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# Utilizing a Protocol to Reduce Post-Operative Urinary Retention in Total Joint Arthroplasty

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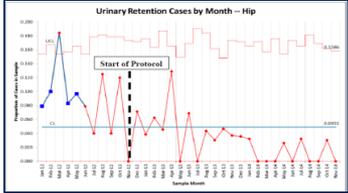
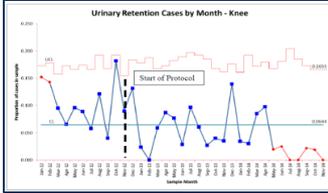
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# Utilizing a Protocol to Reduce Post-Operative Urinary Retention in Total Joint Arthroplasty



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Plan	Check	Act
<p>Foley catheters have not routinely been used for our total joint patients for many years, leading staff to bladder scan and straight catheterize patients postoperatively. Bladder scanning and catheterization were identified as an inconsistent practice. Patients were commonly straight catheterized when nurses determined bladder scan volume and time of last void; yet the amounts for both and decision to catheterize were inconsistent. Also, the clinical evaluation and treatment was inconsistent among physicians. Variations in practice included rationale for a urology consult, use of medications for urinary retention, and documentation.</p> <p>Baseline urinary retention condition codes ranged from 8-18%, which led our team to choose urinary retention as a performance measure in 2012 for The Joint Commission Disease Specific Care Certification.</p> <p><b>Objective:</b> Describe the clinical and cultural impact the total joint urinary protocol has on decreasing urinary retention</p>	<p><b>Urinary Symptom Codes, Total Hip and Knee Replacement Patients</b></p> <ul style="list-style-type: none"> <li>Team created a goal to see a decline in assigned symptom codes to &lt;5% of patients, which was a simple way to measure the performance improvement efforts of culture change and appropriate protocol use</li> <li>Monthly measurement of patients coded with a defined urinary symptom code, acquired in the hospital             <ul style="list-style-type: none"> <li>(78820-unspecified retention of urine, 78821-incomplete bladder emptying, 78829-other specified retention of urine) in elective TKA (81.54) and THA (81.51) patients from DRGs 469 and 470</li> </ul> </li> </ul> <div style="display: flex; justify-content: space-around;">   </div> <p>From baseline, urinary retention codes for THA have decreased from 16.04% (Q3, FY 12) to 0.9% (Q2, FY 15)</p> <p>From baseline, urinary retention codes for TKA have decreased from 12.58% (Q3, FY 12) to 1.4% (Q2, FY 15)</p>	<p><b>Overall goal to provide total joint replacement patients with a consistent standard of care when experiencing post-operative urinary conditions such as retention.</b></p> <p><b>Protocol specifics:</b></p> <ul style="list-style-type: none"> <li>Initiated with surgeon order, as part of post-operative order sets</li> <li>Nurse implements if patient unable to void 8 hours after start of procedure, 8 hours after any straight catheterization in surgery or PACU, or 8 hours after admission</li> <li>When to bladder scan a patient who has not voided or voids in small amounts</li> <li>Amount at which to straight catheterize</li> <li>Separates orders based on patients being symptomatic vs. asymptomatic             <ul style="list-style-type: none"> <li>Symptoms may include bladder pressure or pain, anxiety</li> </ul> </li> <li>Parameters to notify providers and/or initiate Flomax             <ul style="list-style-type: none"> <li>Encourage voiding at bedside, bedpan, commode prior to any bladder scan or straight catheterization</li> </ul> </li> </ul> <p><b>Ongoing performance improvement</b></p> <ul style="list-style-type: none"> <li>Random EMR audits each month, 10 THA and 10 TKA             <ul style="list-style-type: none"> <li>Review of patient records without urinary codes assigned to compare clinical picture</li> <li>Review clinical picture of patient cases assigned urinary codes</li> </ul> </li> <li>Continue discussions with Bone &amp; Joint value analysis team, coding specialists, Disease Specific Care committee and house wide performance improvement team</li> <li>Evaluate