



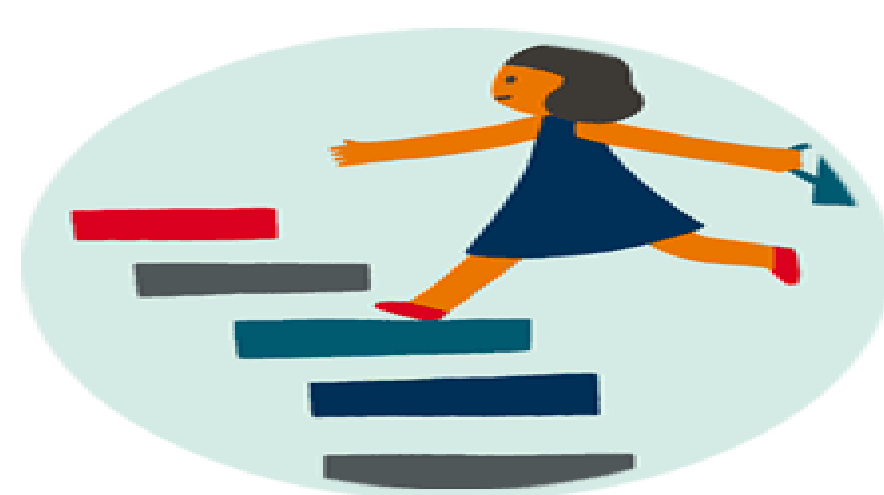
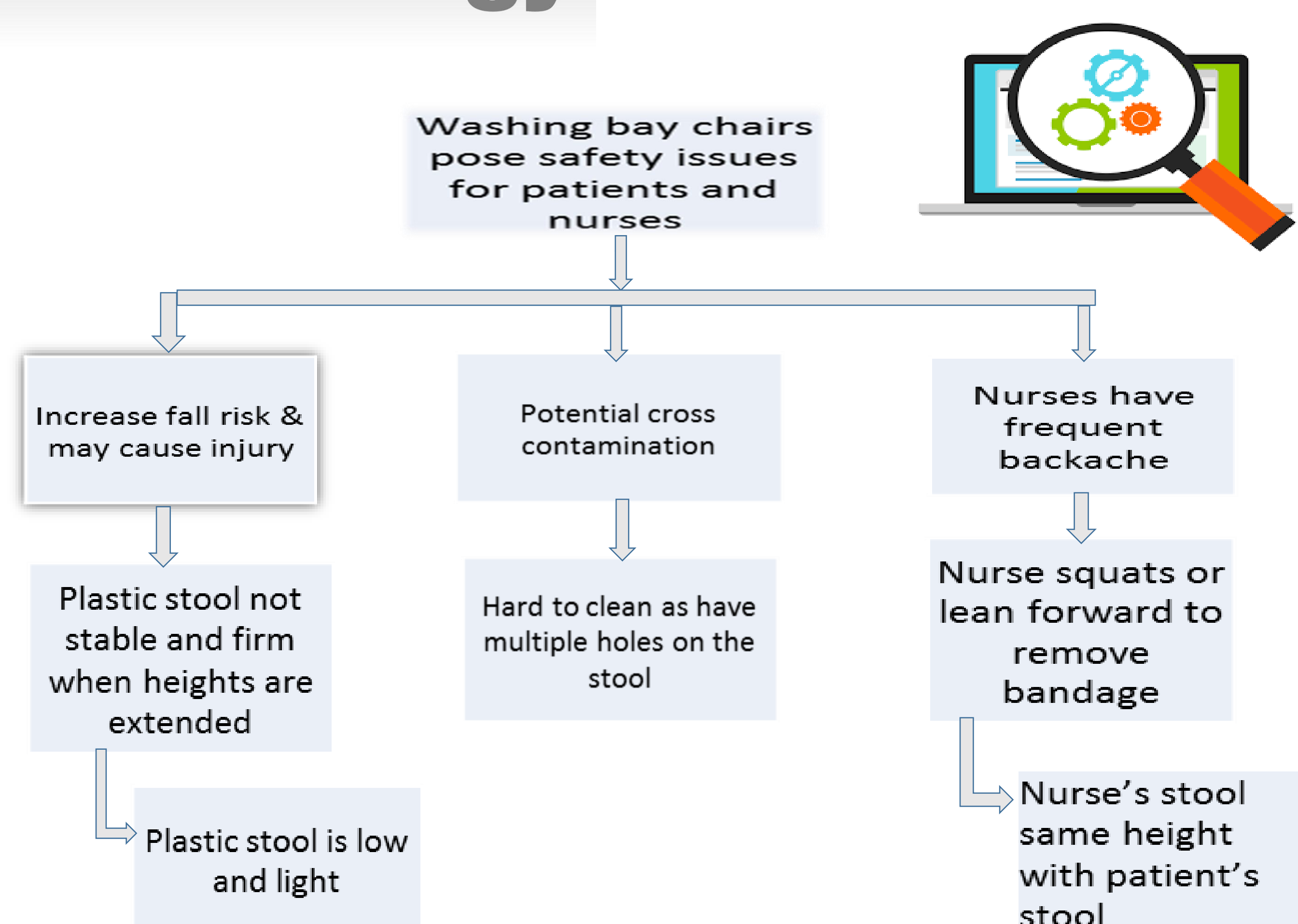
## Introduction

