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Urinary Catheter Infection Prevention and Intermittent Urinary Catheter Care Delegation

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Urinary Catheter Infection Prevention and Intermittent Urinary Catheter Care Delegation

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TABLE OF CONTENTS

Process Description	3
Theoretical Framework	3
Evidence	4
Proposed Policy and Procedure	8
Implementation into Professional Practice	9
References	11
Old Policy and Procedure	13

When evaluation of assessment and implementation is concerned, it is important to consider the entirety of care completed upon the general medical-surgical adult patient. Particularly, it is sometimes the most intimate of details of care that are overlooked or persuaded by assumption to be already accomplished. It is under these beliefs that most nurses and nursing assistants often operate. Because one has charted it, the task must be complete. Because one has a shared duty, it is neither a duty to oneself, nor to the patient. We can examine these elements further by taking a more microscopic view of urinary catheter care and catheter associated urinary tract infection (CAUTI).

This Evidence-Based Practice investigation is an attempt to appraise the quality of current policy regarding catheter care. This inquiry will compare the current modus operandi of Foley catheter intermittent peri-urethral hygiene care and its delegation, with new evidence supporting best practice for these interventions. This paper considers strengths and weaknesses of these interventions and offers suggestions for change.

This investigation will operate on the theoretical framework of Leavell and Clark (1975) suggesting, “the natural history of any disease exists on a continuum, with health at one end and advanced disease at the other. The model delineates three levels of the application of preventive measures that can be used to promote health and arrest the disease process at different points along the continuum.” The goal of this model is to maintain the state of health by avoiding disease or illness. We will focus intent upon primary prevention. Primary prevention is action taken prior to the onset of disease or illness. This removes the likelihood that anything other than the state of health can occur. (For example, we will intermittently cleanse the catheter and peri-urethral area attempting to remove the chance for infection and disease.) Primary prevention encourages the perception of positive health. (Park, 2015).

It has come to the attention of caretakers involved in Foley catheter hygiene, that often, it is not being completed. One may pose the question, “How can you know if catheter care is incomplete when the electronic Medical Administration Record (eMAR) certifies it has been finished?” To answer this question, we will first examine the current tools of protocol involved in intermittent cleansing of the Foley catheter and peri-urethral area.

Current practice involves care of the catheter using Provon Post Insertion Foley Care Wipes. There are 5 wipes per Provon package. Murray Calloway County Hospital (2018) directs that, per each swipe of the catheter, and the peri-urethral area, a Provon wipe is used and discarded. For each instance that a patient’s catheter is cleansed, a new package of Provon wipes should be procured and used in its entirety. (Murray Calloway County Hospital, 2018). On each package of Provon Post Insertion Foley Care Wipe package, there is a sticker appearing on the bottom left corner.



Figure 1. *Surestep Foley Post Insertion System*. Bard Corp Marketing, 2017.

Murray Calloway County Hospital (2018) states, “Catheter care is performed on both the day and night shifts and prn if soiling with stool, blood, or other substances occurs. Catheter care consists of the perineal area being cleaned with soap and water, then the Foley catheter and perineal areas are also cleaned with Post Insertion Foley Care Wipes.” (Murray Calloway County Hospital, 2018). The sticker is then removed from the Provon Post Insertion Foley Care Wipes and applied to the urinary collection bag. Each shift applies it to either “day” or “night” shift, and on the correct numbered day, as seen above.

Theoretically, it would be possible to view the collection bag with an exact documentation of the shift’s cleansing intervention. However, this is hardly the case. It has been the experience of many caregivers to have completed this intervention, to begin application the sticker, and not know to which day to apply it. For example, the patient may have had the catheter placed 4 days ago, but no stickers have been applied to the collection bag. Documentation for the intervention has occurred, and it is possible to see who has claimed to have cleansed the catheter and peri-urethral area according to agency policy, and yet, no sticker appears on the collection bag.

Another dissection of the problem occurs here: documentation. Current policy exists that allows nurses to assess each shift the need for current continuation of Foley catheter insertion. (Murray Calloway County, 2018). This is part of the HOUDINI protocol to reduce unnecessary risks for infection. The registered nurse (RN), or licensed practical nurse (LPN), may chart about the patient’s genitourinary system, examples include: output, color, odor, quality, clarity, continued need for catheterization, etc. Though, unlike the nurse, the nursing assistant’s documentation for Foley catheter care is much different. An effort has been made to simplify, and encourage compliance for, documentation. Documentation for nursing assistants has

changed to checking boxes for interventions that have been completed. Checking all the boxes for compliance is strongly encouraged (when the documentation is complete, the intervention changes from red and incomplete to non-existent on the screen). Examples for nursing assistant interventions include: use of Provon wipes, ensuring collection bag is off the floor, ensuring patency of tubing, etc. There is no option for narrative charting.

