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# **New Options for Long-Term Care in the Management of Overactive Bladder**

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**A review of the clinical burden of overactive bladder and urinary incontinence in the long-term care population and discussion of new guidance to assist long-term care health professionals in appropriate assessment, diagnosis, and treatment**



Jointly sponsored by the University of Cincinnati College of Medicine, the University of Tennessee College of Pharmacy, The Institute for Johns Hopkins Nursing, and Princeton Media Associates

September 2006

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# Management of Overactive Bladder

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**Dr. Glassman:** Speakers bureau—Pfizer

**Dr. Ouslander:** Advisory board—Pfizer; Grant support—Novartis; Speakers

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## TARGET AUDIENCE

This activity is designed for long-term care medical directors and geriatricians, consultant pharmacists, and long-term care nursing directors.

## STATEMENT OF NEED

An estimated 35 million people suffer from overactive bladder (OAB) and 13 million individuals are affected with urinary incontinence (UI), both of which increase in prevalence with age. Also, over 50% of individuals in the long-term care setting have some form of OAB or UI. OAB and UI management with traditional therapies has been particularly challenging in the older population due to the increased risk of drug interactions and adverse effects in these patients. With the addition in recent years of several new agents and formulations in the antimuscarinic class, clinicians in the long-term care setting require education on the potential advantages of new antimuscarinics in improving outcomes and reducing adverse effects and drug-drug interactions among the older population, as well as on the specific importance of reducing central nervous system adverse effects in this population to prevent serious clinical complications (eg, falls and fractures) and associated healthcare resource use.

## LEARNING OBJECTIVES

After completing this activity, participants should be able to:

- Describe the burden of OAB, and consequent effects on overall health and quality of life
- Identify potential medical complications of OAB specific to the long-term care population
- Assess the efficacy and adverse effect profiles for available pharmacologic OAB treatment options
- Evaluate the possibility of drug-drug interactions with individual pharmacologic OAB treatment options in the long-term care population
- Implement an appropriate OAB screening and management algorithm

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**Dr. Rosenberg:** Consultant, Speaker, Advisor—Esprit Pharma

Ms. Marks and Dr. Tangalos disclosed no actual or potential conflicts of interest in relation to this activity.

Planning Committee Kay Weigand, University of Cincinnati College of Medicine Office of Continuing Education; Glen E. Farr, PharmD, University of Tennessee College of Pharmacy; Jackie Mosberg, The Institute for Johns Hopkins Nursing; and Mary Johnson and Randy Robbin, Princeton Media Associates, disclosed no actual or potential conflict of interest in relation to this activity.

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## GRANT SUPPORT

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# New Options for Long-Term Care in the Management of Overactive Bladder

Based on a presentation by Joseph G. Ouslander, MD, Wesley Woods Center of Emory University

Overactive bladder (OAB) and urinary incontinence (UI) are multifaceted and complex conditions, the symptoms and prevalence of which have placed them foremost among public health concerns. In the United States, an estimated 35 million people have OAB, and UI affects approximately 13 million individuals.<sup>1,2</sup> As the prevalence of both OAB and UI increase with age, this presents a considerable burden in the long-term care population. The symptoms of OAB and UI necessitate early and effective management, as these conditions have the potential to result in debilitating effects on physical functioning, as well as a considerable impact on patients' psychological well-being and quality of life. The treatment challenges presented by OAB and UI are compounded in the long-term care setting, as comorbid conditions managed with various pharmacologic agents are common in this population and increase the risk of adverse effects and drug interactions. Although multiple behavioral therapies exist and a number of effective anticholinergic agents with improved pharmacokinetic profiles and decreased potential for adverse effects and interactions have been approved in recent years, OAB and UI remain undertreated in the long-term care population.

## CLINICAL BURDEN OF OAB AND UI

The International Continence Society has identified OAB as a syndrome characterized by urinary frequency, urinary urgency, and nocturia.<sup>3</sup> Although almost 50% of patients with urinary urgency also experience incontinence,<sup>4</sup> these conditions are not identical. UI is part of the symptom complex of OAB, but refers specifically to an involuntary leakage of urine.<sup>5</sup> There are several types of UI, and the type must be identified before appropriate treatment can be initiated.

