Wednesday, April 8, 2015
Anaheim, CA

Educational Partner:
Session 4: Overactive Bladder: Individualized Management to Bridge the Quality Gap

Learning Objectives

1. Understand the importance of participating in national quality initiatives and identify quality measure(s) that apply best to clinical settings and patients’ needs
2. Develop a patient-centered approach to the diagnosis of overactive bladder (OAB), proactively questioning patients at risk for bladder problems
3. Individualize the management of OAB patients utilizing guideline-and evidence-based approaches to provide optimal care, reduce risk of central and peripheral adverse events, and improve patient quality of life

Faculty

M. Ray Painter, MD, FACS
President
Physician Reimbursement Systems
Denver, Colorado

Dr. M. Ray Painter is a board certified urologist and cofounder and current president of Physician Reimbursement Systems, Inc. (PRS), a firm in Denver, Colorado, that assists physicians with complicated coding and payment concerns. Dr. Painter is also the cofounder and president of PRS Urology Service Corporation, and previously established a solo urology practice in Grand Junction, Colorado, which grew into a four person practice under his guidance and leadership.

Dr. Painter has authored coding and reimbursement articles for *Urology Times*, Urology PracticeToday.com, and the *Journal of Urology*, among other publications. He lectures nationwide on these topics and on the future of the health care industry. A fellow of the American College of Surgeons, Dr. Painter holds active memberships in numerous professional societies.

Matt T. Rosenberg, MD
Director
Mid Michigan Health Centers
Jackson, Michigan

Dr. Rosenberg earned his medical degree at the University of California, Irvine. He trained in general surgery at UC Irvine and in urologic surgery at Brigham and Women’s Hospital, Boston, before changing fields to general practice. Dr. Rosenberg now practices in Jackson, Michigan, and serves as medical director of Mid-Michigan Health Centers. He is on staff at Allegiance Health, Jackson, where he served as the chief of the department of family medicine from 2003 to 2006.

Dr. Rosenberg has a special interest in the medical management of urologic diseases. He has authored and coauthored articles appearing in *International Journal of Clinical Practice*, *Journal of Urology*, *BJU International*, *Urology*, and other peer reviewed journals. He is currently the section editor of urology for the *International Journal of Clinical Practice* and a reviewer for several other national and international journals. He has presented his original research at many national meetings, including those of the National Institutes of Health, American Urological Association, the Sexual Medicine Society of North America, and the European Society for Sexual Medicine.
Faculty Financial Disclosure Statements
The presenting faculty reported the following:
Dr M Ray Painter has nothing to disclose.
Dr Matt Rosenberg serves on the speaker board of Astellas and is on the medical advisory boards of Astellas, Bayer, and Janssen.

Education Partner Financial Disclosure Statement
The content collaborators at Rockpointe have nothing to disclose.

Suggested Reading List


12:30 – 1:45pm

Overactive Bladder: Individualized Management to Reduce Adverse Events and Bridge the Quality Gap

SPEAKERS
Matt T. Rosenberg, MD
M. Ray Painter, MD, FACS

Presenter Disclosure Information

The following relationships exist related to this presentation:

► M. Ray Painter, MD, FACS has nothing to disclose.
► Matt T. Rosenberg, MD serves on the speaker board of Astellas and is on the medical advisory boards of Astellas, Bayer, and Janssen.

Off-Label/Investigational Discussion

► In accordance with pmICME policy, faculty have been asked to disclose discussion of unlabeled or unapproved use(s) of drugs or devices during the course of their presentations.

