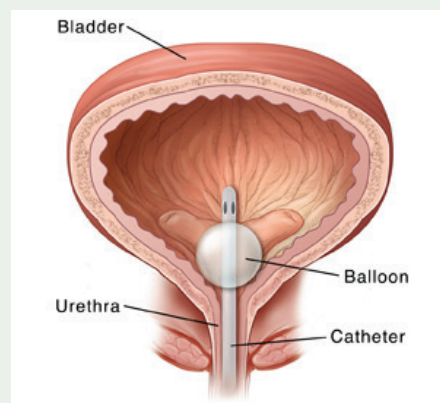


Effectiveness of Targeted Interventions in Prevention of Catheter Associated Urinary Tract Infections

Introduction

Catheter Associated Urinary Tract Infections (CAUTIs) are the most common hospital acquired infections. Indwelling urinary catheters are frequently used when they are not required or indicated. If there is an indication, then these catheters are left in place for longer time than required. Prolonged use of urinary catheter increases the risk of developing CAUTIs. The term CAUTI refers to patients who develop a urinary tract infection with an indwelling catheter in place or within 48 hours of removal.

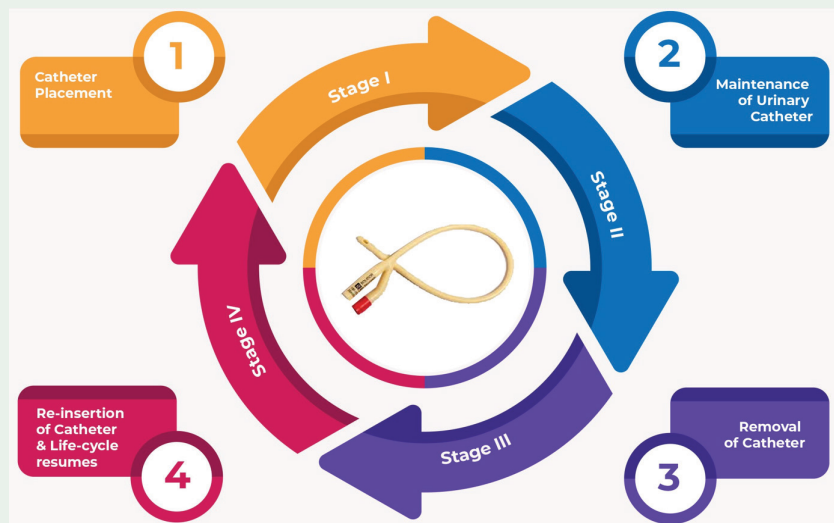


75% UTIs are associated with use of urinary catheter.

Complications associated with CAUTI can lead to increase in length of stay, patient discomfort, increased cost and can also lead to mortality. Appropriate use of catheters and its removal as soon as possible plays a vital role in the prevention of CAUTI.

Conceptual Framework

Life cycle of urinary catheter was used as conceptual framework for this study. This framework describes the life cycle of catheter in following four stages:



