

PREVENTION AND MANAGEMENT OF HOSPITAL ACQUIRED 'CATHETER ASSOCIATED URINARY TRACT INFECTIONS' (CAUTI) IN A REGIONAL AUSTRALIAN HOSPITAL: UTILIZING CLINICAL PRACTICE IMPROVEMENT PRINCIPLES TO OPTIMIZE PRACTICE.

Hypothesis / aims of study

The purpose of this project was to:

- Identify current catheter associated practices in a regional Australian hospital
- Develop clinical tools aimed at reducing CAUTI by optimizing bladder & urinary management
- Design and test an evidence based best practice Clinical Practice Guideline (CPG)
- Introduce the CPG effectively to the clinical setting,
- Evaluate the impact according to pre & post intervention criteria
- Suggest methods and further research to sustain and enhance clinical practice

Study design, materials and methods

A critical analysis of the literature review, identified key aspects of urinary catheter management associated with minimizing hospital acquired CAUTI.

Particular emphasis was placed on applying 'Clinical Practice Improvement' (CPI) methods' in order to maximize the impact and sustainability of the interventions aimed at improving clinical practice.

Data collection pre & post intervention consisted of three criteria:

1. Catheter count on each ward to determine the total duration of catheter use per patient, ward and hospital per month.
2. CAUTI rate
3. Nurses knowledge

By utilizing brainstorming sessions with nurses from the main intervention ward, specific local target areas for CAUTI prevention strategies were identified. This method aimed at involving local clinicians with their active input throughout the project and complemented the literature review findings with organisation-specific factors.

Key tools to change practice were tested and refined prior to the development of a more comprehensive CPG. These consisted of:

- Catheter checklist
- Discharge form with CAUTI diagnosis checkbox
- Patient pamphlet

A CPG draft was completed and trialed across the hospital wards

Results

The results indicated improvements in all of the measured criteria over the 8 month project phase:

- The total catheter count across in-patient wards decreased by 42%.
- The CAUTI rate decreased from 14 CAUTI/ 1000 Catheter Days to 1.6 CAUTI/ 1000 Catheter Days.
- The nursing knowledge assessed by a questionnaire increased from 54% pre - CPG exposure to 76% post - CPG exposure.

Interpretation of results

This clinical practice improvement (CPI) project delivered significant improvements to bladder and urinary management in a regional hospital. The combination of a literature search to review current evidenced based practice with the CPI methodology led to the development of new clinical tools to optimize clinical management. The integration of best practice standards with the innovative clinical tools resulted in a clinical practice guideline based on a 'bundle of care' approach.

Concluding message

The substantial reduction of the CAUTI rate and total catheter days over the study period are seen as a direct effect of the project interventions and promise wider applicability in other centres. Beyond the clinical impact of CAUTI reduction, significant financial benefits were calculated.

Disclosures

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