



USING MULTIPLE STRATEGIES FOR HIGH-RISK UNITS TO REDUCE THE INFECTION RATE OF CATHETER ASSOCIATED URINARY TRACT INFECTIONS

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INTRODUCTION

The issue of hospital-associated infection is a widely discussed issue in the process of quality of care and health promotion. Catheter-associated UTIs are common among healthcare-associated infections, especially in high-risk intensive care units. CAUTI is prone to cause a variety of complications, leading to increased medical costs and hospitalization days. The rate of CAUTI was (4.4 per mille) at our medical intensive care unit in 2020, which was higher than the average rate of (3.2 per mille) in regional hospitals in Taiwan.

AIM

- 1.Reduce the density of Catheter-Associated Urinary Tract Infections (CAUTIs) in the internal medicine intensive care unit from 5.1‰ to 3.2‰.
- 2.Decrease the utilization rate of urinary catheters in the internal medicine intensive care unit from 72.3% to 69.1%.
- 3.Enhance healthcare professionals' daily care completeness for urinary catheter management from 87.8% to 98.5%.
- 4.Improve healthcare professionals' proficiency in urinary catheter insertion technique from 79.7% to 98.5%.

RESULTS

We observed a noteworthy reduction in the annual catheter-related urinary tract infection rate within the medical intensive care unit of our hospital, which decreased to 3.2‰.

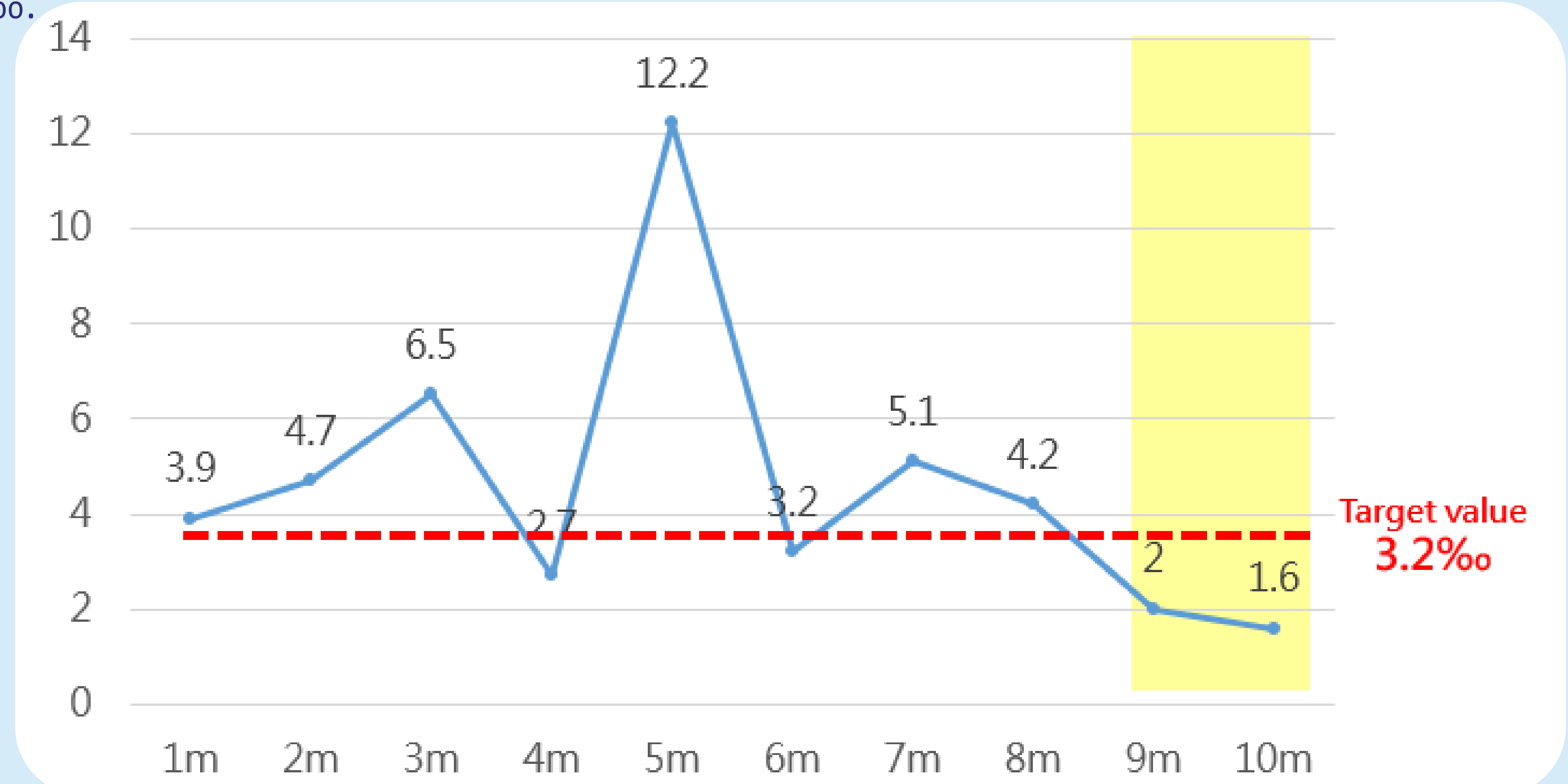


Figure 1. The rate of catheter-associated urinary tract infection in the medical intensive care unit during the year 2022.

