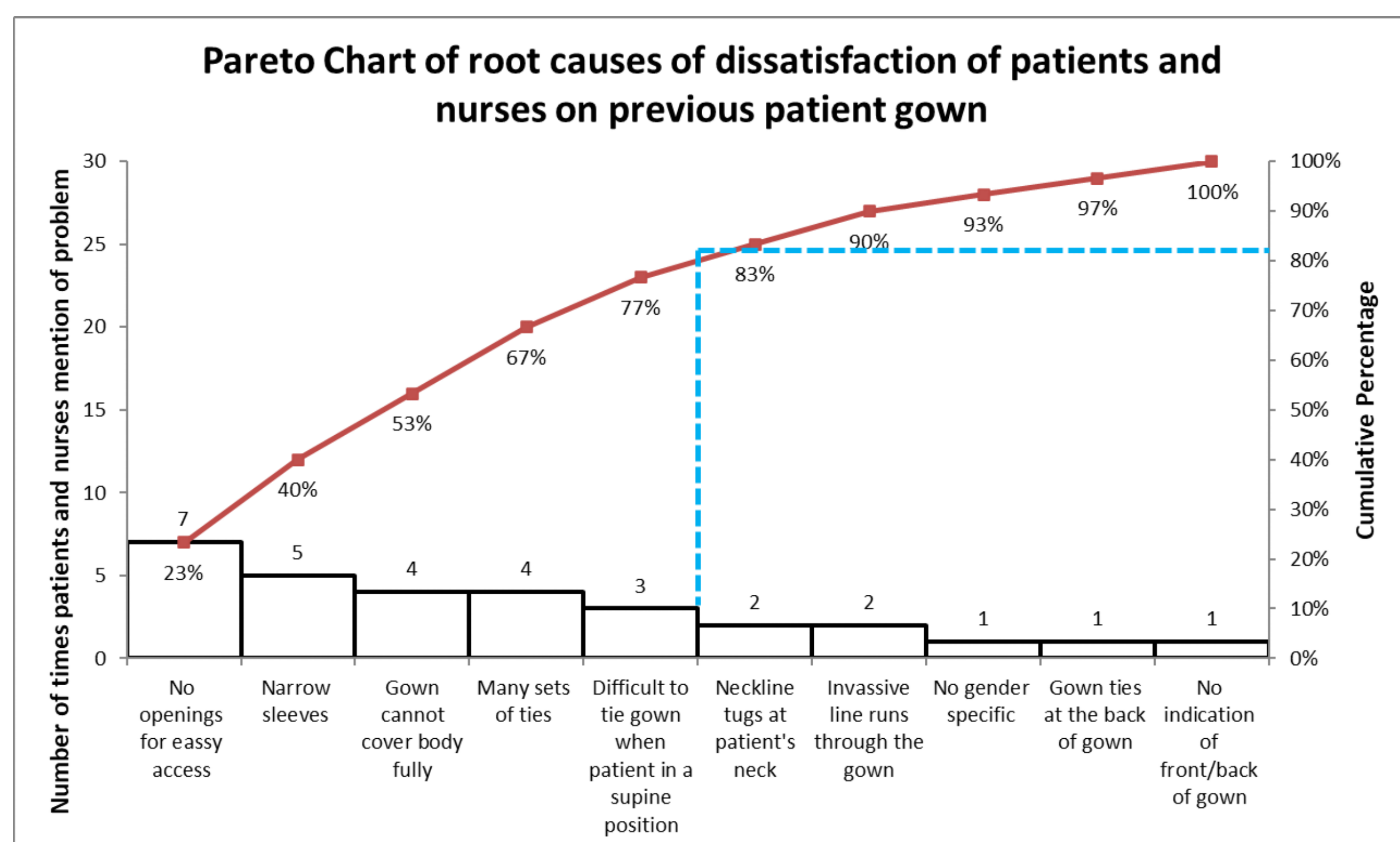


Figure 2: Pareto Chart

Each group member was allowed 3 votes to select the final root causes as follows:

1. No openings for easy access
2. Narrow sleeves
3. Gown cannot cover body fully
4. Many sets of ties
5. Difficult to tie gown when patient in a supine position

Interventions / Initiatives

To address the root causes, a total of 12 solutions were explored based on prioritisation matrix :

