

IMPLEMENTATION OF SECONDARY SECUREMENT FOR PATIENTS RECEIVING HOME-BASED INFUSION CHEMOTHERAPY USING CONTINUOUS AMBULATORY DEVICES (CADD) VIA A PORT-A-CATH, WITH THE AIM OF ENHANCING NEEDLE STABILIZATION AND REDUCING THE RISK OF DISLODGMET , DISPLACEMENT, OR RELATED COMPLICATIONS

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Define Problem, Set Aim

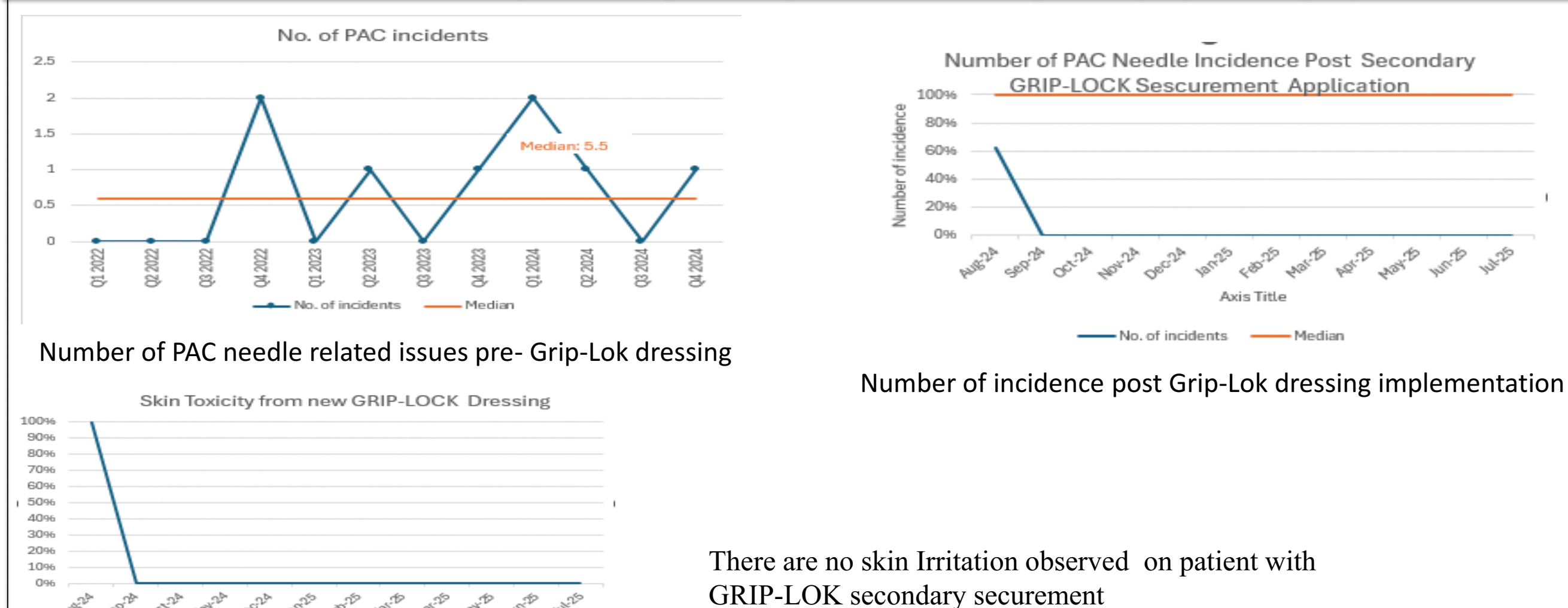
PROBLEM STATEMENT

There is significant growth in home-based chemotherapy using continuous ambulatory delivery devices (CADD) via port-a-cath (PAC) between 2022 and 2024. However, this increase has led to a rise in needle-related complications, such as dislodgment and tugging, despite the use of standard dressings and micropore tape for securement. These issues pose serious risks, including exposure to cytotoxic medications, extravasation, and potential skin problems that may require dermatological intervention. Such complications can disrupt chemotherapy schedules, causing psychological distress for patients, including anxiety and phobias related to needle use, which can hinder their adherence to treatment plans. This situation emphasizes the urgent need for more effective securement strategies to enhance patient safety and comfort, ultimately helping patients regain confidence in their home-based chemotherapy treatments.

