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ORIGINAL ARTICLE

Patient navigation for overactive bladder improves access to care

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Abstract

Introduction and hypothesis Patients with overactive bladder (OAB) become discouraged with medication therapy because of the side effects, minimal subjective improvement and costs of therapy. With the implementation of a patient navigation pathway there is increased communication, subsequently leading to increased patient retention rates and utilization of third-line therapies.

Methods This was a quality improvement study carried out over a 17-month period comparing utilization of a navigation pathway versus patients without navigation. The data were obtained using an online database (PPS Analytics) to compare medication use, cystoscopy, urodynamic studies, use of third-line therapy, and return visits.

Results A total of 535 patients were included in the analysis and broken down into two respective groups. Group 1 were those placed on the navigation pathway and able to be reached via telephone ($n = 431$). Group 2 were those started on the navigation pathway who were not able to be reached via telephone, but were chart reviewed by a navigator ($n = 104$). Third-line therapy usage for groups 1 and 2 was 24% and 11% respectively. Return visits for additional OAB management for groups 1 and 2 were found to be 71% and 50% respectively.

Conclusion Patient retention levels and utilization of third-line therapies are significantly improved when utilizing a navigation pathway. With 24% of the patients included in this study opting for third-line therapy, this represents a 600% increase in third-line therapies over national averages.

Keywords Overactive bladder · Patient navigation · Care pathway

Abbreviations

AUA	American Urological Association
FPMRS	Female pelvic medicine and reconstructive surgery
OAB	Overactive bladder
SUFU	Society of Urodynamics, Female Pelvic Medicine & Urogenital Reconstruction
UDS	Urodynamic studies

Introduction

Overactive bladder (OAB) is a clinical diagnosis defined by the International Continence Society as urinary urgency, usually accompanied by frequency and nocturia, with or without urgency incontinence, in the absence of urinary tract infection or other obvious pathological condition [1]. Representing a significant proportion of the US population, idiopathic OAB affects an estimated 33 million adults [2]. After ruling out potential reversible etiologies, therapy for OAB can commence, with the ultimate goal of improvement in quality of life. According to American Urological Association (AUA) and Society of Urogynecology, Female Pelvic Medicine & Pelvic Reconstruction (SUFU) guidelines, clinicians should treat OAB in a stepwise manner, starting with the least invasive therapy [3]. First-line therapy consists of behavioral modification including fluid management, bladder training, and biofeedback. Second-line therapy consists of medications, such as anticholinergics and beta-3 agonists, to help with overactivity. Third-line therapy consists of minimally invasive procedures, such as InterStim®, peripheral tibial nerve stimulation (PTNS), and Botox injection.

Although it is best to trial conservative options, it is estimated that 66% of patients (21.9 million) do not respond to behavioral therapy [4]. Furthermore, 53% of patients (17.5 million) do not adhere to second-line therapies [5–7]. Often, this stems from adverse effects of the medications, minimal

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subjective improvement, and increasing costs of therapy. This represents a large subset of patients relying on minimally invasive third-line therapies. Although minimally invasive therapy can offer greater success and satisfaction, only 2.7–3.9% ultimately undergo third-line treatments [8, 9].

The national attrition rates for OAB patients after the second and third visits are estimated to be 31–40% and 13–18% respectively [8, 9]. These high attrition rates can be attributed to a multitude of factors: cost of treatments, patient frustration with therapy failures, lack of access to a physician in the community who offers third-line therapies, or inability for clinicians to allocate enough time to each individual patient.

Patient navigation via a flowchart is a simple method that allows a trained nurse navigator to contact patients, track progress, and make treatment decisions. These navigators have been used in other disease processes with favorable outcomes [10–12]. With the hopes of improving patient attrition rates and optimizing outcomes, we present a pilot patient navigation for OAB. We are reporting our individual practice outcomes as part of this pilot as we aim to assess the outcomes of patients placed on the navigation pathway.

Materials and methods

This represents a quality improvement study utilizing office data from 1 February 2017 to 1 July 2018 comparing patients with navigation activity versus patients without. The navigation pathway flow charts (Figs. 1, 2) were created and implemented by one female pelvic medicine and reconstructive surgery (FPMRS) urologist (JT). The practice of six physicians had their patients navigated along the same OAB algorithm. The FPMRS physician performed all third-line therapies for the group. Patients included were women over 18 years old who had the International Statistical Classification of Diseases and Related Health Problems (ICD-10) codes listed in Table 1 at initial consultation. Exclusion criteria comprised male patients, women under 18 years old, and ICD-10 codes listed in Table 2. Males were excluded from this data set owing to possible confounding factors, such as bladder outlet obstruction secondary to benign prostatic enlargement. The data were obtained using an online database (PPS Analytics) that pulls information from our practice management system (MedEvolve) and our electronic medical record (UroChart).

