

## A Renewed Effort to Improve Bladder Health in Women

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Leslie Rickey, MD, MPH

Leslie Rickey, MD, MPH, Associate Professor of Urology, is celebrating the approval of a second five-year grant for the Prevention of Lower Urinary Tract Symptoms (PLUS) Consortium. Funded by the National Institute of Diabetes and Digestive and Kidney Diseases at the National Institutes of Health, this first-of-its-kind national large-scale study of bladder health in women aims to shed much needed light on how we might prevent these urinary tract conditions.

It was Dr. Rickey who recruited a multidisciplinary team in 2015 to make Yale one of the seven clinical sites for the PLUS Consortium. “The consortium takes a unique public health approach by seeking to identify risk and protective factors for bladder health and expand clinical and research efforts to include earlier intervention or prevention,” said Dr. Rickey. In the five years since, the national consortium’s diverse group of investigators—including epidemiologists, clinicians, and prevention scientists—has developed important tools to advance the study and promotion of bladder health.

Lower urinary tract symptoms (LUTS), such as incontinence, overactive bladder, and urinary tract infections, affect large portions of the population. “Seventy-five percent of women report at least one lower urinary tract symptom,” said Dr. Rickey, “while 20 percent of women age 30 and older report severe LUTS.” Yet many women regard LUTS as just an inevitable part of being female. “There’s a bit of danger in normalizing LUTS,” she said. “Women delay seeking care until it progresses to the point where it’s so advanced they can’t live their lives the way they want, and the

conditions might be harder to treat.”

The consortium started by developing a definition of bladder health, which will serve as a benchmark for the consortium’s own study and can become a reference point for other researchers and clinicians. The definition states: “Bladder health is a complete state of physical, mental, and social wellbeing related to bladder function and not merely the absence of LUTS. This function that permits daily activities, adapts to short-term physical or environmental stressors, and allows optimal wellbeing, e.g., travel, exercise, social, occupational, and other activities.”

In the consortium’s first study, women of different backgrounds and ages from 11 to 91 participated in focus groups across the country. “Many women said they were pleased that someone was investigating this issue because they felt bladder health was a ‘hidden’ topic that was never discussed with their healthcare providers or in general,” said Deepa Camenga, MD, MHS, a pediatrician and Associate Professor of Emergency Medicine. Dr. Rickey adds, “Information from this study has deepened our understanding of how girls and women learn and communicate about their bladders and has also informed the language and perspective of PLUS surveys.”

Another innovative aspect of the PLUS Consortium is its focus on community engagement and data dissemination. Shayna Cunningham, PhD, Assistant Professor of Community Medicine and Health Care at UConn, is a Yale PLUS Investigator who has helped spearhead Yale’s efforts to share the focus group results with the local New Haven community. The Yale group has also held

community sessions with local women to get feedback on the bladder health definition and aspects of the study design, as well as discuss their own concerns about bladder health.

A Bladder Health Survey that Dr. Rickey helped develop is currently being validated for use in a population study, and consortium members are also fine-tuning questionnaires for Latinx and adolescent populations. “I was really impressed that the PLUS Consortium is taking a life-course approach and including adolescents as a priority population from the beginning of its inception,” said Dr. Camenga, who is helping write the adolescent version of the questionnaire. “The life-course approach allows us to be more innovative in our science and more appropriate for the age group.”

Those questionnaires will play a crucial role in the PLUS Consortium’s longitudinal study of bladder health, which is expected to roll out in 2021. “We’re at an exciting point in the consortium,” Dr. Cunningham said. “We’ve done all this work to lay the foundation for this study.”

Dr. Rickey is looking forward to the study’s results and applying them to improve the health of patients not only locally in Yale clinics and New Haven communities, but also nationwide. “Similar to prediabetes, we want to identify ‘pre-LUTS’ in girls and women with early signs or risk factors,” she said. “If we can use the knowledge we gain to intervene and change what they’re doing and prevent their condition from progressing, we can have tremendous impact on both individual well-being and overall public health.” **Y**