Drug Listing

The following drugs are discussed in this presentation:

- Darifenacin (Enablex)
- Fesoterodine (Toviaz)
- Mirabegron (Mybriq)
- Oxybutynin ER (Ditropan XL)
- Oxybutynin TDS (Oxytrol)
- Oxybutynin 10% gel (Gelnique)
- Oxybutynin IR (Ditropan)
- Solifenacin (Vesicare)
- Tolerodine ER (Detrol LA)
- Tolerodine IR (Detrol)
- Trospium Chloride (Sanctura XR)
- Trospium Chloride (Sanctura)

Faculty Speakers

M. Ray Painter, MD, FACS
President
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Matt T. Rosenberg, MD
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Mid Michigan Health Centers
Jackson, MI

Learning Objectives

- Understand the importance of participating in national quality initiatives and identify quality measure(s) that apply best to clinical settings and patients’ needs
- Develop a patient-centered approach to the diagnosis of OAB, proactively questioning patients at risk for bladder problems
- Individualize the management of OAB patients utilizing guideline- and evidence-based approaches to provide optimal care, reduce risk of central and peripheral adverse events, and improve patient quality of life

Definition of OAB

OAB is a syndrome or symptom complex defined as: “Urgency, with or without urgency incontinence, usually with frequency and nocturia.”

Urgency is the key symptom of OAB.

Urgency is defined as “a sudden compelling desire to void, which is difficult to defer.”

Definition of STRESS INCONTINENCE

Stress urinary incontinence is the complaint of involuntary leakage on effort or exertion, or on sneezing or coughing.

Prevalence of OAB Symptoms

1 in 3 US adults ≥ 40 years of age reported symptoms of OAB at least “sometimes”

Risk Factors for OAB

- Increasing Age
- Diabetes Mellitus (30%-70%)
- Neurogenic (multiple sclerosis (50%-80%), Parkinson’s disease, cerebrovascular disease, spinal cord injury
- Obesity
- Multiple pregnancies
- Surgery (prostate and pelvic surgeries)

OAB and Other Disorders

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Millions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic Bronchitis</td>
<td>5</td>
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<tr>
<td>Diabetes</td>
<td>10</td>
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<tr>
<td>Ulcer</td>
<td>15</td>
</tr>
<tr>
<td>Asthma</td>
<td>20</td>
</tr>
<tr>
<td>Hay Fever/Allergic Rhinitis</td>
<td>25</td>
</tr>
<tr>
<td>Heart Disease</td>
<td>30</td>
</tr>
<tr>
<td>Chronic Sinusitis</td>
<td>35</td>
</tr>
<tr>
<td>Overactive Bladder</td>
<td>40</td>
</tr>
<tr>
<td>Articular Symptoms</td>
<td></td>
</tr>
</tbody>
</table>

OAB is Prevalent, Undiagnosed, and Undertreated

- 33.3 million US adults are said to have OAB
- Less than 50% will discuss with health care provider
- Only a minority will be diagnosed and offered treatment
- A smaller proportion will stay on therapy

Barriers to OAB Care

- Patients
- Clinicians
Patients Don’t Discuss Bladder Issues with the Provider

• Embarrassment
• Fear of invasive procedures or need for surgery
• Perception of lack of available and effective treatment

What Do Patients Say?

• I have had this problem and did not know who to talk to
• My previous doctor told me it was part of aging
• It became a problem only when my diaper overflowed
• I thought it was normal as my sister and mother had this
• You mean going to the bathroom every hour is not normal?
• I am too embarrassed

Coping Strategies

To cope with symptoms of OAB, many patients employ elaborate behaviors aimed at hiding and managing urine loss

- Restrict fluid intake
- Try to urinate on a schedule
- Bathroom mapping
- Wear dark, baggy clothes to hide wet spots or wear diapers
- Try to keep dry clothing in case of wetting accident
- Use diapers or other absorbent products

Potential Misconceptions in OAB

• OAB is a natural part of aging
• Diagnosis and treatment of genitourinary disease is to be determined by a specialist
• Diagnosis and treatment is outside the realm of the PCP setting

What Do Doctors Say?

