

To improve the current practice of PCN dressing change

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Background of the problem

Patients with PCN tubes require dressing change every other day or when soiled. Gauze and micropore tape that is currently used disables proper visualization of any kinks along the inner tube as well as the exit site. Also, despite frequent change of dressing, dislodgement of PCN still occurs, leading to unnecessary readmissions for reinsertion of PCN. This also leads to unnecessary cost of hospital admissions, procedures and facilities.

Mission Statement

The team's mission statement is to eliminate all incidences of dislodged PCN within 6 months.

Analysis of problem

Investigation revealed reasons for causing dislodgment such as wrong positioning after dressing is done, skin area around PCN site is not thoroughly dry when securing dressing, failure to monitor PCN tubing or even incidences whereby patient forgets the presence of PCN tube.

Hence, a new dressing method is required for easier monitoring of PCN tube. In line with the opinion of the staff, the team concluded that the PCN baseplate transparent dressing was the most suitable and safest for patient use.



Interventions / Initiatives

Prototyping from the initial gauze and micropore dressing.

Phase 1: Use of gauze and transparent dressing however does not allow exit site visualization

Phase 2: Use of only transparent dressing without gauze however sutures tend to stick to dressing

Final Phase: Using wafer baseplate and transparent dressing that allows proper securement and better visualization of exit site

A teaching pictorial guide was created and provided to the patients and caregivers for better visualization of the dressing and easy reference



Results

Number of dislodgements when using current dressing over a period of 3 months: 5 dislodgements out of 20 admissions

Number of dislodgements when using baseplate dressing over a period of 3 months: 0 dislodgement out of 20 admissions

With this, risk of patient getting PCN dislodgement is minimized and allow for early detection of dislodgement with easy visualization of tube. Other benefits include:

- Staff has more time to care for patients & able to assess exit site anytime to affirm PCN tube in situ.
- Reduce time wastage with simplified dressing steps and less frequent change of dressing (from every other day to once a week dressing).
- Patient get to save cost and avoid unnecessary stay in the hospital.
- Based on a standard 1 year cycle, a patient need only incur a cost of **\$7804**. However, a single dislodgement incident will increase the cost to **\$9755** as shown below, with an unnecessary additional fee of **\$1951.05**.

Visit	1	2	3	4	-	Total cost
Month	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	-	-
Cost	\$1951.05 per visit				-	\$7804.20

Table 1: Estimated cost for normal patient

Visit	1*	2	3	4	5*	Total cost
Month	Jan-Feb	Mar-May	Jun-Aug	Sep-Nov	Dec-Feb	-
Cost	\$1951.05 per visit				-	\$9755.25

Conclusion

With the new implementation, the risks of patient getting PCN dislodgement is minimized and allows for early detection of dislodgement with easy visualization of tube hence improving patient experience and safety.