Patients were designated for navigation by two distinct methods. The most common method of enrollment was the primary clinician placing them on the navigation pathway at the first office visit. The additional enrollment method was used for patients who were placed on the navigators' list if they met the inclusion criteria. These patients were then reviewed by the navigator and if deemed appropriate, the patient's clinician was contacted via the electronic medical record to consider enrolling the patient in navigation. If the physician felt that the patient was suitable for navigation, enrollment ensued.

A nurse navigator employed from Nurse Navigator Solutions contacted patients. Based on our practice-wide defined OAB algorithm, patients were contacted at set intervals and moved along the OAB pathway based on their level of bother. There were two subgroups of patients used to obtain data. Group 1 included those placed on navigation pathways and able to be reached via telephone. Group 2 were those started on navigation pathways who were not able to be reached via telephone, and did not complete navigation.

The PPS Analytics database was used to monitor medication use, utilization of cystoscopy and urodynamics, attrition rates, and movement of the patient to third-line therapies. International Review Board approval was not required for this study because all survey data were collected retrospectively in a de-identified manner. In addition, the manuscript represents a review of a single practice experience with the implementation of this navigation pathway; thus, a pre-determined sample size was not calculated.

Results

A total of 535 patients seen in the clinic for OAB were included in the analysis. Two separate subgroups of patients were used to obtain data (Table 1). There were 431 patients in group 1 (placed on navigation pathways and able to be reached via telephone) and 104 patients in group 2 (started on navigation pathways who were not able to be reached via telephone, and did not complete navigation).

In groups 1 and 2, 43% and 23% of patients respectively were trialed on two medications. Also, 56% and 50% of patients in groups 1 and 2 respectively underwent cystoscopy or urodynamic studies. Third-line therapy usage in groups 1 and 2 was 24% and 11% respectively. 71% and 50% of patients in groups 1 and 2 respectively were found to have made return visits for additional OAB management.

Discussion

Overactive bladder is a complex disease process that presents a multitude of challenges in its management. OAB impacts on daily activities, such as work, travel, sexual function, sleep, and exercise. In addition, patients suffering from OAB are at an increased risk of falls, urinary tract infections, skin infections, and depression [13, 14]. Owing to high morbidity in both the USA and the world, it is vital to streamline and improve the treatment process [2, 15].

