Implementing Choosing Wisely Canada's Lose The Tube Toolkit at London Health Sciences Centre

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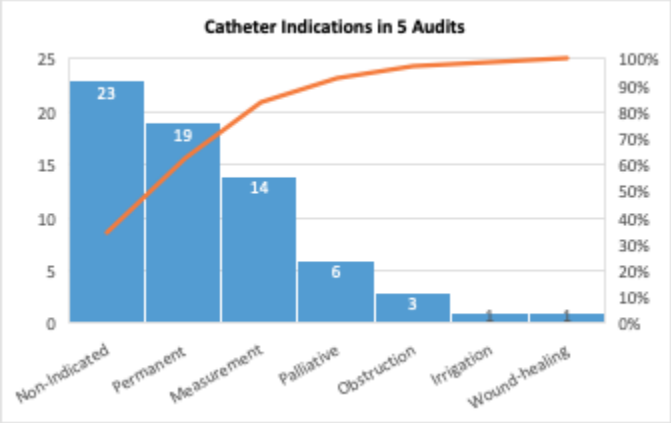
Background: Choosing Wisely Canada (CWC) developed the Lose The Tube toolkit to reduce unnecessary urinary catheters in hospitalized patients. London Health Sciences Centre implemented and adapted the toolkit on seven academic tertiary general internal medicine (GIM) wards at Victoria Hospital (VH) in London, Ontario.

Aim: Reduce indwelling urinary catheters by 30% (from 18% to 13%) on 7 VH-GIM wards by April 30, 2019.

Measures: Our outcome measure was catheters/patients/day, collected manually in weekly convenience audits. Our process measures were daily audits and inservices completed. Our balance measure was catheter reinsertions.

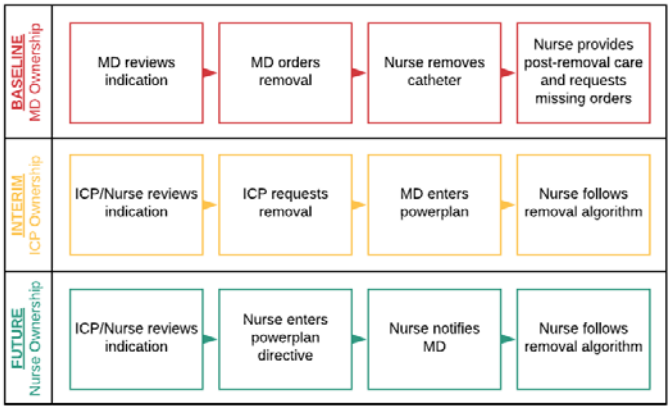
Baseline: On average, 18% of patients were catheterized (n=14 audits) and 36% (n=5 audits) lacked appropriate indication (Leis et al, 2016). Multiple removal barriers were identified:

- Lack of standard indications for use.
- Unknown reason for catheterization.
- Nursing belief that indwelling catheters were less painful and less likely to cause infection than intermittent catheters.
- Some nurses preferred indwelling catheters to reduce workload.
- Diaper scales for urine measurement were poorly calibrated and inaccessible.



Strategy: We used Plan-Do-Study-Act cycles to test change ideas and measurement strategies from the toolkit. Our change strategy was to develop nurse ownership over catheter removals through:

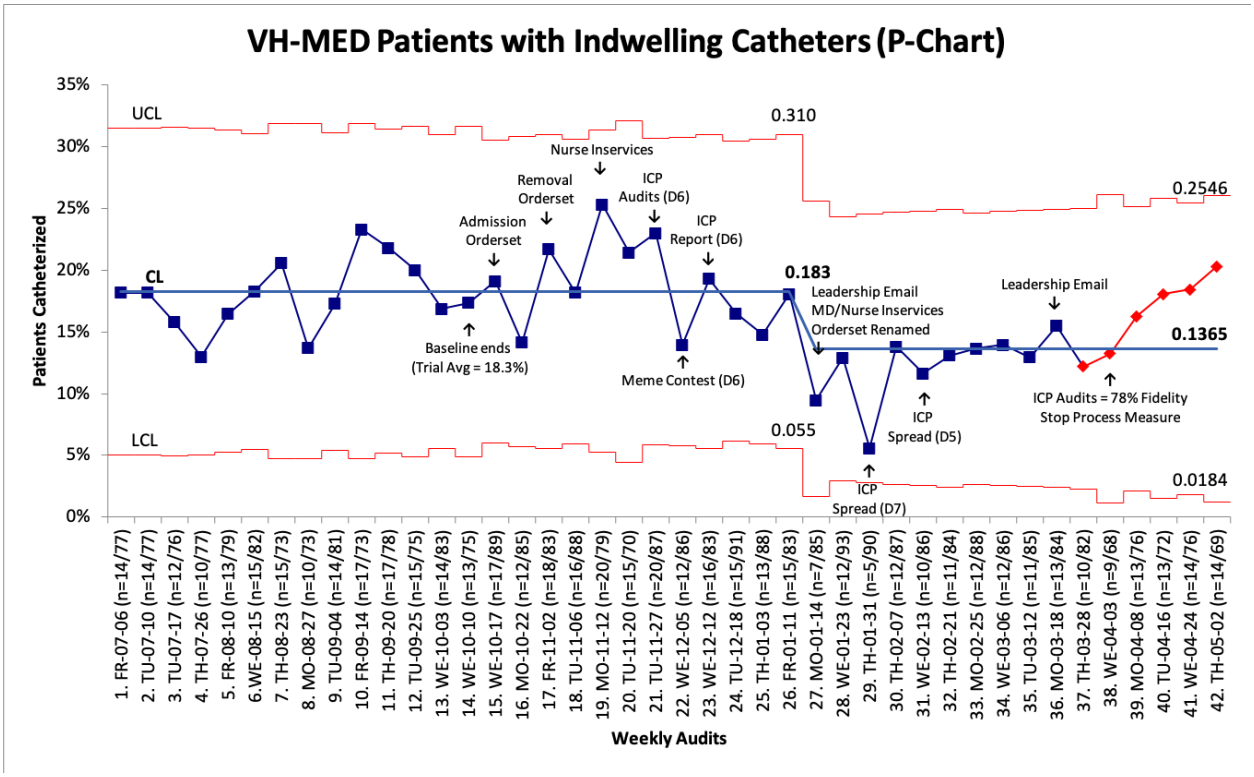
1. Physician consensus criteria for removal;
2. Removal algorithm for decision support;
3. Orderset to use removal algorithm;
4. Nursing directive to use orderset;
5. Nursing motivation to remove catheters.



Changes: We implemented the following changes: A charge-nurse daily audit to remind/assist nurses flagging inappropriate catheters; standard charge nurse documentation across wards; an electronic removal orderset; individual in-services to over 150 nurses and physician trainees; a meme contest to increase staff engagement; digital scales to measure urine output (in progress); and a nursing medical directive (in progress).

Results: Catheter use was measured over 42 weeks and plotted on process control charts. Catheters decreased with special-cause variation from 18% to 14%, with 13 weeks consecutively below baseline. However, prevalence increased over the past 6 weeks, coinciding with the end of daily process monitoring. Charge-nurses completed audits on 78% (47/60) of shifts surveyed, with 52% (31/60) of audits conducted in the morning (preferred). The

median catheter reinsertion rate was 12%; it increased during change implementation as catheter use decreased.



Challenges: Challenges have included electronic catheter tracking, nurse resistance to catheter removal, and the medical directive approval process. While significant improvement was seen after implementing several change ideas, there has been a recent regression that coincided with the cessation of daily process audits; this suggests that more work needs to be done to create and sustain charge nurse habits. One contributing factor may be nurse staffing ratios, as catheter indication checks were less likely to occur when charge nurses were pulled to cover other nursing assignments.

Bottom Line: CWC's toolkit has been an excellent guide, although some digital strategies were not possible in our organization. The biggest challenge has been changing the nursing culture to consider catheter indications and request removal orders, as well as increasing nursing comfort with using the medical directive going forward.

References:

1. https://choosingwiselycanada.org/perspective/toolkit-urinary-catheters-hospitals/
2. Leis JA, Corpus C, Rahmani A, *et al.* Medical Directive for Urinary Catheter Removal by Nurses on General Medical Wards. *JAMA Intern Med* 2016;**176**:113–5.