UI is classified as either transient or persistent. Transient incontinence, a relatively rare occurrence in the long-term care population, is sudden in onset and may be caused by potentially reversible factors such as illness or medications that increase urinary volume or affect urinary functioning. The causes of persistent incontinence, which is more common in this population, are multifactorial and may improve following comprehensive assessment and treatment.<sup>6</sup> Persistent incontinence is further classified as one of the following: urge incontinence, stress incontinence, overflow incontinence, or functional incontinence.

The most common type of UI in the long-term care population is urge incontinence, characterized by leakage of urine that occurs with a sudden, urgent need to urinate and is often caused by neuromuscular, contractile, or sensory bladder abnormalities. Stress incontinence is distinguished by the leakage of small amounts of urine coincident with increases in intra-abdominal pressure due to coughing, laughing, or sneezing. Stress incontinence is more common in women, especially following childbirth, and may manifest in older individuals as constant leakage caused by anatomic changes, such as weakening of the sphincter. Some degree of incomplete bladder emptying causing urinary retention is common in the long-term care population. Overflow incontinence occurs when patients with acontractile bladders or obstruction leak urine periodically due to pressure on the distended bladder. This is relatively uncommon, but is important to recognize in the long-term care setting, as recurrent urinary infections and kidney damage are potentially serious complications of chronic urinary reten-

tion. Functional incontinence is predominantly related to an impaired ability to reach a toilet due to reduced mobility and/or cognitive function. In the long-term care setting, it is common for a patient to experience several overlapping types of UI; for example, a patient with urge incontinence may also have limited mobility, contributing to functional incontinence.

Both OAB and UI are a substantial burden in the long-term care setting—the estimated prevalence of OAB in this population is 50%<sup>7,8</sup> and the US Centers for Medicare & Medicaid Services (CMS) estimates that the prevalence of UI in US nursing homes is 59%.<sup>1</sup> In addition, UI is the second most frequently cited reason for admission of elderly individuals to long-term care facilities.<sup>5</sup> Despite the considerable prevalence of UI and OAB in this population, documentation of any type of toileting plan for patients in US nursing homes remains at only 32%.<sup>9</sup> The undertreatment of these conditions in the long-term care population can lead to comorbidities such as urinary tract infections, skin irritation, and falls resulting in injury, which have been found to occur more frequently in patients with OAB and UI.<sup>10</sup> A 2000 study, in which 25% of 6049 community-dwelling women with a mean age of 78.5 years reported at least 1 incidence of urge incontinence per week, revealed that urge incontinence was independently associated with an increased risk of falls and nonspinal, nontraumatic fractures in these women.<sup>11</sup> Researchers suggested that urinary frequency, nocturia, and the act of rushing to the bathroom to avoid incontinence episodes increased an individual's risk of both falling and fall-associated fractures.<sup>11</sup>

OAB and UI can also profoundly affect quality of life. The National Overactive Bladder Evaluation program found that patients who received a diagnosis of OAB with UI had significantly worse quality-of-life scores across physical health, mental health, depression, and sleep measures when compared with age-matched controls.<sup>12</sup> Additional studies discovered decreased quality-of-life scores in patients with OAB across other areas, including physical role, bodily pain, general health, vitality, social functioning, and emotional role.<sup>13</sup> Clinical interviews have revealed that the primary concerns among patients with UI were not physical, but instead focused on coping with condition-associated embarrassment and interference with lifestyle caused by incontinence.<sup>14,15</sup>