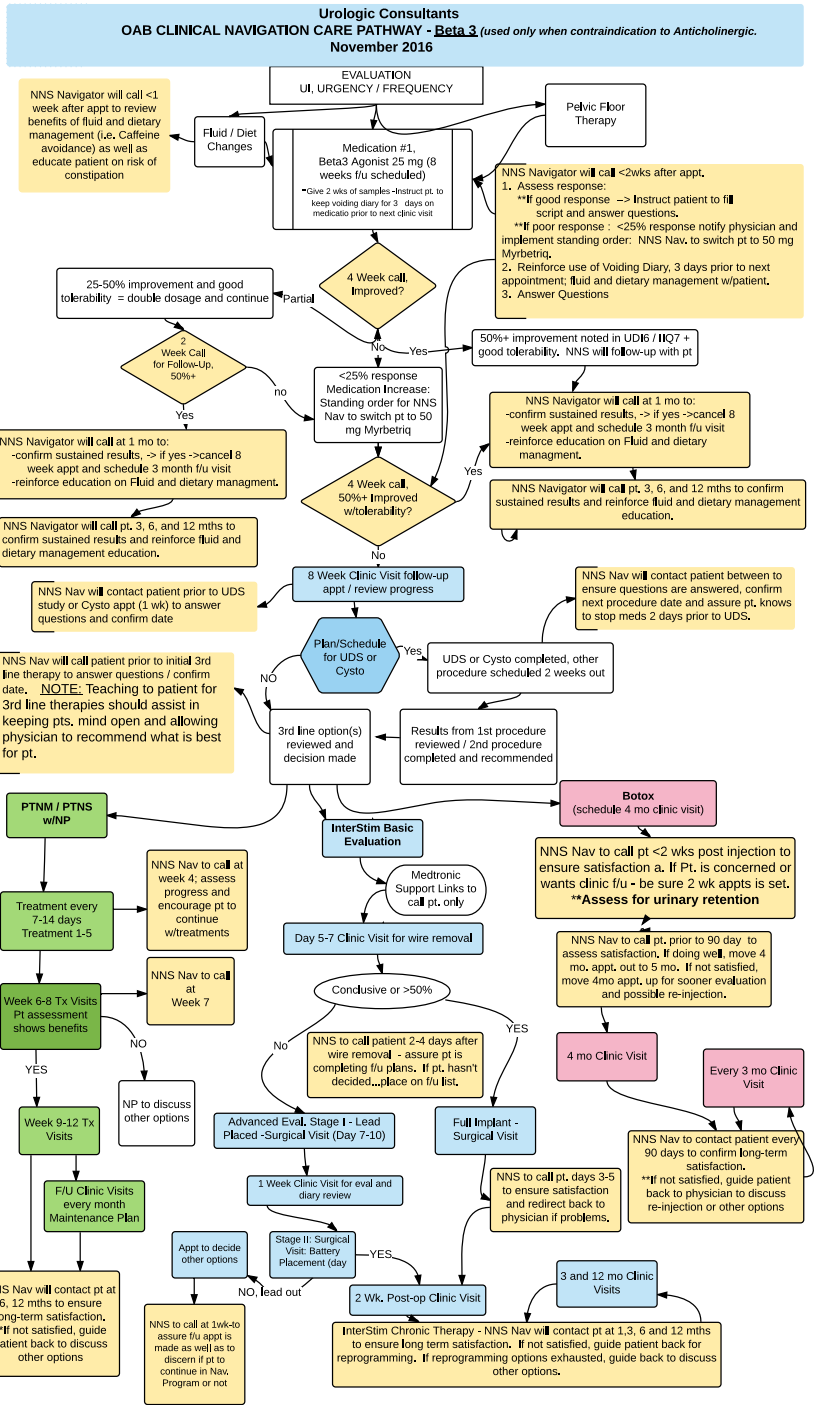

Fig. 1 Overactive bladder clinical navigation care pathway: beta 3 (used only when contraindications to anticholinergics)

Often, patients are discouraged because of a lack of improvement in symptomatology or the volume of office visits to optimize outcomes. As described by Schabert et al., greater than 45% of patients cite unmet treatment expectations as the reason for medication discontinuation. They concluded that healthcare providers are well aware of the need for patient education, but commonly lack the time and resources to deliver necessary consultation [16]. The authors called for external programs that foster patient support, while improving patient–provider interactions.

Based on the above data, we have presented a process for clinicians to utilize that would lead to an improvement in patient satisfaction. By using a clinical navigation pathway, patient retention levels were increased by 21%. Additionally, the amount of patients trialed on two medications was increased by 20%. This represents a large subset of patients who would have been lost to follow-up in traditional medical practice. In addition, the use of a patient navigation pathway allows a patient navigator to dedicate more time and resources to fostering better patient–provider