The 4-layer bandage dressing is applied to patients with chronic venous leg ulceration. The bandage must be applied on the patient for a week for it to be effective in wound healing. Patients on these dressing will come back to SGH Vascular Clinic weekly for a change of dressing. The nurse would need to remove the dressing and wash the patient's leg with running water in the washing bay. The average time for patients to remove 4 layer dressing is about 30 minutes and for nurses is about 20 minutes.

There is a plastic stool with extendable legs for patients to sit however it has multiple holes, which is possible of harboring bacteria despite frequent washing. The stool is low which poses a safety issue for patients as they may have difficulty standing up. The stool is also light in weight and it will topple easily causing patient to fall or sustain injury. Although The height of the stool can be adjusted, it becomes unstable once the legs of the stool are extended. Housekeeping colleagues also highlighted that it is challenging to clean the chairs thoroughly.

Furthermore, the nurse assisting the patient would need to lean forward which poses an ergonomic issue which causes strain to their back. All nurses have complained back pain after assisting patient in removing the bandage.

## Methodology



The team have decided to look into possible design of a chair that provides comfort and safety for both patients and nurses while cutting the bandages and washing the legs through the following considerations:

- The height of the chair must meet average usage of all patients
- The surface of the chair must not have holes to facilitate easy cleaning and **no sharp edges that cause discomfort to the patients**
- **Team have agreed to use stainless steel materials to design the new chair**



Picture 1. Old plastic stool with four extendable legs



Picture 2. Comparison of old stool and new chair



Picture 3. New chairs for patients (higher chair) and nurses (lower chair)

## MISSION

To improve the safety and comfort for patients and nurses during the removal of 4 layer bandage dressing by redesigning the washing bay chair in DMC within 3 months



### Tangible results:

- Easy cleaning due to flat surface and stainless steel materials
- Reduce chances for bacteria to harbor inside the chair and meet infection control guideline
- Firm and stable chair so patient can lean over and won't topple down accidentally
- The desirable height of the chair can facilitate more patients to use it especially those patients having stiff knees
- It also shorten the time to cut 4 layer bandage for nurse from 20 minutes to 10 minutes without bending and straining their back due to different height for patient's and nurse's chair, only 17% nurses have complains back pain after intervention

### Intangible results:

- Promote patient's safety and comfort
- Increase patient's experience and satisfaction
- Provide healthy working environment by reducing the risk of back strain and injury to the nurses

## CONCLUSIÓN

The chairs are placed in the washing bay at Vascular Clinic.

Patient's feedback are positive because it promotes patient's safety and comfort.

Number of nurses that complain of back strain is reduced by 83%. Housekeeping staff also appreciate this improvement as cleaning is much easier than before.

### Sustainability



The team are looking into the height of the chairs for the nurses. As the height of nurse's chair is much lower than the patient's chair, some nurses may have difficulty to stand up. Hence team plan to make another nurse's chair which is an additional 9 cm higher than the current one.