Efficacy of a Medical Directive to Reduce Inappropriate Indwelling Urinary Catheter Use on Orthopedic Wards

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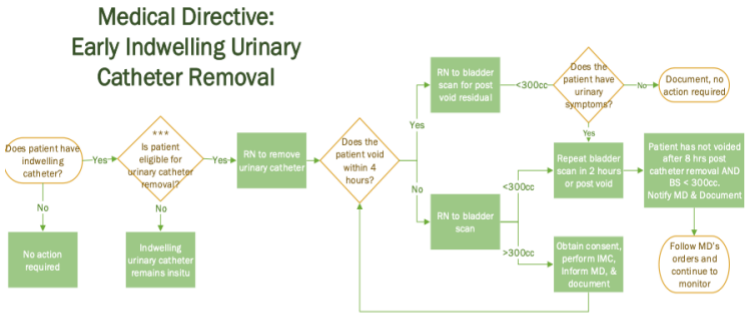
Goal: Assess the efficacy of a medical directive for nurses to reduce inappropriate indwelling urinary catheter (IUC) use among orthopaedic inpatients at a large teaching hospital.

Figure 1: Nursing Medical Directives



*** **Contraindications for Urinary Catheter Removal**

- Pre-admission permanent indwelling urinary catheter.
- Patient being consulted on by the Urology service.
- Continuous bladder irrigation for gross hematuria.
- Stage 3 or 4 sacral ulcer in a female patient with urinary incontinence or uncertain continence status (if patient is male, change to a condom catheter).
- Serum Sodium <125, AND MD order for Strict Intake and Output
- Serum Sodium >150, AND MD order for strict Intake and Output
- Comfort care at end of life, as per patient's / substitute decision maker's wishes or as ordered by Palliative Care.
- Spinal cord injury or bladder/urethral injury.
- Radical pelvic surgery involving the bladder, uterus, cervix or vulva.
- Pre-operative patient awaiting hip fracture or pelvic fracture repair and unable to use a urinal or bedpan to void.
- Postoperative spine surgery patient using patient controlled analgesia (until 24 hours after patient controlled analgesia removal).

Figure 2: Multimodal Intervention Timeline

Methods: A copy of the nursing medical directive is provided (Figure 1). Pre-intervention (July 2017 – Jan 2018) and post-intervention (July 2017 – Jan 2018) catheter days and reasons for catheter use were abstracted manually from the electronic medical record.

Results and Conclusion: Catheter days per patient-days decreased by 31.5% (pre-intervention 11.8% vs post-intervention 8.2%), representing an ARR of 3.62% (95% CI 2.33-4.86, $p < 0.0001$). There was also a 38.1% reduction (pre-intervention 6.8% vs post-intervention 4.2%). The most common approved conditions for IUC use were pre-operative hip fracture (13.4%), immediately post-operative spine surgery patients (24.9%), and pre-existing IUC (7.1%). This project demonstrates that implementation of a medical directive is an effective strategy to reduce inappropriate IUC use in a surgical inpatient setting.

Future Directions: This project is the first step in a multimodal intervention (Figure 2) aimed at standardizing and reducing unnecessary IUC use.

Discussion: Challenges, Limitations, and How to Improve

1. Implementing the Medical Directive:
   - The medical directive was developed collaboratively with nursing, geriatrics, orthopedics, and administration to coordinate smooth implementation.
   - Continuity – How to ensure new staff are educated on the medical directive
2. Data Abstraction
   - Ensuring reliability of manual chart review
   - Consistency in defining IUC days, appropriate/inappropriate IUC days
3. Data Analysis and Outcomes
   - Additional Outcomes that could be evaluated: changes in rate and causes of IUC re-insertion, incidences of adverse IUC-related outcomes
   - Use interrupted time-series methodology instead of before-and-after χ^2 tests of proportions

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Developing Choosing Wisely Canada Recommendations for Critical Care Nursing – Challenges and Opportunities

Presenters: Mélanie Gauthier (melanie.gauthier@mcgill.ca) & Jane de Boer (jane.deboer@muhc.mcgill.ca)

Goal

This presentation will share the process of creating the Critical Care Nursing list, focusing on the challenges and opportunities that emerged in bringing together a diverse group of critical care nursing experts to address overuse.