AIM STATEMENT

To aim for Zero incidence of port-a-Cath related issues including needle dislodgement and needle tugging at outpatient oncology chemotherapy Unit within 12 months after implementation of a standardized secondary securement of Grip-LOk .

Establish Measures



Analyse Problem

Key Measurement

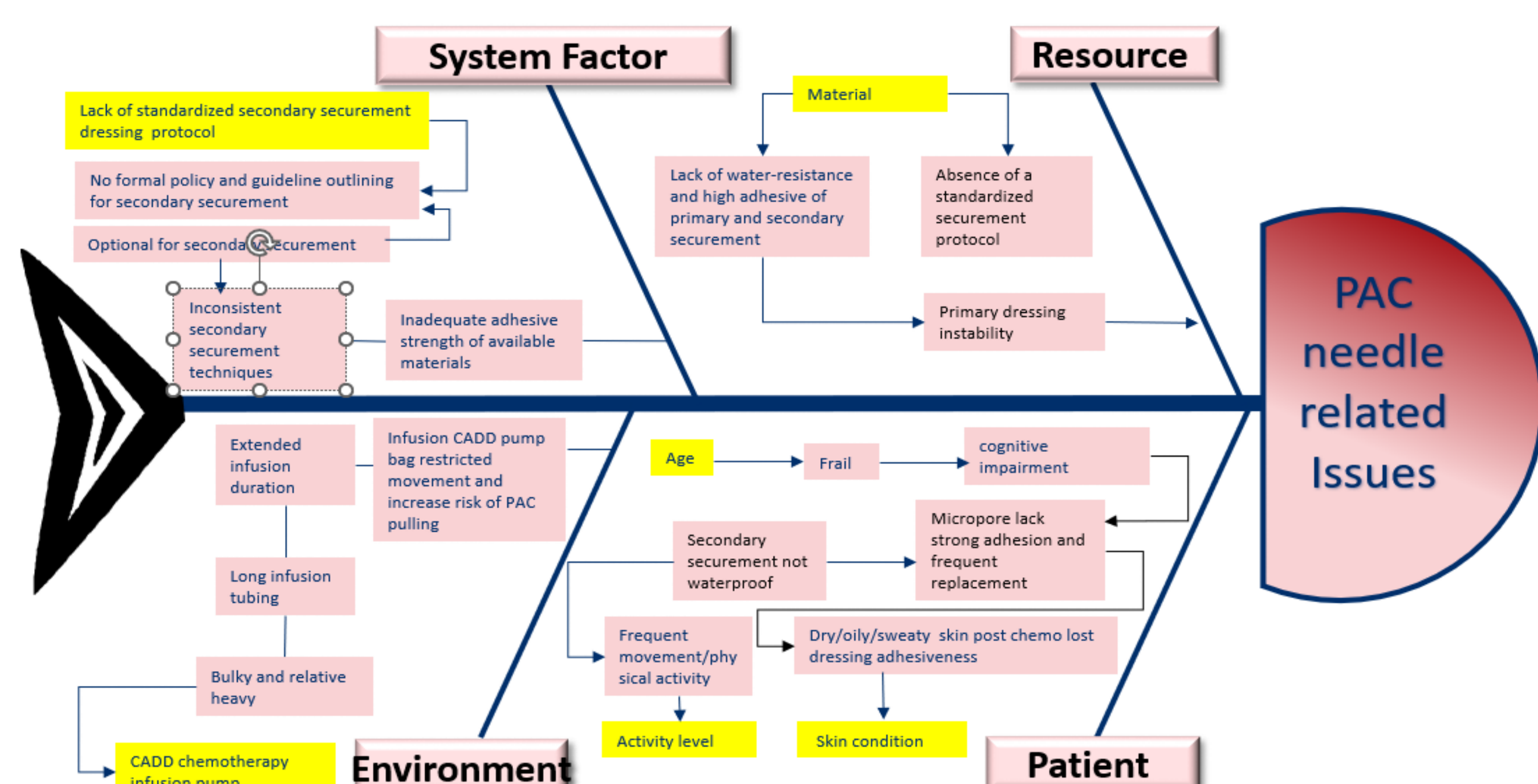
Observe the reduction of PAC related issues after implementing Grip-LOk versus micropore as secondary securement.