In the past, the economic burden of OAB and UI has been thought to impede implementation of comprehensive treatment protocols. These conditions are time consuming and difficult to manage, which translates to the added expense of additional staff time, pads and undergarments, and pharmacologic agents. Approximately \$3 billion is spent annually on labor, laundry, and supplies to manage incontinence in US long-term care facilities.<sup>16</sup> A 2003 examination of clinical outcomes and costs associated with implementing an incontinence management protocol in a nursing home discovered that 6 months of incontinence management resulted in an overall cost of \$86,436, 46% of which was attributed to direct labor costs.<sup>17</sup> The most costly component of direct labor was toileting, with an estimated expense of \$36,755.<sup>17</sup> The total daily cost of incontinence management was \$573 for 63 patients.<sup>17</sup>

## DIAGNOSTIC EVALUATION OF SYMPTOMS

In 2005 the CMS released an updated Federal Tag 315 (Tag F315) as part of a federally mandated process for care of all residents in Medicare- or Medicaid-certified nursing homes, requiring that facilities appropriately evaluate residents for incontinence. Facilities can be cited by CMS surveyors for lack of physician supervision and lack of medical director involvement in establishing appropriate incontinence management. The new guidance for surveyors combined with the established consequences for noncompliant facilities may result in more aggressive assessment, diagnosis, and treatment of OAB in the long-term care setting.<sup>18</sup>

Tag F315 now defines incontinence as a void with little or no control, a classification that will likely increase the number of diagnosed cases of UI in long-term care facilities. Once a patient has been diagnosed, the facility is required to diagnose and document the specific type of UI, as well as provide comprehensive treatment options for the individual patient. Several tools designed to facilitate the diagnosis of UI and OAB are frequently used by providers in this setting, including the CMS Resident Assessment Instrument,<sup>19</sup> the American Medical Directors Association Clinical Practice Guideline on Incontinence,<sup>6</sup> and the CMS Guidance to Surveyors—Long-Term Care Facilities, which was updated in 2004.<sup>20</sup>

**Perform a Basic Assessment.** The key areas that comprise a thorough evaluation of long-term care residents with UI remain consistent across guidelines and recommendations issued by regulatory agencies and national associations, beginning with a basic patient assessment that includes a focused history and physical examination. The history should focus on past evaluations and treatment for incontinence, medication use, lower urinary tract symptoms, and the degree of both associated with symptoms. A bladder record or voiding diary—which should be implemented upon resident admission—can be used to track frequency and circumstances of incontinence, and assist in differentiating the type of incontinence. An evaluation of the patient's functional and cognitive abilities in relation to toileting should also be performed.

A targeted physical examination should include a pelvic and rectal exam. A urinalysis for patients who have recent onset of UI or who are suspected of having a symptomatic urinary tract infection, and a post-void residual (PVR) determination in patients at risk for elevated PVR should also be performed. A PVR determination is warranted in patients with diabetes or neurological conditions, such as a stroke, multiple sclerosis, or a spinal cord injury; men who have not had a prostate resection; and patients with a history of urinary retention or elevated PVR.

**Identify Reversible Factors.** Among the potentially reversible and treatable causes of UI and OAB in long-term care are delirium and restricted mobility, both of which may have a significant, although temporary or alterable, effect on continence. Other potentially reversible and treatable causes of incontinence include acute urinary retention due to medication effects, urinary tract infection, and inflammation in women due to atrophic vaginitis or atrophic urethritis. Fecal impaction is a condition that can cause pressure on the bladder outlet and sensory enervation of the bladder and urethra, resulting in symptoms of UI and OAB. If present, fecal impaction must be treated appropriately before consideration of specific therapy for UI or OAB. Polyuria is another condition associated with UI and is frequently caused by factors such as caffeine intake, uncontrolled diabetes, or lower extremity edema.

A resident's medication regimen should be carefully considered when evaluating urinary dysfunction, as OAB and UI may present as adverse effects of certain pharmacologic agents. Rapid-acting diuretics can cause or exacerbate UI or OAB. Narcotics and anticholinergics are among the drugs that contribute to poor bladder contractility and may cause some degree of urinary retention, which in turn can contribute to urinary frequency. Some psychotropic drugs have anticholinergic effects, and may also interfere with mobility and mental status, which may contribute to functional incontinence. Cholinesterase inhibitors, which are commonly used in the treatment of dementia, can increase the contractility of the smooth muscle in the gastrointestinal tract and potentially in the bladder; such effects can theoretically cause or contribute to symptoms of OAB.