Creating a CWC Critical Care Nursing List provided CNA and CACCN an opportunity to collaborate on a national initiative, which presented opportunities and challenges throughout the list development process.

Challenges and Lessons Learned

Prior to list development

- Establishing the appropriate group membership to ensure manageable and active working group.
- Shared leadership and strong collaboration between CNA and CACCN created a foundation for an effective working group.

During list development

- Accommodating changes in staff and working group members for both CNA and CACCN
- Competing priorities and schedules, as well as ensuring availability of members across different time zones
- Ensuring the recommendations remain nurse-driven and critical care specific
- Variability of expertise and access across working group members posed both a challenge and opportunity for list development.
- Diversity of stakeholders both geographically and across levels of leadership and practice created a space to discuss conflicting practice cultures in critical care nursing

In reflection

- The list development process encouraged working group members to challenge their own practice and be champions of recommendations
- Maintaining ongoing communication with working group members from the call for nominations to finalization of the list is paramount; goals and timelines should be clear, and commitment reaffirmed throughout.
- The use of debriefing as milestones are achieved and the list is completed and published could be beneficial in highlighting the quality work that took place.

Learn more and download the lists at cna-aiic.ca/choosingwisely

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Broadening Choosing Wisely Canada Nursing Lists to Include Specialty Practices

Presenter: Aden Hamza (ahamza@cna-aiic.ca)

Goal

For the Canadian Nurses Association to partner with specialty nurses/groups to expand the Choosing Wisely Canada campaign. This expansion would include the creation of specialty-specific lists that support nurses in providing quality, evidence-based care in distinct areas of practice. For our two most recent lists, we partnered with Infection Prevention and Control Canada and the Canadian Gerontological Nursing Association.

Challenges

- Orientating new members to the development process and achieving consensus to ensure the recommendations were prioritized appropriately
- Ensuring broad dissemination to reach nurses at the practice level

Lessons Learned

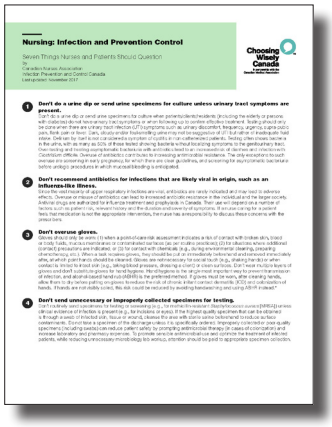
- Collaborating with nursing experts in specific practice areas is essential to developing appropriate recommendations. The specialized nature of the lists allowed for relevant and timely recommendations that would be incorporated into practice effectively.
- Developing knowledge translation strategies is essential to ensuring recommendations are disseminated and used in practice. We will be evaluating the nursing lists and dissemination strategies to inform the development of future lists for nursing and potentially other professional groups.

List Highlights

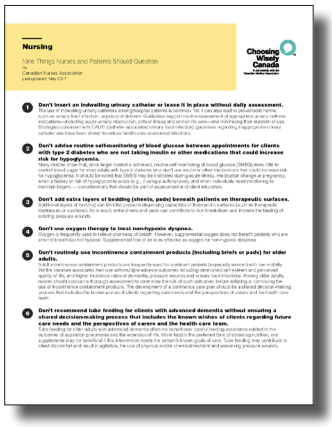
- **Gerontology** – Focuses on an important and growing population in Canada that has increasing care demands and impacts many practice settings. The list contains key recommendations that address concerns around meeting patients' goals of care, an important factor for consideration of tests and treatments in this population.
- **Infection prevention and control** – Supports nurses by questioning common practices (e.g., use of gloves, invasive devices, shaving). The list recognizes nurses' leadership role in areas such as antimicrobial stewardship by providing recommendations on antimicrobial treatment and specimen collection.

Learn more and download the lists at cna-aiic.ca/choosingwisely

Six Things Nurses and Patients Should Question — Gerontological Nursing (2018)



Seven Things Nurses and Patients Should Question — Infection Prevention and Control Nursing (2017)



Nine Things Nurses and Patients Should Question (2017)

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