

Urinary Catheter Breakaway Device

This technology offers an independent accessory to the standard urinary catheter that allows the tube to disconnect when pulled. This device eliminates the risk of trauma and reduces demand on hospital resources.

What is the Problem?

Nearly one quarter of all hospitalized patients require a urinary catheter, which is about nine million patients in the U.S. each year. Urinary catheters are long, flexible tubes inserted into the bladder to drain urine. They are often used for patients with urinary retention, a condition in which the patient cannot pass urine independently. The standard indwelling catheter, known as the Foley catheter, has an inflatable balloon at the end of the tube. Once inserted into the bladder, the balloon is inflated to maintain the catheter's position. If the tube is pulled, this balloon is ripped out of the bladder, tearing the delicate tissue and damaging the surrounding anatomy. This often occurs in patients with altered mental status, usually a result of delirium, dementia, or heavy medication who are in a state of confusion or agitation. Each incidence of accidental catheter removal adds an average of 9.4 days to the patient's hospital stay, \$10,000 in treatment costs, and increased risk of infection. Current solutions include patient restraints, constant supervision, and other devices to protect from sudden pulls. However, these solutions are resource intensive, expensive, and are inconsistent. Our core needs statement is a way to address the risk of urethral trauma for patients with indwelling catheters so that urine can be safely drained from the bladder.

What is the Solution?

Our fully functional device is an independent accessory to the standard catheter that allows the tube to disconnect when pulled. This eliminates the risk of trauma and reduces demand on hospital resources. The tube can be easily reconnected for continuous use. When connected, the device preserves pressure in the catheter balloon and allows urine to flow. The device is sold as a separate accessory to the catheter and is completely independent of the catheter tube. The device is designed to fit into existing catheters which preserves the hospital's catheter supply chain and allows clinicians to continue using catheters they are familiar with. After a clinician places the standard catheter into a patient, they determine whether the patient is at increased risk of traumatic removal. If the patient is at increased risk then the clinician will have the option to install this breakaway device into the patient's existing catheter. This solution was selected because it satisfies all the core functions for clinicians and was driven by the most viable solution to the medical need given the complexity of competing directly with the widely adopted Foley catheter. Preserving the supply chain and allowing clinicians to continue using catheters they are familiar with enables easier support from our stakeholders. Since this solution is sold as a separate accessory, the hospital can also preserve its existing contracts with catheter manufacturers.

Technology ID

BDP 8406

Category

Device/Other
Selection of Available
Technologies

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What Differentiates it from Solutions Available Today?

None of the existing solutions can guarantee that the catheter will not be pulled or that trauma will be avoided. This solution can prevent trauma from sudden pulls on urinary catheters.

Patent Information:

[WO2023168313A2](#)