**Determine the Need for Further Evaluation.** A number of conditions with the potential to contribute to urinary dysfunction require further evaluation prior to implementation of a treatment plan. Recurrent symptomatic urinary tract infections warrant a urologic evaluation to determine if a structural abnormality of the urinary tract is contributing to symptoms. Recent pelvic surgery or severe pelvic prolapse, which can be detected on a superficial pelvic exam, should prompt consideration of gynecologic or urologic evaluation. Sterile hematuria in a patient with a new onset of incontinence symptoms may be a manifestation of an underlying tumor, and further evaluation should be considered. Patients with urinary retention or refractory OAB incontinence symptoms who have failed to respond to prior therapy should also be considered for further evaluation by an experienced urologist or gynecologist.

**Select Treatment.** Dependent upon diagnostic findings and type of incontinence, several treatment options exist for patients with UI and OAB, including nonspecific measures, behavioral interventions, and pharmacologic therapy. Patient and family preference for treatment must be considered prior to initiation of therapy.

Each facility should take the necessary steps to impress upon its staff the importance of following recognized protocols to ensure appropriate assessment and treatment of UI and OAB in long-term care residents. To assist staff in meeting mandated expectations of care, each facility should consider establishing their own internal protocol and standards (Table).

## NONSPECIFIC MANAGEMENT MEASURES

A number of nonspecific measures are options for management of UI and OAB symptoms. Patient education plays a vital role for some individuals; increased knowledge regarding bladder and bowel habits and fluid intake modification may be extremely useful in selected patients. Patients with mobility impairment may benefit from the use of appropriate toilet substitutes, including hand-held urinals for men and bedside commodes. Although undergarments and pads are helpful for many patients, these items should be used when needed for comfort, dignity, and skin protection, and in a manner that does not foster dependency. If patients are able to toilet themselves with or without assistance, a trial of a toileting program should be initiated, rather than relying on pads or undergarments when the use of these items may not be necessary.

Indwelling catheters are another nonspecific measure to control OAB and UI, but a chronic indwelling catheter is only indicated in patients with significant, irreversible urinary retention that is causing recurrent infection and/or renal dysfunction; skin lesions or surgical wounds that cannot heal due to incontinence; and when requested for patient

comfort or preference. Although chronic indwelling catheters are not appropriate for OAB or urge incontinence in most circumstances, they may be used in palliative care situations if patients are uncomfortable being toileted.

## BEHAVIORAL INTERVENTIONS

Behavioral interventions to treat UI and OAB are frequently used in long-term care populations as they are noninvasive and are not associated with adverse effects or complications. Bladder training and prompted voiding are among the behavioral therapies that have demonstrated efficacy in treating incontinence.

**Bladder Training.** A multifaceted behavioral intervention, bladder training is a practice that combines a number of techniques aimed to assist the patient in urinating at less frequent intervals and according to a predetermined schedule, rather than in response to the urge to void. This practice requires attention to fluid intake and bowel habits, education about and implementation of urge suppression techniques, and pelvic muscle rehabilitation, including pelvic floor muscle exercises—also known as Kegel exercises—taught with or without biofeedback. Bladder training requires learning, motivation, practice, and incorporation into daily life. Up to 70% of elderly incontinent nursing home residents are unable to transfer onto a toilet independently, and 57% have low scores on a 10-point mental status examination.<sup>21</sup> Therefore, the prevalence of functional difficulties in long-term care residents renders this treatment method relevant to only a small proportion of the population.