Current Workflow

A nurse uses a transparent dressing to secure a PAC needle, followed by secondary securement micropore tape.

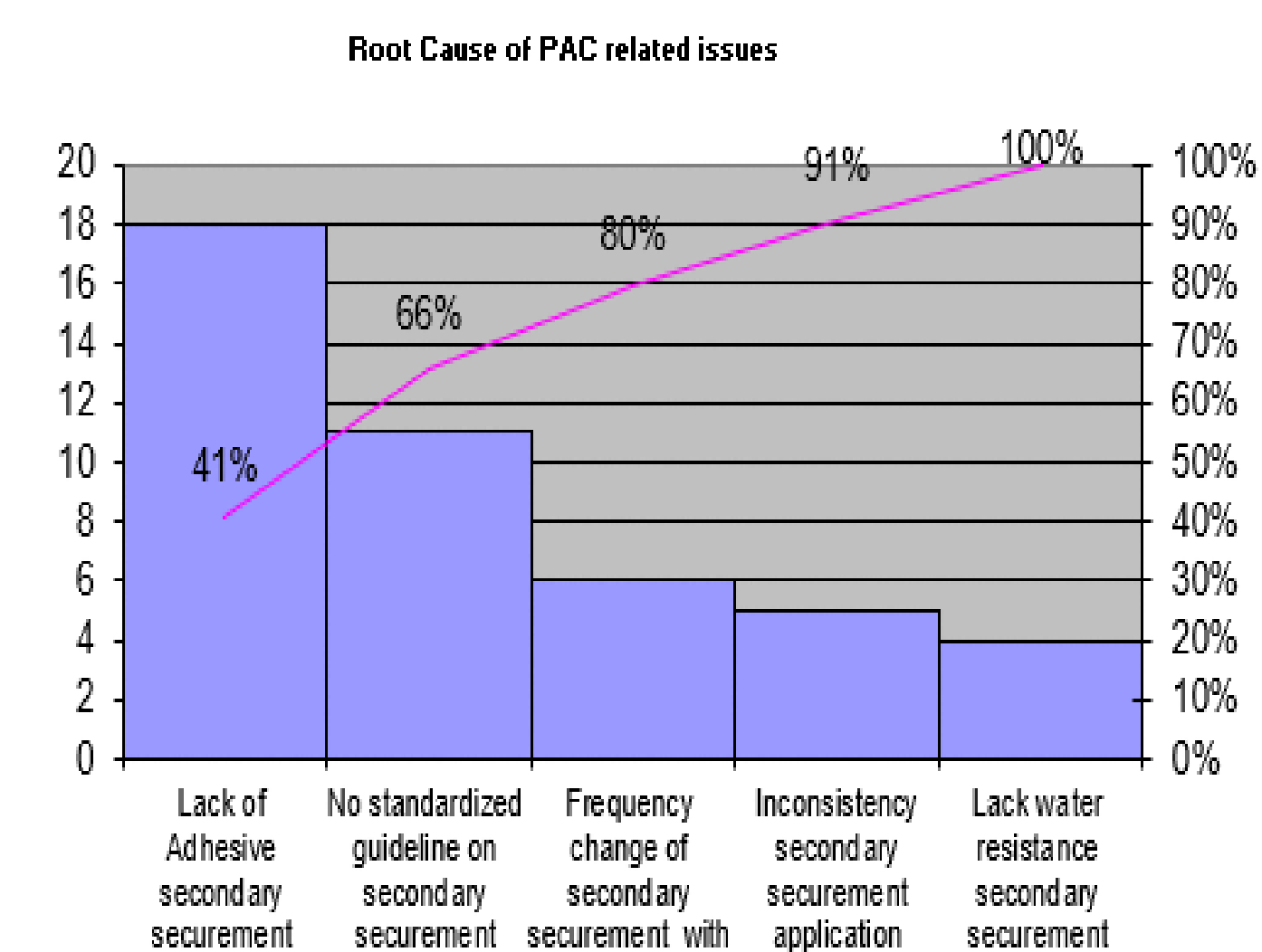
Problem Root Cause

We identified that the lack of strong adhesive secondary Securement is the most important issue, followed by lacking standardized guideline on secondary securement.