• No time
• Treatments are not all that effective
• If it was a problem for the patient, he or she would bring it up
• Your bladder/penis/kidney won’t kill you, your heart will, so I need to focus

Identifying OAB Takes a Village

- Patient
- Primary Care
- Specialist
The PCP Role in Partnership with the Urologist and the Urogynecologist

- Identification and initial evaluation of OAB starts in the office of the PCP
- There is a significant amount of medically related LUTS
- The diagnosis of OAB does not require an extensive or complicated evaluation

Why Should We Care?
Quality of life
Quality measures

The Top Ten Medical Conditions That Are Too Embarrassing for Patients to Discuss with Their Family Physicians

1. Impotence
2. STDs
3. Physical and Sexual Abuse
4. Prostate Problems
5. Incontinence of Bladder or Bowels
6. Emotional Problems like Depression
7. Eating Disorders
8. Alcohol or Drug Abuse
9. Birth Control and Sex (especially teens)
10. Menopause

Why Quality Measures?
- To improve the quality of care
  - Feedback on performance for continuous improvement
- To understand the quality care
  - Population-level surveillance
- To assess physician competence
  - Maintenance of certification
- To reward physicians and practices that provide high-quality care
  - Financial incentives

Urinary Issues-related Quality Measures

<table>
<thead>
<tr>
<th>Measure Name</th>
<th>Source</th>
<th>Application</th>
<th>Quality Strategy Aim</th>
<th>Priority</th>
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<tbody>
<tr>
<td>% female patients aged 65 years old and older with a diagnosis of urinary incontinence</td>
<td>AGS, PCPI, NCQA</td>
<td>Ambulatory/Office-based Care</td>
<td>Prevention and Treatment of Leading Causes of Mortality</td>
<td></td>
</tr>
<tr>
<td>% female patients aged 65 years old and older who were assessed for the presence or absence of urinary incontinence within 12 months</td>
<td>AGS, PCPI, NCQA</td>
<td>Ambulatory/Office-based Care</td>
<td>Person- and Family-centered Care; Prevention and Treatment of Leading Causes of Mortality</td>
<td></td>
</tr>
</tbody>
</table>
Evaluation of Urinary Issues

What does the PCP need?

Medicare Advantage Plan Five-star Ratings: Results

• Rating for the measure C20 “members with urine leakage who discussed this issue with their physician and received treatment within 6 months”:
  – In 2012, 1.8 stars
  – In 2013, 2.3 stars
  – In 2014, 1.9 stars

The Reality Is:
We Can Do Better in...

• Providing and reporting quality of care in the treatment of OAB
• Diagnosing and treating OAB

Urinary Issues-related Quality Measures

<table>
<thead>
<tr>
<th>Measure name</th>
<th>Source</th>
<th>Application</th>
<th>Quality strategy aims priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>% female patients aged 65 years and older with a diagnosis of urinary incontinence who had a trial of behavioral therapy documented</td>
<td>AGS, PCP®, NCQA</td>
<td>Ambulatory Office-based Care</td>
<td>Prevention and Treatment of Leading Causes of Mortality</td>
</tr>
<tr>
<td>% Medicare members 65 years old and older who reported having urine leakage in the past six months and who reported that urine leakage made them change their daily activities or interfered with their sleep</td>
<td>NCQA, HEDIS</td>
<td>Managed Care</td>
<td></td>
</tr>
<tr>
<td>Long-stay nursing home care: percent of low-risk residents who lost control of their bowel or bladder</td>
<td>RTI International</td>
<td>Skilled Nursing Facilties/Nursing Homes</td>
<td>Person- and Family-centered Care; Prevention and Treatment of Leading Causes of Mortality</td>
</tr>
</tbody>
</table>

Clinicians’ Performance with Urinary Issues-related Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Eligible Professionals</th>
<th>Eligible Professionals Who Reported</th>
<th>Eligible Professionals Who Reported Satisfactorily</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urinary Incontinence: Assessment of Presence or Absence of Urinary Incontinence in Women Aged 65 Years and Older</td>
<td>546,125</td>
<td>2,300</td>
<td>38.9%</td>
</tr>
<tr>
<td>Urinary Incontinence: Characterization of Urinary Incontinence in Women Aged 65 Years and Older</td>
<td>125,927</td>
<td>2,392</td>
<td>67.3%</td>
</tr>
<tr>
<td>Urinary Incontinence: Plan of Care for Urinary Incontinence in Women Aged 65 Years and Older</td>
<td>125,927</td>
<td>2,627</td>
<td>65.1%</td>
</tr>
</tbody>
</table>

