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## Case Study: Transitional Care For a Patient with Benign Prostatic Hyperplasia and Recurrent Urinary Tract Infections

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### Abstract

Chronic urologic conditions, including benign prostatic hyperplasia, recurrent urinary tract infections, and urinary incontinence, are common in older adults. This article highlights the urologic and transitional care needs of an elderly, cognitively impaired male during and after an acute hospitalization. Collaboration between the patient, his family, the advanced practice nurse, primary care providers, and outpatient urology office are described. The importance of mutual goal setting and a focused plan for transitional care are discussed.

### Keywords

Prostatic hyperplasia; urinary tract infections; transitional care

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In the United States (U.S.), close to 50% of individuals over 65 years of age live with three or more chronic health conditions (Anderson & Horvath, 2002), and for many of these individuals, co-morbidity increases the likelihood of adverse events during an acute hospital stay and the transition to home post-discharge. Cognitive impairment (CI), including dementia and delirium, is one of the most common co-morbidities seen in an older adult population (Alzheimer's Association, 2012), and its presence compounds the burden of other chronic and acute health conditions, including a greater risk for morbidity, preventable re-hospitalizations, and decreased survival (Feil, Marmon, & Unuizer, 2003; Rudolph et al., 2010; Zuccala et al., 2003). Chronic urologic conditions, including benign prostatic hyperplasia (BPH), recurrent urinary tract infections (UTI), and urinary incontinence, are

also common in older adults (Litwin & Saigal, 2007), and may complicate or be the direct cause of an acute illness requiring a hospital admission.

To address the issues surrounding an increasingly elderly population and test strategies for reducing the adverse effects of hospitalization for cognitively impaired older adults, a study was conducted of an advanced practice nurse (APN)-led, evidence-based transitional care model (TCM) (Naylor et al., 1994, 1999, 2004). Additional information regarding the study design and outcomes have been described elsewhere (Bradway et al., 2012; Naylor et al., 2007). In this article, a case example focuses on the transitional care and urologic nursing needs of an elderly individual followed by APNs as part of the study (Naylor et al., 2010).

## The Case

An 83-year-old male was brought to the emergency department (ED), evaluated, and subsequently admitted to the hospital with a primary diagnosis of hematuria secondary to an acute UTI. He and his primary caregiver (CG, spouse) reported one day of worsening urologic symptoms (e.g., urinary frequency, hesitancy, dysuria) and early signs of delirium at home prior to the ED visit. The patient's past health history included dementia, depression, hypertension, stroke, diabetes, BPH, recurrent UTIs, and limitations in activities of daily living (e.g., bathing, assistance with dressing). He was taking five prescription medications daily and denied use of any over-the-counter medications, alcohol, tobacco, or illegal drug use. Prior to this hospitalization, the patient and CG noted that his depression/apathy led to non-adherence with prescribed BPH medications, and in turn, recurrent UTIs treated on an outpatient basis through the patient's urology office.

## Clinical Interactions

The patient's history of dementia and positive screen for delirium during his ED workup made him eligible for this study. The patient provided assent to participate, and his CG provided written informed consent to participate. Once enrolled, the APN met with the patient and CG at the hospital bedside and initiated implementation of the TCM standardized intervention protocol ([www.transitionalcare.info](http://www.transitionalcare.info)) adapted for the study population.

The protocol directed the APN to see the patient within 24 hours of enrollment into the study, daily during hospitalizations, and within 24 hours of hospital discharge. APNs also developed individualized care plans focusing on patient and family-centered goals, collaborated with primary and specialty care providers through accompanying the patient to office appointments and via telephone or electronic mail in the event of symptom exacerbation or adverse events, and were available to see patients and their CGs seven days per week (e.g., Monday through Friday: 8:00 a.m. to 8:00 p.m.; Saturday and Sunday: 8:00 a.m. to 12:00 p.m.) and available by phone, as needed.

During the patient's seven-day hospitalization, the APN assigned to this patient visited him at least once daily and collaborated with hospital staff and the patient/CG to identify and manage acute care needs and make plans for discharge. Significant acute issues addressed included 1) UTI treatment, 2) elevated blood glucose secondary to the UTI, 3) delirium

superimposed on pre-existing dementia with periodic behavioral disturbances (e.g., shouting out, anxiety, fearfulness), 4) history of non-adherence with BPH medications, and 5) CG burden and concerns regarding needs post-discharge.