After implementing improvement measures, an evaluation was conducted from September 2022 to December 2022, employing the "CAUTI Structural Questionnaire" and "Behavior Observation".

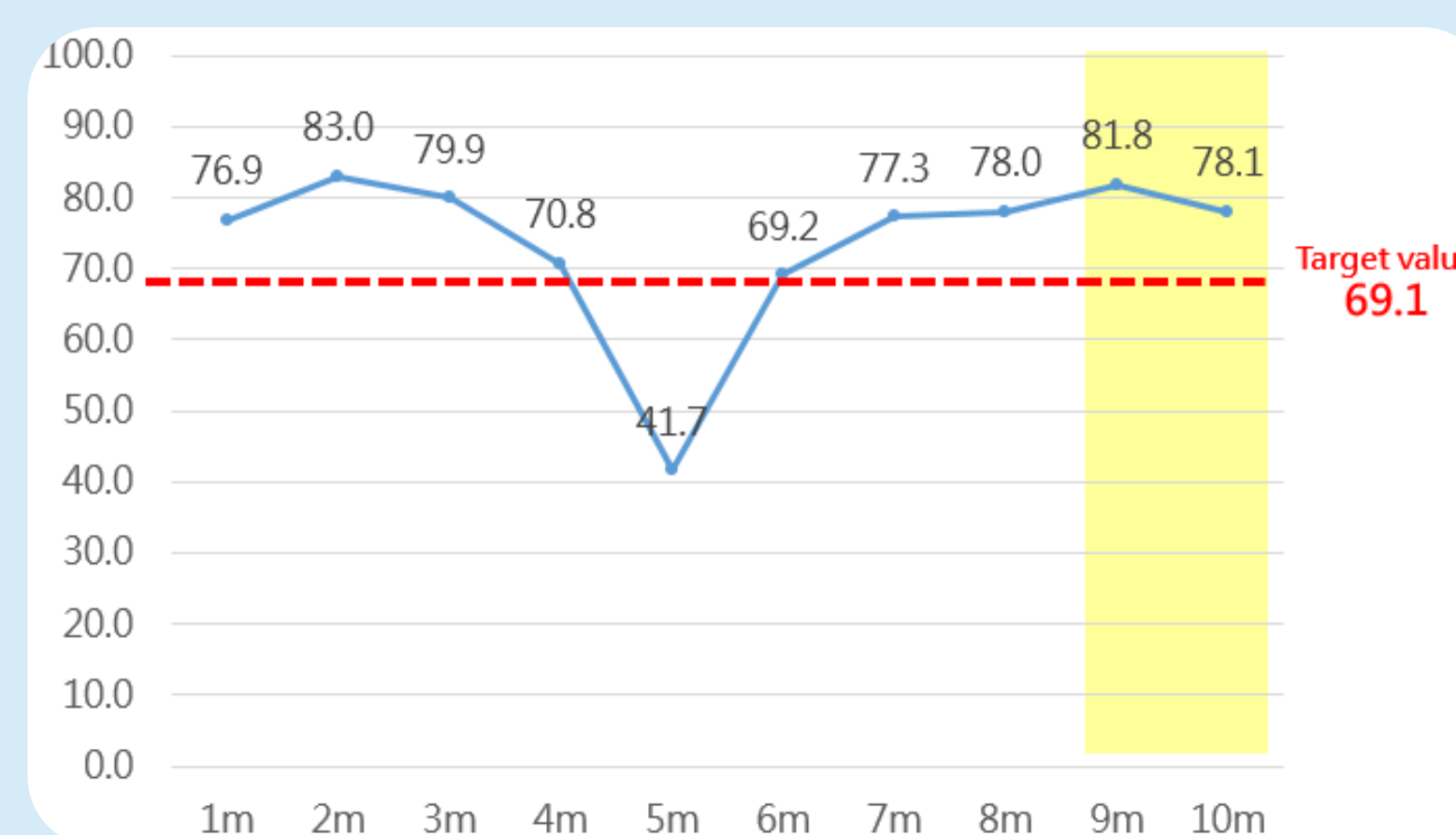


Figure 2. The rate of catheter-associated urinary tract infection in the medical intensive care unit during the year 2022.