trends and patterns observe from EMR tool findings</li> </ul> <p><b>Staff education and competency</b></p> <ul style="list-style-type: none"> <li>Nursing assistants complete majority of straight catheterizations</li> <li>Mandatory competency education for RNs and LPNs- all performed demonstration on a manikin</li> <li>All new Bone &amp; Joint RNs and LPNs demonstrate competency in simulation, nursing assistants complete specific training which includes 1:1 instruction, demonstration on a manikin, and evaluation on three actual patients</li> </ul> <p><b>Ongoing enculturation and monitoring</b></p> <ul style="list-style-type: none"> <li>House wide urinary catheter protocol currently being created, with our work to be utilized as a guide</li> <li>Continued opportunity to bladder scan less often</li> <li>Bi-annual competence for nursing assistants with demonstration via mannequin</li> <li>Monitor use of protocol in other orthopedic order sets (was implemented in all other orthopedic order sets February, 2015)</li> <li>Continued evaluation of competency of straight catheterization for Bone &amp; Joint RNs, LPNs, nursing assistants</li> </ul>
<p><b>Do</b></p> <ul style="list-style-type: none"> <li>Reviewed literature and benchmarks</li> <li>Patient complaints related to frequency and timing of bladder scanning and straight catheterization</li> <li>Determined documentation variations, coding variations, nursing practice variations, or variation in all three</li> <li>Educated ourselves and our team on urinary retention symptom codes and documentation requirements             <ul style="list-style-type: none"> <li>Frequent provider documentation of "urinary retention", being picked up as a urinary symptom code, when it was an expected outcome of surgery</li> </ul> </li> <li>Evaluated stakeholders, engaged them from the start:             <ul style="list-style-type: none"> <li>Coding specialists, clinical documentation specialists, clinical utilization specialists, performance improvement data analysts, Bone and Joint leadership and nursing staff, orthopedic surgeons, urology providers, Hospitalists, anesthesia providers</li> </ul> </li> <li>Discussions with Bone and Joint Center and PACU nursing staff to understand approach to the decision to bladder scan and/or straight catheterize             <ul style="list-style-type: none"> <li>Recognized drastic differences in practice as to what bladder volume prompted a bladder scan and/or straight catheterization</li> </ul> </li> <li>Discussions with Urologists and Anesthesiologists related to best practice</li> <li>Created urinary protocol based on patient symptoms and bladder scan volume, to enable a structured guide for nursing staff to address post-operative urinary retention</li> <li>Team created a goal to decrease the number of straight catheter insertions</li> <li>Team created a goal to enable more structure to the decision to bladder scan</li> </ul>	<p><b>Electronic Medical Record (EMR) Tool</b></p> <ul style="list-style-type: none"> <li>Captured risk assessment of chronic health conditions, determined inconsistency in documentation of conditions pre-operatively in H&amp;P</li> <li>Captured results of protocol use, as defined in order set             <ul style="list-style-type: none"> <li>Protocol followed as defined by patient symptoms, bladder scan amounts, timing of scanning and straight catheterization amounts</li> </ul> </li> </ul>	
<h2>Urinary Protocol</h2>		