The Reality Is: What the PCP Need?
Keep It Simple
Keep It Effective
Keep Us from Killing Our Patients


It All Comes Down to “Normal”

- How many times a day does a normal person need to urinate?
- What is the normal volume of urine voided per micturition?
- Is it normal for older people to get up during the night to use the bathroom?

Function of the Bladder

- Normal Function
  - Storage capacity (300 – 500 mL of fluid)
  - Adequate pressure urinary storage (bladder)
  - Adequate outlet resistance (sphincter)
  - Empty to completion (minimal residual)
  - Adequate bladder contraction
  - Absence of outlet obstruction
- Abnormal Function (failure to store or empty)
  - Voiding frequently small amounts
  - Uncontrollable urge (urgency)
  - Incomplete emptying
  - Heatlancy, poor stream

Function of the Prostate

- Normal Function
  - Does not grow (enlarge) into the urethra; thereby, allowing unobstructed flow
  - It is intimately associated with the continence mechanism
  - Produces fluid for seminal emission
- Abnormal Function (failure of flow)
  - Obstruction of urinary flow (“obstruction”; “retention”)
  - Sphincter damage/usually surgical (“stress incontinence”)

Lower Urinary Tract Symptoms (LUTS): Bladder or Prostate?

<table>
<thead>
<tr>
<th>Storage (bladder)</th>
<th>Voiding (prostate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urgency</td>
<td>Hesitancy</td>
</tr>
<tr>
<td>Frequency</td>
<td>Poor flow/weak stream</td>
</tr>
<tr>
<td>Nocturia</td>
<td>Intermittency</td>
</tr>
<tr>
<td>Urge incontinence</td>
<td>Straining to void</td>
</tr>
<tr>
<td>Stress incontinence</td>
<td>Terminal dribble</td>
</tr>
<tr>
<td>Mixed incontinence</td>
<td>Prolonged urination</td>
</tr>
<tr>
<td>Overflow incontinence</td>
<td>Urinary retention</td>
</tr>
</tbody>
</table>

It is all about VOLUME VOIDED and FLOW

- It's all about VOLUME VOIDED and FLOW

The LUTS Algorithm

LUTS
- Focused HPE
  - Likely OAB/BPH/SI
  - provisional OAB/SI
- Providers Treatment? (Yes)
  - Treat for BPH
    - Effective
    - Ineffective
  - Assess and Treat OAB/SI
    - Effective
    - Ineffective
- Refer

LUTS
- Likely OAB/BPH/SI
- Unlikely OAB/BPH/SI
- Treat or Referral
- Watchful Waiting

Defining LUTS

| Frequency | Patient considers that he/she voids too often by day. Normal is <8 times per 24 hours |
| Nuduria | Waking to urinate during sleep hours. Considered a clinical problem if frequency is greater than twice a night |
| Urgency | Sudden compelling desire to pass urine that is difficult to defer |
| UI | Involuntary leakage accompanied by, or immediately preceded by, urgency |
| OAB "Wet" | OAB with UI |
| OAB "Dry" | OAB without UI |
| Warning Time | Time from first sensation of urgency to voiding |

OABq

- 3 of 8 queries assess bother related to urgency
- During the past four weeks, how bothered?
  - Q 2: A sudden urge to urinate with little or no warning
  - Q 3: A sudden urge to urinate with little or no warning
  - Q 7: An uncontrollable urge to urinate
- Scored on Likert scale: 1 (not at all) – 6 (very great deal)
- Validated and reliable
- Responsive to therapy in wet and dry subjects