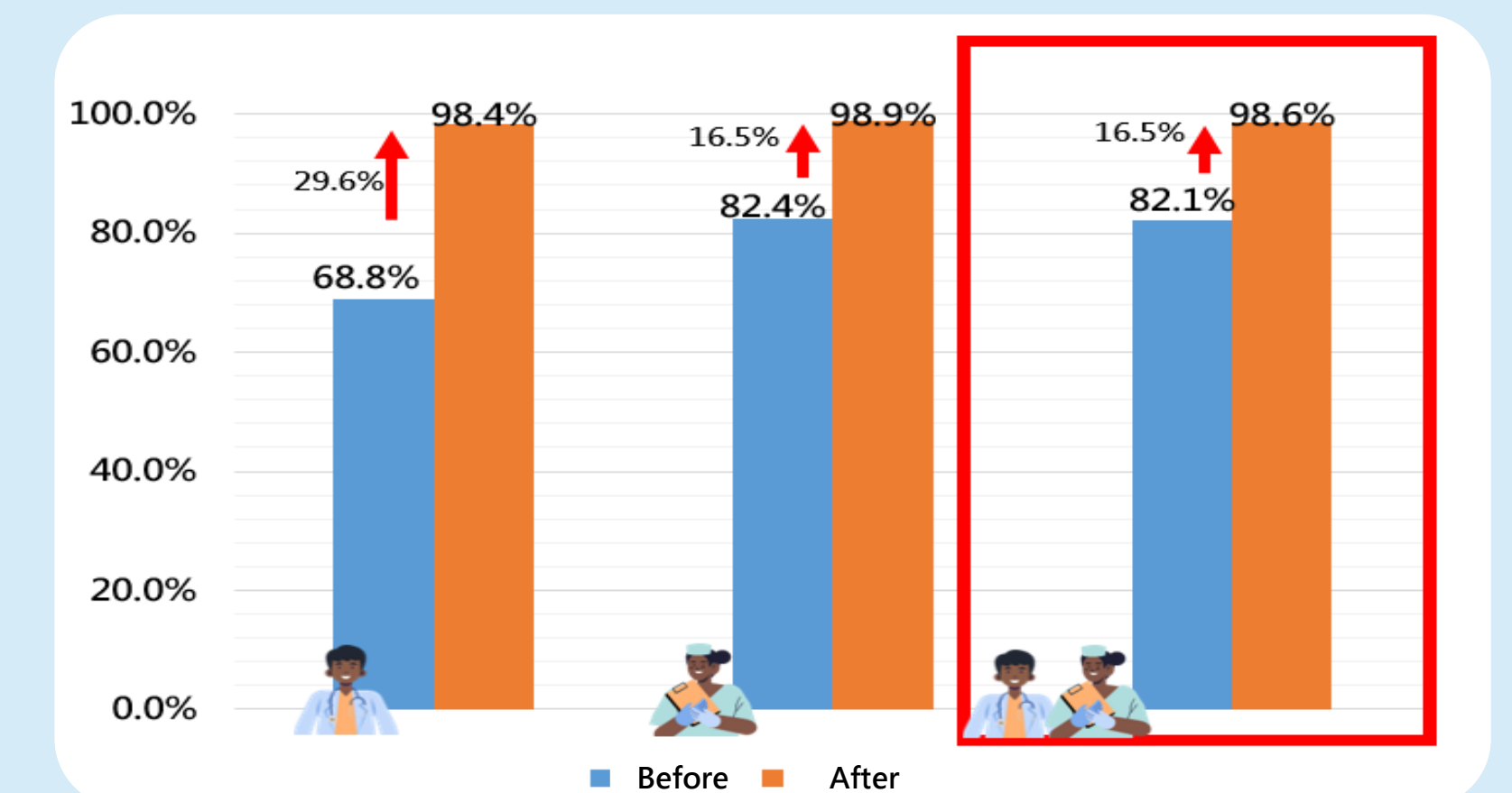


Figure 3. Results of the Comprehensive Survey on the Technical Integrity of Urinary Catheter Insertion by Healthcare Professionals.

METHOD

A prospective study was conducted in 3 high risk intensive care units (ICUs) between September and December 2022.

- Implementing "Catheter Combination Care Education and Training "
- Promoting "Nursing-led Urinary Catheter Care "
- Promoting "Urinary Catheter Combination Care Propaganda Ambassador-ICARE "
- Optimizing the information system of "linking business intelligence panel interface alerts"

CONCLUSIONS

The results revealed significant advancements in several key performance indicators. Specifically, within the high-risk ICU medical team, there was a noteworthy reduction in the utilization rate of urinary catheters, decreasing from 72.3% to 69.1% ($p<0.05$).

Furthermore, a substantial improvement was observed in the technical insertion rate of urinary catheters, increasing from 82.1% to 98.6% ($p<0.05$). Additionally, the completion rate of daily catheter care exhibited a remarkable enhancement, rising from 87.8% to 99.5% ($p<0.05$).

ACKNOWLEDGEMENT

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