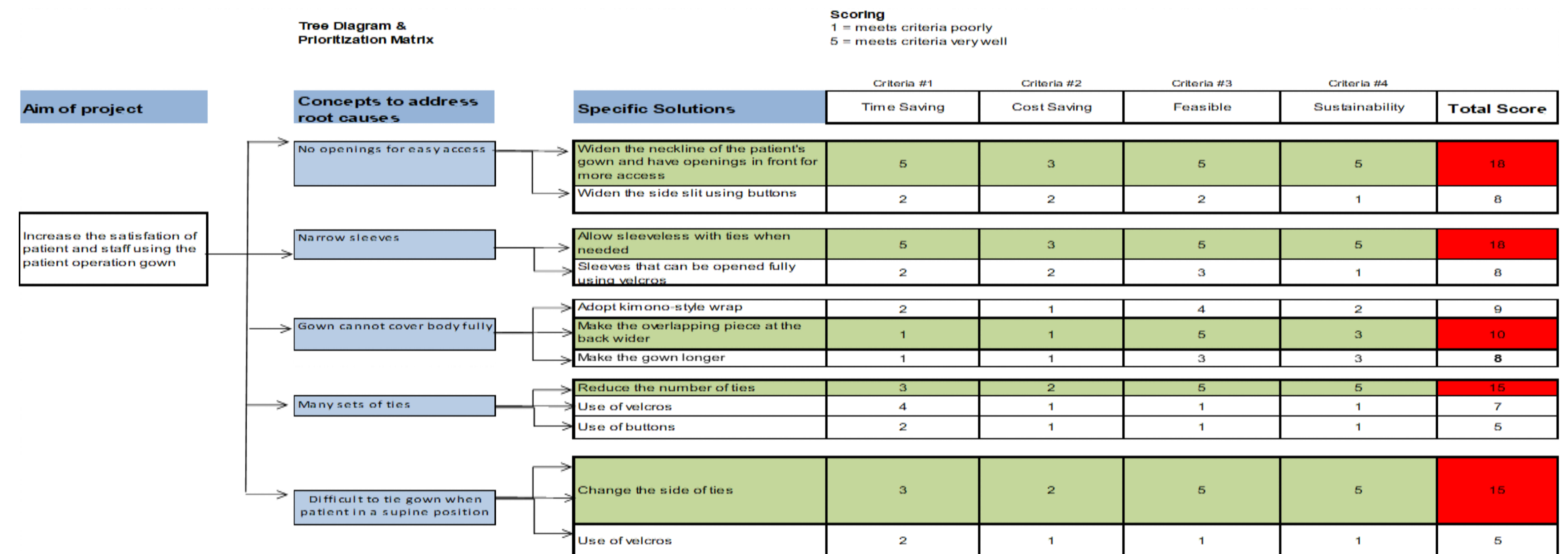
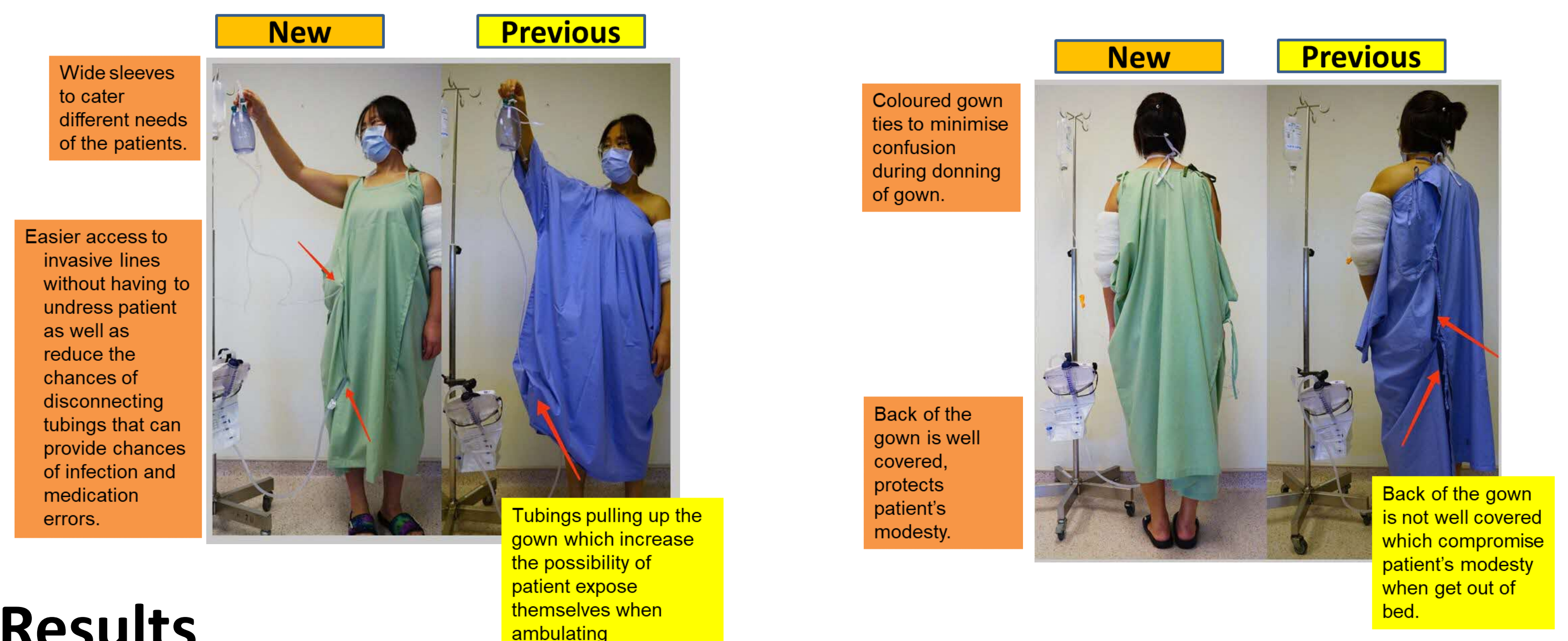