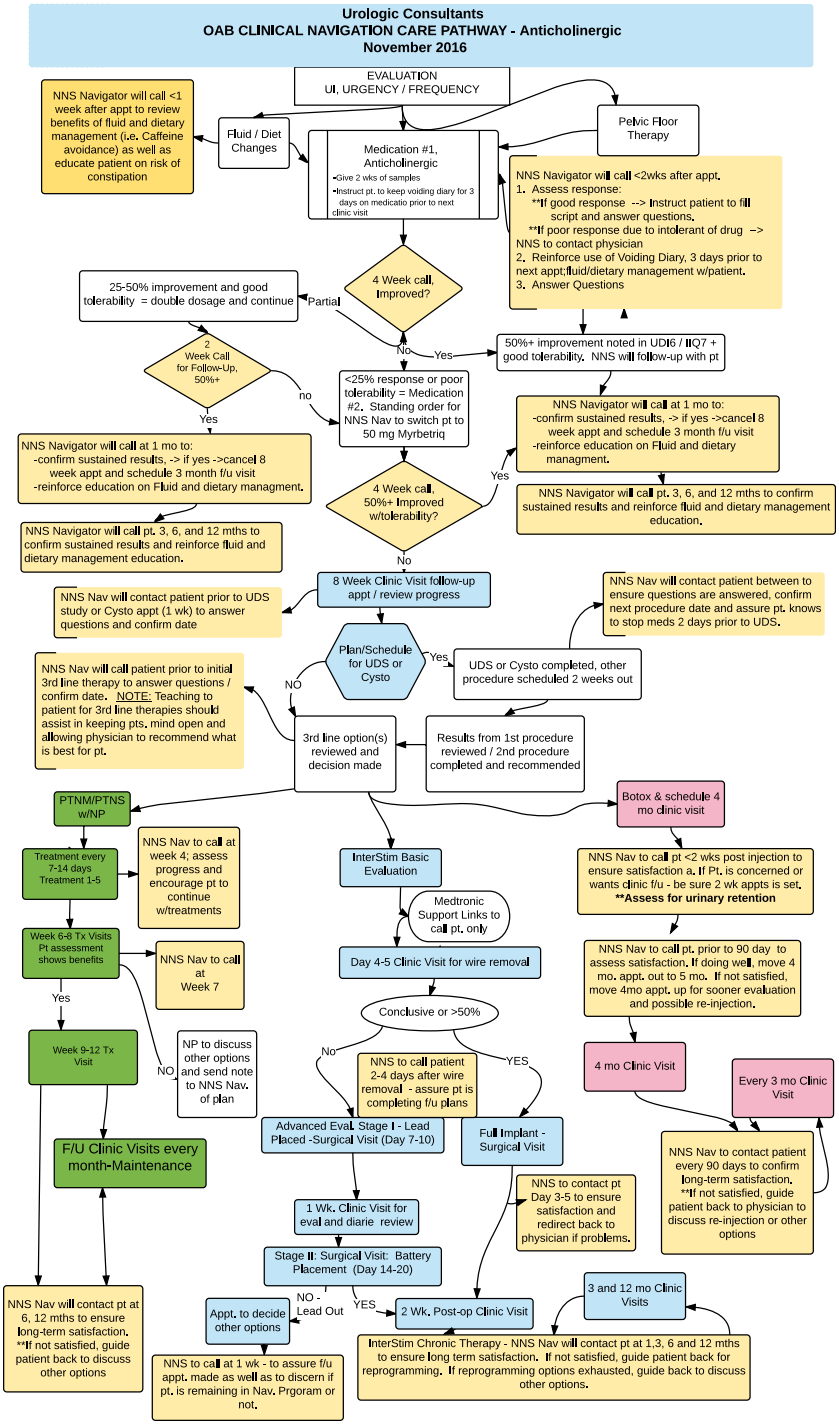

Fig. 2 Overactive bladder clinical navigation care pathway: anticholinergics

Table 1 International Statistical Classification of Diseases and Related Health Problems 10 codes for inclusion criteria

Has navigation activity	Has been reached	Patient count	Two medications, *n* (%)	Cysto/UDS, *n* (%)	Third line, *n* (%)	Return visit, *n* (%)
Yes	Yes	431	185 (43)	241 (56)	102 (24)	306 (71)
Yes	No	104	24 (23)	52 (50)	11 (11)	52 (50)

UDS urodynamic studies

Table 2 International Statistical Classification of Diseases and Related Health Problems 10 codes for exclusion criteria

Code	Criterion
R97.2	Elevated prostate-specific antigen
R39.81	Functional urinary incontinence
R35.8	Other polyuria
R33.9	Retention of urine, unspecified
R33.8	Other retention of urine
R33.0	Drug-induced retention of urine
N39.490	Overflow incontinence
N39.43	Post-void dribbling
N39.3	Stress incontinence
N39.0	Urinary tract infection, site not specified
N35.9	Urethral stricture, unspecified
N35.8	Other urethral stricture
N35.12	Postinfective urethral stricture, female
N35.119	Postinfective urethral stricture, male

interactions, an option that is not always available in a busy urology or urogynecology practice.

Furthermore, as genitourinary clinicians, we are in a unique position to offer surgical options when medical therapy does not produce the desired outcomes. With improved provider–patient communication and lower attrition rates, we are able to reach an increased volume of patients and educate them on alternative options for treatment. As discussed by Moskowitz et al., third-line therapy is often underutilized, especially by non-urologists [17]. In fact, it is estimated that only 5% of OAB patients ultimately undergo third-line therapy [5]. This could be secondary to multiple factors, but it can be presumed that attrition rates and lack of patient–provider communication play a large role in the underutilization of third-line therapies. With 24% of the patients included in this study opting for third-line therapy, this represents an increase in third-line therapies of over 600% compared with the national averages [8, 9]. Both of these strategies are paramount to optimizing outcomes and encouraging application of all available therapies.

This study does have its limitations. First, it is a single-practice experience utilizing a new algorithm, in which use of all third-line therapies by a single provider was already in place. In addition, the patients were tracked for a short period of time. We are not able to account for the possibility that patients may leave the practice in subsequent years. These limitations could be mitigated by a prospective study involving a larger subset of patients, over a longer period of time, in multiple practice settings. Despite these limitations, this study represents a unique, quality improvement project to assist in the optimization of OAB education and improve the quality of life of OAB patients.

Conclusion

Implementing navigation for patients suffering from OAB is beneficial to both patients and physicians. Patient retention levels are increased by 21% and utilization of third-line therapies was increased by over 600% when using a navigation pathway. This will ultimately lead to increased usage of third-line therapies, improved patient satisfaction, and optimized outcomes.

Compliance with ethical standards

Conflicts of interest There are no conflicts of interest in the publication of this article.

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