



URINARY TRACT INFECTION (UTI) AND HYDROPHILIC CATHETERS

Bladder management with intermittent catheterization is associated with complications. The most severe and common one is UTI. Single-use, hydrophilic-coated catheters lower the risk of UTIs and have been reported as both convenient and the preferred choice for people who rely on intermittent catheterization as their bladder management.¹ As a result, hydrophilic-coated catheters are identified as a cost-effective contributor in UTI prevention.²

Single-use hydrophilic-coated catheters were developed in the early 1980s to address the long-term complications of intermittent catheterization seen from reusing non-coated plastic catheters. As reported by Wyndaele and Maes³ and Perrouin-Verbé et al.⁴, the majority of complications related to intermittent catheterization occurs after long-term use and as a result of repeated damage to the urethral wall. These long-term complications can, however, be prevented by use of hydrophilic-coated catheters.⁵⁻⁷

There is today extensive high-level evidence supporting hydrophilic catheters' ability to prevent urethral trauma^{1,8-11} and to reduce the risk of UTIs.^{1,10,12-17} For example, a risk reduction of hematuria between 43-48% has been reported.^{10,18} The UTI risk reduction associated with hydrophilic catheter varies between reports, and figures between 16-64%^{10,12-15} have been presented in recent meta-analyses. Also, observational data suggest a UTI incidence of 40%-60% for users of single-use hydrophilic catheters as compared to 70%-80% for users of non-hydrophilic catheters.^{6,19} This translates to an expected UTI risk reduction between 21-37% after real life long-term use.⁶

It should be noted that studies investigating UTI incidence are compromised by the facts that different UTI definitions are used, different populations are studied (e.g. neurogenic and non-neurogenic bladder), and different research perspectives are utilized (e.g. observational surveys, randomized controlled trials). To facilitate comparisons, standardized definitions of UTI are proposed.^{20,21} Also, there is still a need for more

research evidence about impact of different types of hydrophilic-coated catheters and less common complications associated with intermittent catheterization (e.g. epididymitis and urethral strictures).¹

It is recognized that the UTI risk is not the only important criterion to consider when choosing a catheter for intermittent catheterization.^{2,22} Patient experienced comfort, satisfaction, and ease of use, are all essential to ensure long-term adherence to intermittent catheterization.^{1,2} Poor adherence can be the cause of urinary and renal complications^{11,23} and that is why an individualized catheter choice is recommended standard practice.^{2,11,12,16,24} Hydrophilic catheters are known to be easy to use and comfortable.^{8,25} As a result, many users prefer hydrophilic catheters when they have the choice.^{1,8,26,27} Catheters that fit the needs and preferences of users also seem to improve the quality of life for people who rely on intermittent catheterization.²⁸

The total evidence in favor of hydrophilic catheters, as compared to non-hydrophilic, is the basis of conclusions on cost-effectiveness. So far, cost effectiveness for hydrophilic-coated catheters has been established in five different healthcare settings, proposing fewer UTIs and better quality of life during a life-time use with the catheter.^{14,29-32} This makes hydrophilic coated catheters a cost-effective contributor in catheter-related UTI prevention.²

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