Simple Questions the PCP Can Ask

| Simple Screening Questions for Evaluation of OAB and Incontinence |
| Do you get sudden urges to go to the bathroom that are so strong you can't ignore them? (OAB) |
| How often do you go to the bathroom? Is it more than 8 times in a 24-hour period? (OAB) |
| Do you have uncontrollable urges to urinate that result in wetting accidents? (urge incontinence) |
| Do you leak urine on the way to the bathroom? (urge incontinence) |
| Do you frequently get up two or more times during the night to go to the bathroom? (OAB) |
| Do you avoid places you think won't have a nearby restroom? (OAB or urge incontinence) |
| When in an unfamiliar place, do you make sure you know where the restroom is? (OAB or urge incontinence) |
| Do you leak urine when you laugh, cough, or sneeze? (stress incontinence) |
| Do you use absorbent pads to keep from wetting your clothes? (stress incontinence or urge incontinence) |

The Evaluation of LUTS

- Medical and surgical history
- Medications
- Focused physical examination
- Voiding diary
- Labs
- Urodynamics, cystoscopy, and diagnostic renal and bladder ultrasound **not necessary** in initial workup of uncomplicated patients

Examples in the Medical and Surgical History that May Cause LUTS

- Diabetes (new onset or poorly controlled)
  - Causing polyuria/polydipsia
- Congestive heart failure
  - Nighttime fluid mobilization
- Recent surgery
  - Catheterization during surgery, immobilization, constipation from pain medications

A recent onset of the symptoms may provide a clue to the etiology

Medications as a Cause of LUTS

| Sedatives | Confusion, secondary incontinence |
| Alcohol, Caffeine, Diuretics | Diuresis |
| Anticholinergics | Impair contractility, voiding difficulty, overflow incontinence |
| α - Agonists | Increased outlet resistance, voiding difficulty |
| β - Blockers | Decreased urethral closure, stress incontinence |
| Calcium-Channel Blockers | Reduce bladder smooth-muscle contractility |
| ACE Inhibitors | Induce cough, stress urinary incontinence |
| First generation antihistamines | Increase outlet resistance |
| Cholinesterase inhibitors | Precipitate urge incontinence |
| Opioids | Direct effect, constipation |

The Focused Physical Examination

- Abdominal
  - Tenderness, masses, distension
- Neurological
  - Mental and ambulatory status, neuromuscular function
- Genitourinary
  - Meatus and testis
  - Vaginal mucosal integrity, urethral mobility, bladder prolapse
- Rectal
  - Tone
  - Prostate size, shape, nodules, and consistency

Laboratory Tests

- Urinalysis
  - Infection, blood
  - The urine is not an adequate screener for diabetes since the blood sugar must be above 180 mg/dL before it spills into the urine
- A random or fasting blood sugar
  - Diabetes
- Prostate-specific antigen
  - Prostate-specific, not cancer-specific, but can be used in screening
  - Excellent as a surrogate marker for prostate size
  - PSA is more accurate than a DRE when estimating prostate size
  - A PSA of 1.5 ng/mL equates to a prostate volume of at least 30 grams (mL)

The Purpose of the Voiding Diary

- Identifies voiding frequency and voided volume
- Differentiates behavioral vs LUTS pathology
  - Voiding frequently
    - excessive volume (behavioral)
    - small amounts as a result of always being in a rush (behavioral)
    - small amounts (OAB)
- Alerts patients to habits/opportunities to modify
- Can monitor effect of treatment

The Post-void Residual (PVR) Is Only Needed in Select Patients

- The fear of patients going into retention when treated for OAB leaves many patients untreated
- If PVR residual is less than 50 mL, causing retention when treating OAB is extremely unlikely
  - FACT: most PCPs will not have bladder scanner and will not want to catheterize a patient
  - FACT: most PCPs will have access to an ultrasound unit and can order a post-void residual
- Use common sense, if you are treating the patient for voiding too frequently (OAB) and they have not voided in 6-8 hours or have a sense to void but cannot, have them contact you