<p><b>Ortho Urinary Retention Protocol [2346] [2346]</b></p> <p>Only to be used with ORTHOPEDIC PATIENTS Protocol can only be initiated if there is an order. This protocol is to address the determination of insertion of a straight non-indwelling catheter for urinary retention.</p> <p><b>Ortho Urinary Retention Protocol</b></p> <p>Name of Protocol (Single Response) [53031] Provider - do not check anything. RN will choose orders.</p> <p><b>Ortho Urinary Retention Protocol (2346)</b> [NURS0N11209]</p> <p>This protocol is to address the determination of insertion of a straight non-indwelling catheter for urinary retention. This is only to be used for orthopedic patients.</p> <p>Bladder scan if patient unable to void 8 hours after start of procedure, 8 hours after any straight cath in surgery or PACU or 8 hours after admission. Encourage voiding at bedside, bedpan, commode prior to any bladder scan or straight cath., Routine, Normal, Qry-1</p> <p><b>If patient A-SYMPTOMATIC.</b></p> <p>If bladder scan is performed and volume was greater than 700 mL [53032] Straight cath, continue bladder scan every 8 hours, and continue to encourage voiding. If bladder scan was less than 700 mL [53042] Continue to encourage voiding, no straight cath unless patient becomes symptomatic. Continue to bladder scan every 8 hours, PRN, until able to void. If patient is voiding in small amounts [53043] Keep residuals less than 700 mL, with no straight cath needed as long as patient remains a-symptomatic.</p>	<p><b>If patient SYMPTOMATIC (bladder pain or pressure, anxiety) at anytime and is unable to void:</b></p> <p>If patient is newly symptomatic [53044] Check bladder scan to have current volume available. If bladder scan greater than 400 mL [53025] Straight cath and continue to encourage voiding. Continue to bladder scan every 8 hours, if patient becomes symptomatic again before or at the 8 hours mark, bladder scan PRN and repeat straight cath if greater than 400 mL. If Straight Catheterization ONCE, if bladder scan greater than 400 mL [54227] If Straight Catheterization ONCE - if bladder scan greater than 400 mL [NURS0N10348] If Mdication HCl (aka: UROJET) 2 % [84187] Routine, Normal, FY1, Starting today For 1 Occurrences, Qry-1 3-10 mL, urethral, ONCE PRN For 1 Doses, discomfort with catheter insertion 3-5 mL for female patient or 10 mL for male patient urethral once prn catheter insertion "And" Linked Panel</p> <p>If persistent voiding difficulties after 24 hours [53026] Routine, Normal, Qry-1</p> <p>If Nasally Surgeon of urinary status if persistent voiding difficulties after 24 hours. [NURS0N10177] If tamsulosin (aka: FLOMAX) 24-hr cap [10900] 0.4 mg, oral, QHS Do not give if patient hypotensive, common side effects include dizziness and lightheadedness.</p> <p>If bladder scan less than 400 mL [53048] Continue to encourage voiding, bladder scan again. If bladder scan 94% XC - if bladder scan was less than 400 mL, and patient symptomatic. [NURS0N10291] Routine, Normal, QHS, Starting Today For 2 Occurrences, Qry-1</p>	<h2>References</h2> <p>Baldwin, T., Carl F. (2015). Urinary retention after total hip and knee arthroplasty. <i>Minerva Anesthesiologica</i>, 76 (2), 120-30.</p> <p>Baldwin, T., Mataloni, G., D'Angelo, E., Carl F. (2011). Incidence of postoperative urinary retention (POTUR) after joint arthroplasty and management using ultrasound-guided bladder catheterization. <i>Minerva Anesthesiologica</i>, 77, 1050-97.</p> <p>Baldwin, G., Bagby, H., Ankrjan, A., Carl, F. (2009). Postoperative urinary retention: Anesthetic and perioperative considerations. <i>Anesthesiology</i>, 110 (5), 1139-57.</p> <p>Chen, S. (2007). A review of the effects of general anesthesia on bladder emptying and urinary retention. <i>Journal of Orthopedic Nursing</i>, 11 (2), 104-5.</p> <p>Darrach, D.M., Grabbing, T., Silverstein, J.H. (2008). Postoperative urinary retention. <i>Anesthesiology Clin</i>, 27 (3), 465-84.</p> <p>Small, C.V., Umscheid, C.A., Agarwal, R.K., Kuntz, G., Pappas, D.A. (2009). Healthcare Infection Control Practices Advisory Committee (HICPAC). Guidelines for prevention of catheter-associated urinary tract infections 2009. Atlanta (GA): Centers for Disease Control and Prevention (CDC). 6 p.</p> <p>Kotwal, R., Hodgson, P., Carpenter, C. (2008). Urinary retention following lower limb arthroplasty: Analysis of predictive factors and review of literature. <i>Acta Orthopaedica Belgica</i>, 74, 333-36.</p> <p>Kumar, P., Marwan, K., Chowdhary, A.M., Kong, K.C., Pua, J. (2006). Urinary retention and the role of indwelling catheterization following total knee arthroplasty. <i>International Braz J Urol</i>, 32 (1), 31-34.</p>