

Background

The Salinas Valley Health Medical Center Practice Council received a referral indicating potential overuse of the BD (Becton, Dickinson and Company) PureWick™, an external female catheter (EFC; see Figure 1). This EFC was introduced in 2017, and its use follows the indications outlined by the manufacturer (BD).

Families and patients have expressed concerns that the use of an EFC may lead to patient immobility and deconditioning. In response, a request was made for hospital-wide nursing and certified nursing assistant education, or the creation of an algorithm/decision tree to help staff determine appropriate candidates for EFC usage.

Internal data showed that approximately 1000 EFCs are being used monthly hospital wide. The PICO question guiding this investigation is: In hospitalized female adult inpatients in Med-Surg and progressive care units, does the usage of EFCs affect patient immobility and deconditioning?

The purpose of this evidence-based practice (EBP) initiative is to determine best practices for EFC use. To potentially prevent immobility and deconditioning, we noted the opportunity to develop a scoring tool to guide staff on the appropriateness of EFC use.

Figure 1










Note. PureWick™ System includes the PureWick™ Female External Catheter (wick) and the PureWick™ Urine Collection System.

Methods

We conducted a literature review using the following search terms: “urinary catheters,” “inactivity,” “mobility,” “immobility,” “deconditioning,” “female external urinary catheters,” “indwelling catheters,” “interventions to mobilize,” and “elderly patients.” Databases searched included CINAHL® Ultimate, MEDLINE Ultimate, and ScienceDirect®. Years searched were from 2018 – 2023. All articles underwent a title, abstract, and full text screening for relevance to our PICO question. Then, we critically appraised the selected sources, organized them by levels of evidence, and rated their quality using criteria from the Johns Hopkins Evidence-Based Practice Model. The literature search did reveal evidence to suggest that tethering devices like urinary catheters and intravenous lines contribute to immobility and hospital-acquired deconditioning (Surkan, 2018). Although there is no direct evidence linking EFCs to immobility and deconditioning, literature supports that any tethering device (such as intravenous catheters, indwelling catheters, telemetry wires) can adversely affect mobility, increasing the risk for deconditioning. Nurses play a crucial role in the early identification of patients at risk for immobilization (Swinnerton, 2023).

In addition to the literature, we considered internal and external evidence. For example, we conducted a 1-day audit of EFC use in the Med-Surg/3M and Ortho-Neuro-Spine (ONS) units to identify any patterns. We noted that certified nursing assistants were consistently documenting the indication for use of the female external catheter compared to the registered nurses who were documenting the presence of the female external catheter in the physical assessment intervention but not its indication. We also found that for female patients who had a Bedside Mobility Assessment Tool (BMAT) score of 3 and 4, EFCs were more likely to be utilized (see Figure 2).

Figure 2

Bedside Mobility Assessment Tool		
BEDSIDE MOBILITY ASSESSMENT TOOL		
Assessment Level 1- Sit and Shake 1. From a semi-reclined position, ask patient to sit up and rotate to a seated position at the side of the bed <i>*may use the bedrail.</i> 2. Ask patient to reach out and grab your hand and shake making sure patient reaches across his/her midline		PASS= Patient is able to come to a seated position, maintain core strength. Maintains seated balance while reaching across midline. Move on to Assessment Level 2 FAIL= Patient unable to perform tasks, patient is MOBILITY LEVEL 1
Assessment Level 2- Stretch and Point 1. With patient in seated position at the side of the bed, have patient place both feet on the floor (or stool) with knees no higher than hips. 2. Ask patient to stretch one leg and straighten the knee, then bend the ankle/flex and point the toes. If appropriate, repeat with the other leg	 	PASS= Patient is able to demonstrate appropriate quad strength on intended weight bearing limb(s). Move onto Assessment Level 3 FAIL= Patient unable to complete task. Patient is MOBILITY LEVEL 2
Assessment Level 3- Stand 1. Ask patient to elevate off the bed or chair (seated to standing) using an assistive device (cane, bedrail). 2. Patient should be able to raise buttocks off be and hold for a count of five. May repeat once.	 	PASS= Patient maintains standing stability for at least 5 seconds, proceed to assessment level 4. FAIL= Patient unable to demonstrate standing stability. Patient is MOBILITY LEVEL 3
Assessment Level 4- Walk 1. Ask patient to march in place at bedside. 2. Then ask patient to advance step and return each foot. <i>*There are medical conditions that may render a patient unable to step backward; use your best clinical judgment.</i>	 	PASS= Patient demonstrates balance while shifting weight and ability to step, takes independent steps, does not use assistive device patient is MOBILITY LEVEL 4 Fail= Patient not able to complete tasks OR requires use of assistive device. Patient is MOBILITY LEVEL 3