Stage I: Insertion of catheter

Stage II: Maintenance of urinary catheter

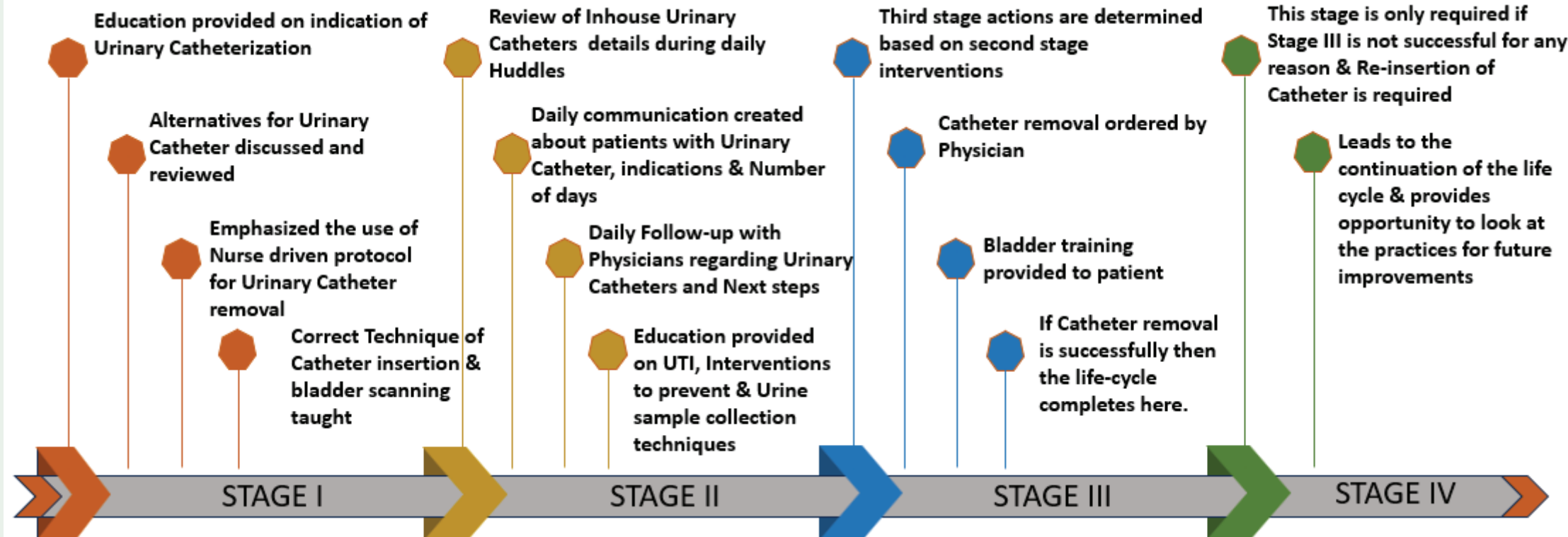
Stage III: Removal of catheter

Stage IV: Re-insertion of catheter & Life-cycle resumes

Methodology

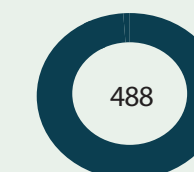
Targeted interventions specific to each stage were developed. Implementation of these interventions was started at the Rehabilitation facility in May 2023 after the identification of the CAUTI event.

Targeted Intervention for all four stages

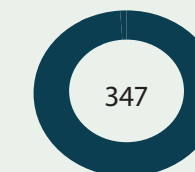


Results

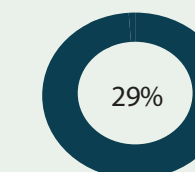
- I. Monthly catheter days, patient days and CAUTI rate were monitored for year 2023 to determine the effectiveness of the targeted interventions.
- II. Significant reduction in the catheter days was observed in quarter 4.
- III. Monthly patient days was increasing in the facility, however the catheters days reduced on other hand explaining the effectiveness of the interventions.
- IV. There was no hospital acquired CAUTI in Q 3 and Q 4 after the implementation of interventions.



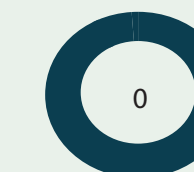
488
Q2 Catheter days



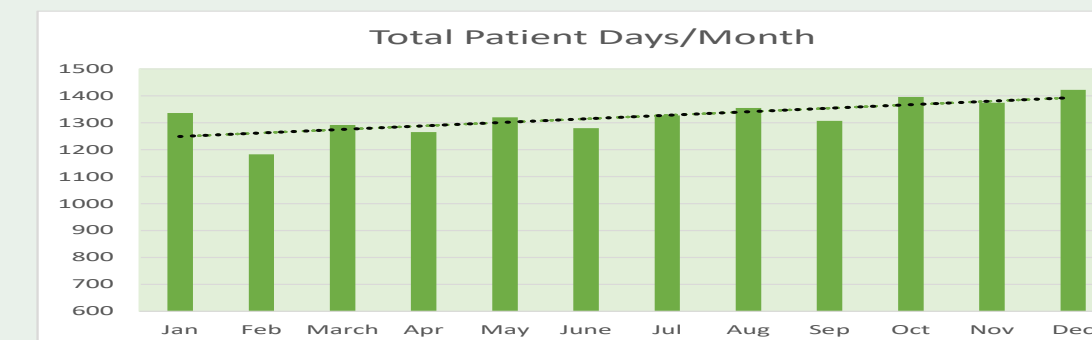
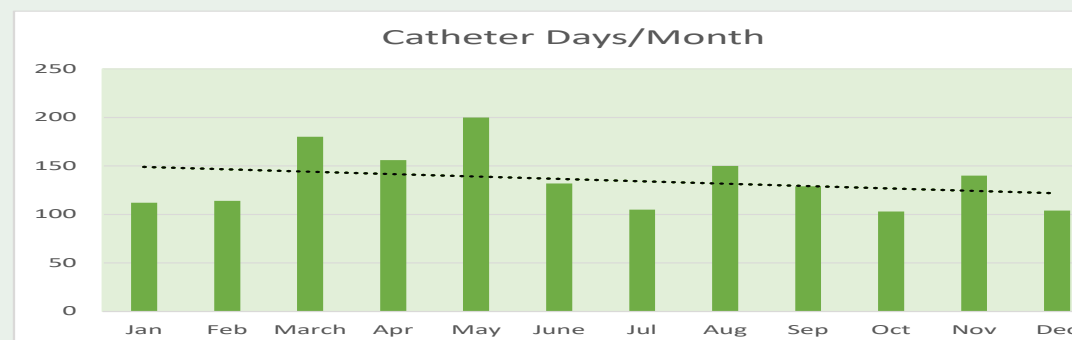
347
Q4 Catheter days



29%
Decrease after implementation



0
CAUTI events after implementation



Conclusion

Implementation of Targeted interventions have been helpful in reducing the usage of urinary catheter. These strategies had led to early removal of urinary catheter, which significantly reduced the risk of the infection. Team involvement has been effective approach in reduction of catheter days. Presence of alerts system for removal of catheter has proved successful in other studies, which also correlates with the findings of this study.

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Meddings, J. & Saint S (2011). "Disrupting the life cycle of the urinary catheter." *Clinical Infectious Diseases*, 52 (11), 1291-1293. <https://doi.org/10.1093/cid/cir195>.

Andreessen I, Wilde MH & Herendeen, P (2012). Preventing catheter associated urinary tract infections in acute care. *Journal of Nursing Care Quality*, 27(3), 209-217. Meddings, J. & Saint S (2011). "Disrupting the life cycle of the urinary catheter." *Clinical Infectious Diseases*, 52 (11), 1291-1293. <https://doi.org/10.1093/cid/cir195>.