**Prompted Voiding.** The behavioral intervention that relies most consistently on caregiver involvement is prompted voiding, which involves providing the patient with prompts to void every 2 hours. In addition, the caregiver should provide toileting assistance, if requested by the patient, and offer social interaction and verbal feedback, in addition to encouragement of fluid intake. Prompted voiding reduces the severity of incontinence by about 50%, with 25% to 40% of frail nursing home patients experiencing a decrease in incontinence from 3 or 4 episodes per day to 1 or fewer.<sup>22,23</sup> A 3-day trial of prompted voiding is usually adequate to identify patients who will respond well to this treatment.<sup>23</sup> Prompted voiding is not generally effective at night and can be disruptive to sleep. Care of incontinence at night should therefore be individualized in the long-term care setting.

## PHARMACOLOGIC THERAPY

Clinical guidelines affirm that pharmacologic agents play an important role in the management of incontinence and symptoms associated with OAB.<sup>6,20</sup> In the long-term care population, combination therapy with behavioral interventions is usually necessary, because most patients depend on toileting assistance. Treating such patients with pharmacologic therapy in the absence of systematic toileting assistance is not considered optimal management.

The mainstay of pharmacologic treatment are the anticholinergics, a class of drugs that prevent the binding of acetylcholine to muscarinic receptors, thereby decreasing the incidence of involuntary muscle contractions and improving the capacity of the bladder to store urine.<sup>6,24</sup> Until recently, the anticholinergic class was comprised of only 2 drugs—various formulations of oxybutynin and tolterodine—however, 2004 saw the approval of 3 additional agents: darifenacin, solifenacin, and trospium chloride.

**Efficacy.** The efficacy of anticholinergic medications for the treatment of urge incontinence in OAB and UI has been well documented in younger and older community-dwelling adults. Little data exist on the

**Table. Suggested Internal Measures to Maintain OAB/UI Standard of Care in LTC**

- Facility leadership should make the establishment of a continence management program a priority
- Identify a program leader, typically a nurse, and then provide that individual with the knowledge, skills, and time to oversee the program
- Create an interdisciplinary team to develop and refine straightforward policies and procedures for incontinence management at the facility
- Use simple, standardized assessment and monitoring forms to facilitate clear and complete documentation of patient care
- Develop individualized treatment plans and document the rationale for treatment
- Use principles of continuous quality improvement to monitor and improve outcomes
- Document all efforts carefully within the patient record

OAB = overactive bladder; UI = urinary incontinence; LTC = long-term care.

efficacy of these agents in elderly long-term care residents. A meta-analysis of 32 mostly double-blind clinical trials involving 6800 subjects found that anticholinergic medications improved incontinence and voiding frequency, cure and improvement of UI and OAB, and bladder capacity.<sup>25</sup> However, all studies also noted relatively large placebo effects.<sup>25</sup> Data in the literature have illustrated that most anticholinergic drugs have been shown in clinical trials to be equally efficacious in both younger and elderly patients.<sup>25-31</sup> Across the literature, decreases in incontinence episodes range from approximately 50% to 80% with only minor variability among pharmacologic options.<sup>25-31</sup>

Several factors should guide the decision to use pharmacologic therapy in the management of OAB in the long-term care population, including the degree and bother of symptoms; the resident's responsiveness to toileting; the pharmacologic properties of the drugs; drug cost; and, perhaps the largest concern, the risk of adverse effects given the prevalence of comorbidities in this population.

**Adverse Effects.** Despite proven effectiveness, the use of drug therapy to treat UI and OAB tends to be low. A descriptive, cross-sectional database analysis of 8995 incontinent nursing home residents found that only 8.7% of residents rated as having the most severe incontinence—Level 4, as identified by the Minimum Data Set 2.0 criteria for rating continence—were treated with antimuscarinic drugs.<sup>32</sup>

Adverse effects associated with the use of anticholinergics have been widely documented in clinical trials. Although these effects are usually mild, any adverse effects are of concern in the long-term care population. Potential adverse effects associated with this class of drugs include dry eyes, blurred vision, dry mouth, tachycardia, dyspepsia, constipation, urinary retention, dizziness, somnolence, and impaired cognition. Dry mouth is the most common adverse effect, with an incidence ranging from 10% to 75% across all medications.<sup>25-31</sup> The efficacy of immediate-release oxybutynin, in particular, has been hampered by adverse effects; some clinical trials have reported an incidence of dry mouth in up to two thirds of subjects.<sup>24</sup>