We posted an inquiry on the Magnet Learning Communities® discussion board due to the lack of literature on indications for EFC usage, which enabled us to evaluate two external policies on external urinary catheters and one medical center’s EFC Indication Algorithm. We noted that all three facilities used the PureWick manufacturer indications.

Based on the literature review and the above external and internal evidence findings, we created a scoring tool for the use of EFCs. At that time, our medical center did not have a standardized procedure regarding the use of female urinary catheter. Accordingly, we drafted the policy entitled “Nurse-Driven External Urinary Catheter Protocol Nursing Standardized Procedure,” which included indications and contraindications for EFC use (see Figure 3). Concurrently, a PureWick task force met with the hospitalist group, who reinforced concerns about the overutilization of EFCs, and potential harm (such as hospital acquired pressure injuries). With the roll out of male external urinary catheters in the organization, we collaborated to create a nursing standardized procedure addressing the use of both male and female external urinary catheters.

Figure 3

Indications and Contraindications for EFC Use	
C. PROTOCOL	
A. Plan/Intervention	
1.	RN to assess if the patient is appropriate for an external urinary catheter (see a. and b.) a. RN to document the External Urinary Catheter Indication on patient care/ precautions intervention on the worklist b. RN to complete the External Urinary Catheter scoring tool c. For a score of 3 and above, an external urinary catheter is indicated. RN must place a physician order per policy. d. If a patient has an external urinary catheter placed, the RN will assess its use every shift and as needed
2.	Contraindications a. Bedside Mobility Assessment Tool (BMAT) score of 3-4 b. Patient is combative, uncooperative, or agitated c. Recent external urogenital surgery unless provider has an order d. Moderate/heavy menstruations e. Frequent incontinent stools and no fecal management f. Urinary retention
3.	Indications for use a. Bedside Mobility Assessment Tool (BMAT) score 1-2 b. Urinary incontinence and/or frequent urination c. Inability to use bedpan or urinal d. Pressure Injury Stage 3-4 (buttocks, genitals, or coccyx) e. Severe moisture associated skin dermatitis (MASD) f. Critically ill patient requiring urine output monitoring but does not meet need for indwelling urinary catheterization i. Education-Patient/Family: a. Educate patient/family regarding initiation of external urinary catheter use b. Instruct patient/family to report any signs and symptoms of urinary tract infection
Results	
As a result of this ongoing EBP initiative, the new policy, “Nurse-Driven External Urinary Catheter Protocol Nursing Standardized Procedure,” went live on December 9, 2024. We have recommended data collection to allow comparison of pre- and post-policy implementation immobility and deconditioning data, as well as BMAT scores, for patients receiving a male or female external urinary catheter.	
Conclusions	
This EBP initiative highlights successful interprofessional collaboration to implement the new policy “Nurse-Driven External Urinary Catheter Protocol Nursing Standardized Procedure.” We note the importance of data collection to compare pre- and post-policy implementation immobility and deconditioning data, as well as BMAT scores, for patients receiving a male or female external urinary catheter.	
While the literature review revealed limited direct evidence linking EFCs to immobility and deconditioning, it highlighted the importance of careful patient assessment and the role of nurses in preventing hospital-associated deconditioning for all patients receiving external urinary catheters.	
References	
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Surkan, M. J., & Gibson, W. (2018). Interventions to mobilize elderly patients and reduce length of hospital stay. <i>The Canadian Journal of Cardiology</i> , 34(7), 881-888.	
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