Indications for Referral

- History of recurrent urinary tract infections or other infection
- Pelvic irradiation
- Microscopic or gross hematuria
- Prior genitourinary surgery
- Elevated prostate-specific antigen
- Abnormal genital exam
- Suspicion of neurological cause of symptoms
- Meatal stenosis
- History of genitourinary trauma
- Pelvic pain
- Uncertain diagnosis or patient choice

The LUTS Algorithm

- LUTS
- Focused HPE
  - PSA
  - Blood Sugar
  - OAB/PH/SI
- Desires treatment?
  - Likely OAB/PH/SI
  - No:
    - Treatment
  - Likely OAB/PH/SI
  - Yes
    - Provisional OAB/SI
    - Provisional BPH
    - Treat for BPH
    - Ineffective
      - Ineffective
        - Refer
        - Provisional OAB/SI
        - Effective
          - Continue Meds
          - Effective
            - Continue Meds

**Treatment Now Can Be Empiric**

- No identifiable etiology
- No reversible causes
- Is patient bothered enough for treatment?
  - No, watchful waiting
  - Yes, consider algorithm
    - Weak flow – think Prostate
    - Poor voiding volumes – think Bladder
    - Incontinence – think Bladder/Outlet

**Treatment Guidelines for OAB**

- Behavioral treatment
- Pharmacologic management
- Referral for specialist management/surgery

**Behavioral Therapy for OAB**

- Bladder training
- Pelvic floor Exercises – biofeedback

**Behavioral Therapy for OAB**

- Education reinforcement
- Diaries

**Habit Changes: Managing Bladder Health**

<table>
<thead>
<tr>
<th>Technique</th>
<th>Lifestyle Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diets, Fluid, bowel, and weight management</td>
<td>Smoking cessation</td>
</tr>
<tr>
<td>Urination at a fixed interval that avoids the symptom</td>
<td>Useful for urgency and urinary incontinence not associated with frequency</td>
</tr>
<tr>
<td>Good option in patients with cognitive impairment</td>
<td></td>
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</tbody>
</table>

**How to Perform Pelvic Floor Muscle Exercises**

- Explain location of perineal muscles (anal area)
- Contract perineal muscles, squeezing upward through the pelvis
- Sit or stand with your legs apart, don’t hold your breath
- Hold the contraction for 10 seconds, then gradually relax

The exercises can be performed anywhere

**Additive Effect of Combining Behavioral and Drug Therapy**

![Additive Effect Graph](chart.png)

- Behavioral Therapy
- Combined Therapy
- Drug Therapy
- Combined Therapy

**References**


**Pharmacologic Management**

- 8 antimuscarinics, 6 are oral and 2 are topical
- One β-3 adrenergic agonist
- Choice is based on efficacy, dose flexibility, adverse-event profile, drug interactions, and patient preferences
- Trying several medications before referral is appropriate

### Antimuscarinics – Immediate Release

<table>
<thead>
<tr>
<th>Drug</th>
<th>Brand Name</th>
<th>Dose</th>
<th>Dosing</th>
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</thead>
<tbody>
<tr>
<td>Oxybutynin IR</td>
<td>Ditropan</td>
<td>5 mg</td>
<td>2-4 times per day</td>
</tr>
<tr>
<td>Tolterodine IR</td>
<td>Detrol</td>
<td>1-2 mg</td>
<td>Twice per day</td>
</tr>
<tr>
<td>Trospium Chloride</td>
<td>Sanctura</td>
<td>20 mg</td>
<td>Twice per day</td>
</tr>
</tbody>
</table>


### Antimuscarinics – Extended Release

Extended Release Medications Have a Better Tolerability than Their Immediate Release Counterparts