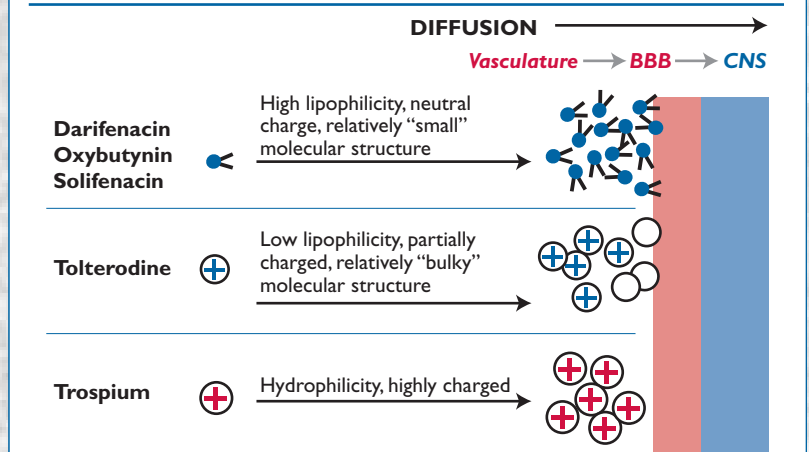
**Pharmacokinetics.** The pharmacologic properties of individual anticholinergics require consideration prior to therapy initiation. The half-

life of these drugs varies, with the longest exhibited by solifenacin and trospium. Generally, the amount of an anticholinergic excreted in the urine is low, with the exception of trospium, which is predominantly excreted renally. It has been reported that some agents are partly unmetabolized with a significant amount of active metabolite when they are excreted, which may have a direct local effect on bladder overactivity.<sup>33</sup> There is some variability in the selectivity of these drugs for the M-3 muscarinic receptors and M-2 receptors that are predominant on the bladder, with darifenacin being the most selective. Although the clinical significance of this selectivity is uncertain, darifenacin appears to have no clinically meaningful effects on cognitive function in older people with no cognitive impairment.<sup>27</sup>

The methods by which anticholinergics are metabolized are an important concern in the long-term care population because of the high prevalence of comorbidities and polypharmacy. Drugs metabolized by the cytochrome P450 3A4 (CYP3A4) system have the potential to contribute to drug–drug interactions—which could have a significant effect in this population. Trospium is the only anticholinergic that is not metabolized by the CYP3A4 system, and is instead predominantly excreted by the kidneys.

Most anticholinergic agents also have the potential to cross the blood–brain barrier into the central nervous system (CNS) due to molecular size and lack of charge (Figure). Darifenacin, oxybutynin, and solifenacin are relatively small, neutrally-charged, highly lipophilic molecules that can theoretically cross the blood–brain barrier and enter the CNS fairly easily.<sup>34,35</sup> Tolterodine is intermediate in size, and is partially charged, presenting a modest risk of CNS involvement.<sup>34,35</sup> Trospium is a large, highly-charged molecule, and is least likely to penetrate the blood–brain barrier.<sup>34,35</sup> However, the penetrability of these drugs through an abnormal blood–brain barrier—which is likely present in many long-term care residents—is unknown. Theoretically, drugs that more readily cross this barrier may have more central nervous system adverse effects, such as drowsiness, dizziness, and memory loss.

**Figure. Predicted CNS Penetration of Anticholinergics**



CNS = central nervous system; BBB = blood–brain barrier.  
Todorova A, et al. *J Clin Pharmacol*. 2001;41:636-644. Dimpfel W. *Urol*. 2000;163(4):226.