Narrative charting is necessary for the sticker intervention because it provides verifiable proof that Foley catheter care was completed. It is easy to check all the boxes as complete, but to increase adherence to current policy, editing of documentation must occur. Nurses and unlicensed assistive personnel alike are responsible for the safe care of catheter and peri-urethral hygiene, so why is compliance such an issue? Perhaps there are too many who share the responsibility, or perhaps there are not enough personnel being held accountable for this essential intervention. The next section examines peer-reviewed articles and American Nurses Association's recommendation for Foley catheter insertion and care.

Regagnin et al. (2016) conducted a study to determine the sustainability of a program for continuous reduction of catheter-associated urinary tract infection (CAUTI) including 2 medical-surgical intensive care units (ICUs) with forty-eight beds and 3 step-down units (SDUs) with 95 beds in a private tertiary care hospital in Sao Paulo, Brazil. Results from the study showed that CAUTI reduction is a multidisciplinary team effort. This means not only 1 person can be responsible for the care of the catheter, but also, all are held responsible for the care of the catheter. Continuing educational interventions also reduced the number of CAUTI instances. This led to, "a cultural change that can be observed in the way the nurse views insertion and maintenance of catheters leading to longer results of successful change." (Regagnin et al., 2016).

Regagnin et al. (2016) found that a successful strategy involves a urinary catheter team that performs insertion and maintenance and is coordinated by a nurse specialist. Programmed reminders (routine daily review) for assessment of need for indwelling urinary catheters showed a decrease in the length of time of catheterization, and therefore, the risk for infection. Bundle components included the creation of a urinary catheter insertion cart, hand hygiene, chlorhexidine skin and meatal antisepsis, sterile field and sterile gloves, only 1 attempt at insertion allowed for each catheter (ie, a new catheter was used for each attempt), adequate urinary catheter balloon inflation, and daily review of the need for a urethral catheter with prompt removal if no longer needed. (Regagnin et al., 2016).

American Nurses Association (ANA) is a professional organization that advances and protects the profession of nursing. The ANA and Panchisin (2016) set standards regarding Foley catheters, divided into several categories. 3 categories will be discussed here: Considering alternatives, Criteria for insertion, and Patient preparation/insertion.

Consider alternatives: The best way to prevent a CAUTI is to avoid unnecessary insertion. Other interventions to assist with incontinence, urinary retention, and intake and output measurements should be considered before inserting a urinary catheter. For example, using condom catheters, instituting toileting protocols, and measuring incontinence pads can all help prevent the need for a urinary catheter. Bladder scanning and straight catheterization should be performed for patients who don't adequately empty their bladders.

Criteria for insertion: Intraoperative monitoring of urinary output during surgery provides accurate feedback. Critical illness necessitates accurate measurements of intake and output. Acute urinary retention and bladder outlet obstruction require catheterization. Wound healing is

promoted in patients with sacral or perineal wounds. Prolonged immobilization related to potentially unstable vertebral injuries or multiple traumatic injuries may require catheterization. And catheterization may provide comfort care at the end of life. (Panchisin, 2016).

Patient preparation/insertion: This category includes hand hygiene, donning sterile gloves before insertion, donning gloves before cleansing the catheter and peri-urethral area, and no longer inflating the balloon before insertion, as this can cause microtears and increase the risk for infection. (Panchisin, 2016).

The ANA and Panchisin (2016) conclude their recommendations with making sure the indwelling catheter is secured to the patient. This can reduce pain, the risk for infection, and damage to the skin. It is also recommended that cleansing of the catheter and meatus should occur at least daily, according to the institution's protocol. Perineal care should be performed after each episode of incontinence. "*Escherichia coli* is the most common pathogen associated with CAUTIs." (Panchisin, 2016).

Now that considerable evidence has been gathered to present new interventions, it is conceivable to propose a new policy and procedure for professional implementation. Three strengths have been identified in the current policy. The first strength is that Foley catheter care is a team discipline. The shared work of catheter care and CAUTI prevention is ideal, but this care protocol does require critique. The second strength of current policy includes the daily assessment of the need for catheterization. This intervention decreases the incidence of prolonged and unnecessary catheterization of the patient and reduces the risk of infection. The third and last strength of current policy includes complete assessment of the patients that are required to have indwelling urinary catheters. Nursing staff evaluates the need for catheterization

and implements other protocol before resorting to indwelling urinary catheterization. This is in compliance with ANA standards and recommendations.

