Researchers at the University of South Florida have developed an innovative User-Controlled Urination Management System aimed at assisting the evacuation of urine from the system of patients who have lost the ability to effectively control their bladder.

Urinary retention, urinary incontinence and bladder cancer are some of the many common types of urological conditions which handicap a patient with regard to efficient control of their bladder. More often than not such patients require the assistance of paramedical staff to help them pass urine, or to change catheter bags. Statistics show that chronic urinary retention (ischuria) significantly increases with age, with incidence probability rising up to 30% for men above 80 years old. Additionally, studies indicate that about 30% Americans suffer from Urinary incontinence. In the case of bladder cancer, a person might completely lose the ability for the bladder to function as a reservoir.

USF scientists have invented a means for patients suffering from all such conditions to effectively control urination. A small catheter, connected to a pressure transducer, is implanted in the bladder at a pump inlet. At the outlet, a second catheter runs to the urethra, past the site of obstruction. The transducer senses and correlates intra-bladder pressure to volume levels. On reaching a preset threshold, the system notifies the user who can toggle a switch which activates the pump. The fluid is thus pulled from the bladder into the urethra, thereby bypassing the portion of the pathway that is non-functional and allowing the patient to urinate normally. This would allow a patient greater freedom and confidence without the need for a urine bag or professional assistance.

**ADVANTAGES:**
- Fully user-controlled
- Can be worn or implanted
- Continuous bladder pressure monitoring
- Eliminate leakage and involuntary urination

**Bringing Effective Urination Management Control into the Hands of the Patient**

**Schematic Showing how the Proposed System Provides the Patient with Complete Control over Urination**

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