## CONCLUSION

The prevalence of OAB and UI in the long-term care population requires intensive steps by long-term care facilities to ensure all residents receive appropriate assessment, diagnosis, and treatment of these conditions. Many facilities are currently lacking toileting plans for affected patients, thereby increasing the risk of complications associated with OAB and UI and decreased quality of life. Nursing homes in the United States will be under increased scrutiny with respect to continence management as a result of the new Tag F315 and the revised surveyor guidance. Facility leadership support and knowledge of appropriate treatment measures will be critical in implementing quality improvement activities designed to enhance the management of these conditions. ■

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## Long-Term Care Commentary

Eric G. Tangalos, MD, Mayo Clinic College of Medicine

Many elderly patients are eventually admitted to a long-term care facility because they and their families are unable to provide the level of care necessary for an individual with untreated overactive bladder (OAB) and urinary incontinence (UI) in the home setting. Due to progressive frailty, immobility, and dementia in this population, urinary dysfunction becomes more manifest with time and remains challenging to manage, even in a skilled nursing facility. As healthcare professionals, we do our best to treat OAB and UI; however, we are working with a population that has lost strength, power, and control in this area. In addition, these patients are likely being treated for multiple comorbid conditions with a cabinet full of medications.

Given these considerations, it should come as no surprise that 59% of US nursing home patients have a positive score on the Centers for Medicare & Medicaid Services UI measures.<sup>1</sup> It is critical that appropriate management of these conditions occurs, and how we choose to do so has an impact on the patient, the care-

givers, and the facility. Multiple guidelines exist to assist those managing patients with OAB and UI. In 2005, Federal Tags 315 and 316 were combined into the new Tag 315, which mandates use of interpretive guidelines, a new investigative protocol, and compliance/noncompliance criteria to ensure appropriate assessment, diagnosis, and behavioral/pharmacologic treatment for all long-term care residents with UI.

The long-term care environment is not static—new anticholinergics and additional anticholinergic formulations have a receptive audience and are well tolerated by the right patient at the right time. However, studies of newer agents to treat OAB and UI are needed in long-term care patients with multiple comorbidities, especially among those with cognitive impairment, before widespread use will occur in these facilities. These agents combined with appropriate toileting programs have the potential to significantly improve quality of life for some of our most frail and vulnerable patients in the long-term care environment. ■

## Reference

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## Clinical Commentary

Matt T. Rosenberg, MD, Mid-Michigan Health Centers

Primary care physicians are in an ideal position to discuss urinary dysfunction with older patients—a population in which overactive bladder (OAB) and urinary incontinence (UI) are prevalent—and provide subsequent clinical evaluation. In addition, the approval within the past few years of improved treatment options for these conditions has resulted in less complicated treatment decisions, permitting primary care physicians to initiate a pharmacologic treatment plan without referral to a specialist.

Behavioral modification—the least invasive and most conservative of OAB and UI treatment measures—can lessen symptoms when used alone and can have a lasting impact in combination with medication. Empiric treatment of OAB and UI without extensive testing is now an appropriate, safe, and effective option due to recently approved agents that are efficacious and more tolerable than their first-generation counterparts. Some of the more recently approved anticholinergic agents do not cross the blood–brain barrier or interfere with the cytochrome P450 system, allowing providers to avoid drug–drug interactions with other medications

in a patient's regimen or to choose medications that will not affect cognitive function.

A 4-week trial is usually sufficient to determine if a medication will be effective. If desired efficacy is not present after 4 weeks, then dose titration or switching medications should be employed before a patient is referred to a specialist. When titrating, it is important to balance efficacy with tolerability and let the patient's preference guide the process. If goals for the patient have not been met at the end of a medication trial, it is appropriate to consider a new drug. Referral for a patient is typically necessary only when an abnormality is observed—such as hematuria, a large residual, or when the patient is refractory to pharmacologic intervention—in order to rule out any other pathological process.

Recent advances in pharmacologic treatment of OAB and UI provide an encouraging outlook for patients with these conditions. Older patients can now receive individualized, effective treatment with less potential for adverse effects or drug interactions. ■

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