Three weaknesses to the current policy have been identified. The first weakness of our current policy include “delegation” of catheter care to both nurses and nursing assistants. Research evidence demonstrates that accountability is best handled by urethral catheterization care teams. Ideally, each team would visit the medical-surgical and critical care floors with their own urinary catheterization cart. This cart would allow for easy transportation of supplies and all patients who need indwelling catheterization or catheter care would be seen by the team. The second weakness for our current policy is there exists no recurrent educational intervention. hospital employs the HealthStream system. HealthStream is a system of evaluation that presents an educational topic and requires a small follow-up exam. These continuing education assessments are often viewed when floor managers are assigning yearly raises. The HealthStream engineers, with the hospital education department, could include a biannual PowerPoint to encourage nurses and nursing assistants to perform catheter care. This presentation would create an atmosphere of learning and empowerment for health care providers to increase compliance to the new policy. The third weakness of current policy is documentation of the sticker applied to the collection bag. A conceivable and potential change would be to include a narrative section, limited to one hundred characters or less, that would allow the nursing assistant to document the numbered day and on which shift (day or night) they performed catheter hygiene. These interventions could be completed independently and serve as suggestions for the policy change that follows.

The proposed plan is a combination of viable interventions that can be adapted based on the current policy in place, the likelihood of these changes being implemented, and the feasibility

of the staff and health care providers adhering to new guidelines. In addition to the current practice in place, the new policy would include documentation of sticker adherence to urinary collection bag with the numbered day (Day 1, the day of insertion) and shift of nurse or nursing assistant who performed catheter care. Both the nurse and the nursing assistant would sign off on who conducted the care. The nurse and the nursing assistant must work as a team to ensure the intervention is complete. This would be documented by the nurse, who would write the name of the health care provider who performed catheter and peri-urethral hygiene. Lastly, the new plan would include a biannual HealthStream competency. This competency must be passed by the nurses and nursing assistants to continue working and providing care.

Ideally, the institution would be saving money by implementing these new changes. The policy would be more inclusive. Since Medicaid and Medicare do not pay the hospital back for acquired CAUTI, the reimbursement from Medicaid and Medicare would cover the incentive for raises to the staff and nursing personnel. The incentive for the hospital to change policy would be covered by the original loss of reimbursement.

The new policy is in complete fulfillment of this investigation's original framework, primary prevention. These interventions are focused on disease and illness prevention. The state of health is unimpaired at the point of catheter insertion, and to continue the continuum of health, there must be new adherence to practices and policies. This includes a rally for hospital staff, nurses, and nursing personnel. Managers must also comply with disciplinary actions if the new policy is failed to be executed. The changes presented are practical and obtainable within a short amount of time. Using this evidence, it will be possible to advocate for the patient and institution as health care providers.

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Old Policy and Procedure

Nursing Policy & Procedure Manual Section 3 - 049 CORE Murray Calloway County Hospital

POLICY TITLE Catheter Care and Emptying of the Closed Urinary Collection System **POLICY STATEMENT** Care and emptying of a closed urinary collection system may be performed by an RN, LPN, or unlicensed assistive nursing personnel depending on the job description and scope of practice. Catheter care is performed on both the day and night shifts and prn if soiling with stool, blood, or other substances occurs. Catheter care consists of the perineal area being cleaned with soap and water, then the Foley catheter and perineal areas are also cleaned with Post Insertion Foley Care Wipes. In acute care, LTC and the Hospice House, a collection bag will be emptied every eight hours and prn or if using a urinary leg bag when the bag is half full. The collection bag including a urinary leg bag and Foley catheter should be changed by licensed staff every 28 days, whenever clinical indications of infection, obstruction or compromise are present, and as ordered, using aseptic technique. If signs or symptoms of a urinary tract infection occur, the physician is notified. Because the risk for developing a urinary tract infection increases the longer a catheter is in place, prior to performing routine care (on both the day and night shifts), nursing will evaluate and document the patient's/resident's need for a Foley catheter using the HOUDINI Urinary Catheter Removal Protocol, IC-027, Attachment 1 to determine if the catheter can be removed. If the urinary catheter can be removed, then nursing will follow the post catheter removal care also outlined in IC-027, Attachment I. Standard precautions will be adhered to. Licensed staff instructs the family/caregiver in the performance of catheter care in