Figure 3: Prioritisation Matrix

Criteria	Rating Scale				
	1 point	2 points	3 points	4 points	5 points
Time saving	No impact on time saving	Possible impact on time saving	Some impact on time saving	Moderate impact on time saving	High impact on time saving
Cost saving	No cost saving	Minimal cost saving	Low cost saving	Moderate cost saving	High cost saving
Feasible	No feasible	Minimal feasible	Low feasible	Moderate feasible	Highly feasible
Sustainability	Highly result in increased work for staff	Moderately result in increased work for staff	Some result in increased work for staff	Possible result in increased work for staff	does not result in increased work for staff

- The new gown have addressed the root causes identified.
- The criteria used were based on time-savings, cost-savings, feasibility and sustainability
- A score was then given to each specific solution. The highest scoring solutions were chosen and incorporated into the new gown design.

Comparison of the new and previous patient gown design:



Results

Surveys, involving 36 patients and 36 nurses from various ICUs and surgical wards, on their satisfaction rate of using the new and previous patient were done. Data from the surveys were analysed using T-test with a P-value of less than 0.05. The target of improving patients and nurse's satisfaction rates from 50% to 80% in surgical wards and ICUs over 6 months was met.

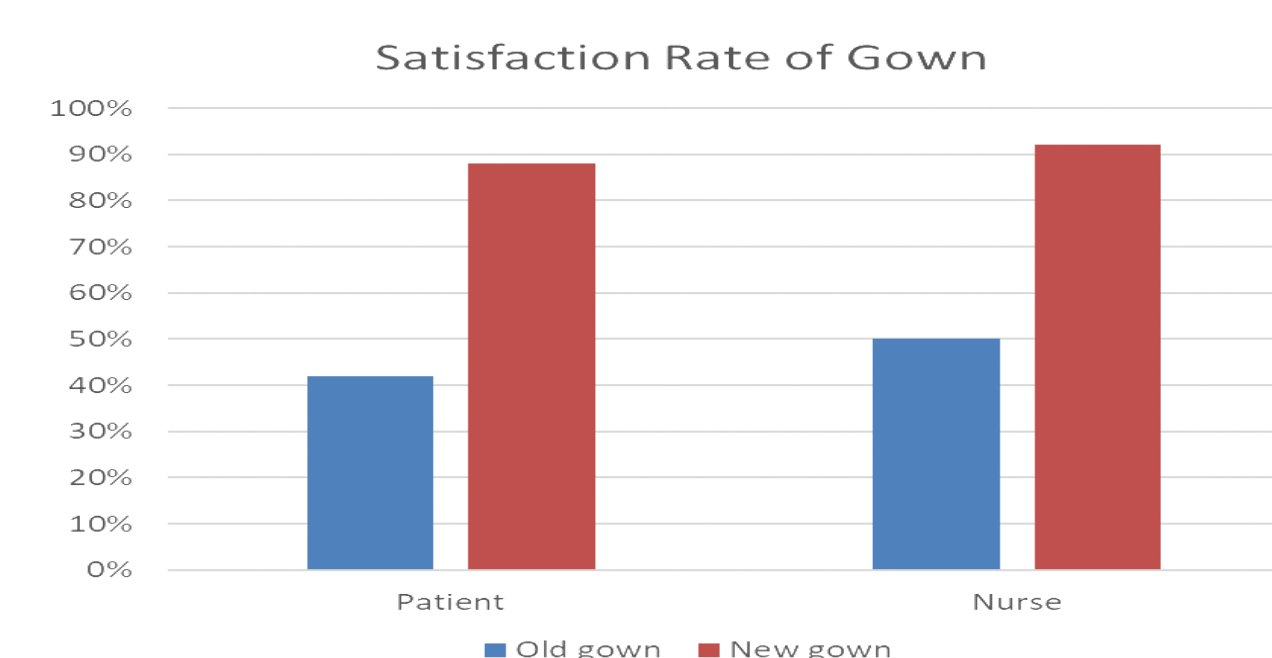


Figure 4: Average satisfactory rate for old and new patient operation gown taken from patient and nurses satisfactory survey

Sustainability

1. Posters and videos to guide nurses on how to put on the new patient gown (right picture) are easily accessible to relevant staff on various platforms.
2. Posters to also guide patients on how to put on the new gown are available and displayed in patient changing room at outpatient setting areas.

HOW TO CHANGE INTO PATIENT GOWN