The patient was discharged to home, and the same APN who followed the patient while hospitalized then visited the patient and CG at home within 24 hours post-discharge. The patient, CG, and APN mutually developed goals to support his transition from the hospital to home and avoid unnecessary re-hospitalization. For example, the patient and CG expressed a shared goal of improving their understanding of BPH and its relationship to urinary retention and recurrent UTIs; therefore, the APN focused on the connection between these conditions and improved urologic health. Over the course of eight weeks, the APN made eight home visits and 14 telephone contacts, and accompanied the patient/CG to one outpatient visit with his primary care provider (PCP) and one follow-up visit (and two telephone calls) with the patient's urology office.

Non-urologic issues requiring attention included patient/CG teaching regarding dementia and delirium, and optimizing blood glucose to improve diabetes mellitus management. Additional urologic issues, including strategies for improving adherence with BPH treatment, and addressing depression (because of its significant impact on adherence with BPH treatment) became a primary focus of the transitional care plan.

## Results of Clinical Interactions

During hospitalization, the patient received appropriate antibiotics for the UTI; the delirium resolved within 24 hours. A glucometer was obtained, and patient/CG education was initiated, including procedures for performing finger sticks and recording glucometer readings, as well as discussion of the impact of diet and exercise on diabetes, and the relationship between blood glucose, hemoglobin A1C ( $Hb_{A1C}$ ), and dietary intake. By the time the patient was discharged from the study, he had reached the desired  $Hb_{A1C}$  target.

Although the patient's depression was not resolved by the time the study intervention ended, the APN and patient/CG worked together to address how the depression and apathy were affecting the patient's adherence with suggested urologic treatment for BPH that in turn would likely have a significant impact on minimizing/avoiding future UTIs, episodes of delirium, and re-hospitalization. The patient agreed to continue to work with his primary care provider on treatment of his depression and to trial a medication suggested by the urologist to treat the BPH. During the course of the study intervention, the patient did not experience any further UTI symptoms; he was not re-hospitalized and was successfully discharged from the transitional care study intervention at nine weeks post-enrollment.

## Clinical Implications

This case highlights the course of an acute illness, hospitalization, and some of the transitional care needs for a patient with BPH and recurrent UTIs. Multiple co-morbid conditions, polypharmacy, limitations in functional status and cognition, treatment non-adherence, and CG burden place this patient at high risk of developing serious complications during the hospital-home transition. In addition, CI, including dementia, delirium, and

depression as seen in this case, complicated the care of this patient during the transition from one clinical setting to another. Caring for patients, such as the one described in this case, can negatively impact family CGs as well as the team of health care professionals involved in all phases of their care.

Important clinical considerations include a concerted effort and focus on interprofessional care, as well as communication and mutual goal-setting between numerous health care providers, patients (especially for patients with a history of acute and/or chronic cognitive impairment), and lay CGs. Identifying goals that are very specific to the individual patient/CG needs, such as avoidance of UTIs, delirium and re-hospitalization, and increased knowledge of the patient's urologic conditions, in this case, has shown to be a particularly strong driver of patient and CG engagement in improving health behaviors (Naylor, Stephens, Bowles, & Bixby, 2005). Moreover, attention to the stressful nature of transitions between the acute care setting and home, the importance of a health care liaison/advocate/teacher (such as the APN in this study), and the need to minimize fragmentation and support health care providers to look at the "whole picture" when patients are ill and recovering from an acute event are all essential to achieving positive, long-term clinical outcomes.

## Conclusion

As part of the study protocol, APNs were asked to comment on how they felt the patient might fare once the study intervention was completed. For the patient described in this case, the APN had a "good feeling" about future outcomes, noted that a "steady course, with stable, positive outcomes" was likely, and that the chance of long-standing behavioral changes and progress toward mutually developed goals was "very good." Although challenging and at times overwhelming, continued interactions and focused transitional care goals, and engagement and teamwork from the patient, CG, APN, hospital staff, primary care provider, and urology offices led to positive outcomes for the patient/CG, as well as the health care providers involved in their care.

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**Objectives**

1. Describe the urologic and transitional care needs of an elderly, cognitively impaired male during and after an acute hospitalization as presented in this case study.
2. Explain the importance of collaboration between the patient, caregiver, and all involved in the delivery of health care.
3. Discuss patient benefits of mutual goal setting and a focused plan of care.

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