the Hospice homecare setting. PROCEDURE Supportive Data Patients/ residents with indwelling catheters need specific perineal hygiene which must be performed in order to reduce the risk of urinary tract infection. Any secretions or encrustations at the catheter insertion site must be completely removed. Care must be taken to clean the perineal area gently but thoroughly using soap and water. The use of powders or lotions is contraindicated. Catheter Care and Emptying of the Closed. Nursing Policy and Procedure Manual Urinary Collection System Section 3 - 049a STEPS KEY POINTS Equipment Care of: Emptying: - Disposable gloves - Disposable gloves - Waterproof pad -Graduated container - Basin - Soap and water - Wash cloths and towel - Blanket - Post Insertion Foley Care Wipes CATHETER CARE 1. Wash hands and explain procedure. 2. Prepare washcloths for perineal It is no longer permissible to use cleaning by wetting the cloths different areas of the same cloth with soap and water. when cleaning the perineal/anal area. 3. Organize equipment for catheter/perineal care. 4. Provide for privacy. 5. Raise bed to appropriate working height. 6. Lower side rail on working side of bed. 7. Position patient/resident: a. Female: Dorsal recumbent position. b. Male: Supine position. 8. Place waterproof pad under patient/resident. 9. Drape blanket so that only the perineal area is exposed. 10. Don gloves and wash perineal area with soap and water. a. Female: -Clean perineal area, using downward strokes. . Catheter Care and Emptying of the Closed. Nursing Policy and Procedure Manual Urinary Collection System Section 3 – 049b STEPS KEY POINTS -If more than one stroke is needed to clean an area and/or when cleaning a different area of the perineum, use a different soapy washcloth with each stroke.. b. Male: -If patient is not circumcised, retract foreskin. -Wash tip of penis at and around urethral If more than one stroke is needed to meatus; then, rinse. clean an area and/or when cleaning a -With a different clean wash cloth, wash different part of the genitalia, use a the penis shaft using downward strokes. different soapy wash

cloth with each stroke. c. Remove gloves. Dispose of gloves 11. Use hand sanitizer found in patient's room, clean hands; don new gloves 12. Clean peri-urethral area and catheter using Provon Post Insertion Foley Care Wipes: a. Female: Accidental closure of labia during the - Gently retract labia to fully expose the cleaning process requires the process urethral meatus. to be done again from the beginning. -Clean catheter, beginning at meatus and Cleaning should be done using one wipe downward with first towelette. downward stroke. -With second towelette, clean the right If more than one stroke is needed to labia minora. clean an area, use a new towelette -With the third towelette, clean the left labia minora. -With the fourth towelette, clean the middle area between the labia minoras. -With the fifth towelette, carefully clean the catheter once again. b. Male: -With first towelette, clean the catheter beginning at meatus and wipe downward. -With second towelette, penis in circular motion, starting at the urethral meatus. - With the third towelette, clean using a circular motion further down the shaft. -With the fourth towelette, clean using a If non-circumcised, move foreskin forward circular motion, further down the shaft. to its natural position after cleaning. Catheter Care and Emptying of the Closed.

Nursing Policy and Procedure Manual Urinary Collection System Section 3 – 049c STEPS KEY POINTS -With the fifth towelette, carefully clean catheter once again 12. Cover patient/resident.

13. Verify patency of system. a. Observe for unobstructed If resident, place dignity cover on urine flow. Foley bag. b. Arrange tubing to facilitate gravity drainage of the urine. Keep collection bag below level of the bladder. 14. Remove gloves and dispose of gloves in proper receptacle. Wash hands. EMPTYING THE COLLECTION BAG 1. Label individual patient/resident drainage container. 2. Wash hands and explain procedure. 3. Provide for privacy. 4. Don gloves. 5. Standard Collection Bag/Urinary Leg Bag a. Place graduated drainage container under splashguard. b. Open splashguard and empty urine into drainage container. c.

When collection bag is empty, close splashguard. d. Measure urine and discard. 6. Urine Meter a.
To empty into collection bag: 1) Grasp urine meter and tilt backwards. 2) Allow enough time for
urine to flow into collection bag. 3) Empty collection bag following Steps 5 a-d under “Emptying
the Collection Bag”. 4) Measure urine and discard. Catheter Care and Emptying of the Closed.
Nursing Policy and Procedure Manual Urinary Collection System Section 3 – 049d STEPS KEY
POINTS 7. Rinse and clean graduated container and return to storage area. 8. Remove gloves;
place in proper receptacle. Wash hands. Documentation Documentation is done in electronic
medical records or on appropriate to the care setting. Reference “Urinary Catheterization
Management and Discontinuation Protocol”, IC-027 “HOUDINI Urinary Catheter Removal
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02/2007, 01/2008 Revised: 11/2010, 07/2011, 11/2014, 04/2017, 09/2017, 04/2018