Select Changes

Root Cause	Potential Solutions
Lack of Adhesive secondary securement	1. Review cross institutional practice , identified better adhesive Securement
No standardized guideline on secondary securement	1. Setting outpatient guideline and change securement practice
Frequency change of secondary securement with micropore	1. Replace micropore secondary securement to another long-lasting secondary securement
Inconsistency secondary securement application	1. Literature review to identified a better securement dressing
Lack water resistance secondary securement	2. Apply additional transparent dressing on top of secondary securement GRIP-LOK



Test & Implement Changes

Identified

-Outpatient oncology chemotherapy Unit A71

-all SSN was trained on the secondary securement change and application

CYCLE	PLAN	DO	STUDY	ACT
1	A literature review examined various materials used for securing a port-a-Cath needles. The review conclude that the GRIP-LOK securement, which is more adhesive and durable, was the preferred choice. The GRIP-LOK securement was tested on staff members with simulated PICC placement .Participants wore the dressing over a week .	A baseline survey was conducted with both patients and staff to evaluate satisfaction and concerns regarding current securement.	Survey results revealed: 90% of both patients and staff reported that current secondary micropore tape was inadequate. Frequent micropore changes were required due to loss of adhesion, particularly in hot and humid conditions or during movement. This reinforced the need for a more reliable and longer-lasting securement method.	GRIP-LOK will be used as the new securement for securely holding intravenous lines during a 1-month trial with patients receiving chemotherapy at home Via CADD pump through PAC . Further evaluation will look at how often needle-related problems occur, how often securement need to be replaced, and how satisfied patients and staff are. The results will help us update our procedures and decide if we should use GRIP-LOK more widely.
2	Following successful preliminary evaluation and positive feedback during a pilot phase, the plan is to implement GRIP-LOK securement as the standard secondary securement for all patients undergoing home-based chemotherapy via port-a-cath.	- A roll call briefing was conducted at Clinic A71 to inform staff about the study objectives and introduce the GRIP-LOK Securement. -A trainer reviewed and validated the application technique to ensure consistency across staff members. -Verbal consent was obtained from patients, and the study aim was explained prior to initiating home chemotherapy. -Post evaluations were collected from patients at the end of their infusion cycle.	A one-month pilot study with patients on home infusion therapy found that 95% felt more secure using GRIP-LOK than before.	Based on the positive outcomes, GRIP-LOK securement will be adopted as the standard secondary securement dressing for all patients undergoing home chemotherapy. Further monitoring and audits will be scheduled to ensure continued efficacy, adherence to the technique, and patient safety.

Spread Changes, Learning Points

Throughout the implementation , we identified potential area of instability of current PAC dressing for home delivery chemotherapy. Factors such as movement, skin condition, and the weight of the device can affect the securement of the primary dressing. By applying secondary securement, such as micropore tape, we aimed to alleviate patient anxiety and reduce the pulling effect. However, the adhesive properties of micropore tape are not very durable, necessitating frequent changes.

Considering that the pump needs to infuse over more than 24 hours, it is worth applying a more effective secondary securement , such as GRIP LOK, for patients receiving home-based chemotherapy.

Feedback from nurses and patients after the intervention indicated positive outcomes, with nearly 100% of patient reporting increased stability and feeling more capable of managing their pumps at home. Additionally, instances of needle-related issues decreased, and no dislodgement was observed in patients who experienced falls.

Therefore , we recommend the use of secondary securement for patient undergoing home- based chemotherapy.