<table>
<thead>
<tr>
<th>Drug</th>
<th>Brand Name</th>
<th>Dose</th>
<th>Dosing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Darifenacin</td>
<td>Enablex</td>
<td>7.5 mg</td>
<td>Daily</td>
</tr>
<tr>
<td>Feferinodine</td>
<td>Toviaz</td>
<td>4 mg</td>
<td>8 mg Daily</td>
</tr>
<tr>
<td>Oxybutynin ER</td>
<td>Ditropan XL</td>
<td>5 – 30 mg</td>
<td>Daily</td>
</tr>
<tr>
<td>Oxybutynin TDS</td>
<td>Oxytrol</td>
<td>3.9 mg</td>
<td>Twice per week</td>
</tr>
<tr>
<td>Solifenacin</td>
<td>Vesicare</td>
<td>5 mg</td>
<td>10 mg Daily</td>
</tr>
<tr>
<td>Tolterodine ER</td>
<td>Detrol LA</td>
<td>2, 4 mg</td>
<td>Daily</td>
</tr>
<tr>
<td>Trospium Chloride</td>
<td>Sanctura XR</td>
<td>90 mg</td>
<td>Daily</td>
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</tbody>
</table>


### Important Distribution Site for Antimuscarinics

- Insular body
- Lacrimal gland
- Salivary glands
- Heart
- Gallbladder
- Stomach
- Colon
- Bladder (detrusor muscle)


### Common Side Effects of Antimuscarinics

- Dry mouth
- Constipation
- Headaches
- Blurred vision

Clinicians should manage constipation and dry mouth before abandoning effective antimuscarinic therapy.

**Balance of efficacy and tolerability** should be considered and discussed with each patient.

### Contraindications, Warnings, and Precautions for Antimuscarinics

**Contraindications**
- Urinary or gastric retention
- Uncontrolled narrow-angle glaucoma

**Warnings and Precautions**
- Angioedema of face, lips, tongue and/or larynx
- Clinically significant bladder outlet obstruction
- Decreased gastrointestinal motility
- Treated narrow-angle glaucoma
- May have CNS effects (i.e. somnolence)
- Use with caution in patients with myasthenia gravis

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### β-3 Adrenergic Agonists

<table>
<thead>
<tr>
<th>Drug</th>
<th>Brand Name</th>
<th>Dose</th>
<th>Dosing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mirabegron</td>
<td>NYBETIQ</td>
<td>25 mg</td>
<td>Daily</td>
</tr>
</tbody>
</table>

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### Common Side Effects of Mirabegron

- Hypertension
- Nasopharyngitis
- Urinary Tract Infections
- Headaches

The patient must decide if the efficacy of the medication is worth the side effects.

*Balance of efficacy and tolerability* should be considered and discussed with each patient.

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### Contraindications, Warnings, and Precautions for Mirabegron

**Contraindications – NONE**

**Precautions and Warnings**
- Not recommended for use in severe uncontrolled hypertensive patients
- Use with caution in patients with urinary retention with bladder outlet obstruction
- Use with caution in patients taking antimuscarinic drugs for overactive bladder
- Use with caution in patients taking drugs metabolized by CYP2D6 as mirabegron is a moderate inhibitor of CYP2D6

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### Follow-up on the Patient Treated for OAB

- Review the patient after 2-4 weeks
  - Be prepared to titrate as studies show >50% will increase dose if given the option
  - Be prepared to try different agent or class
- Consider checking PVR to ensure volume not increasing significantly in the complex patient
  - Studies on medication usage in males show safety and minimal increase in post-void residual over time of follow-up
  - The risk of urinary retention (although low) is highest during the first 30 days of treatment

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### High Discontinuation Rate for Patients on OAB Therapy

**Study Design:** UK study. Overall drug discontinuation for all women prescribed anticholinergic medications (n=29,369).

Unadjusted cumulative incidence of discontinuation (95% CI).

- **Discontinuation Rate (%) From Anticholinergics for OAB (95% CI)**
  - Months to Discontinuation
  - From Discontinuation
  - Days to Discontinuation

**Cumulative incidence of discontinuation was determined using the Kaplan-Meier method.**


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<table>
<thead>
<tr>
<th>Study Duration (y)</th>
<th>Cumulative Inc (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>1</td>
<td>62.5 (59.2-65.8)</td>
</tr>
<tr>
<td>2</td>
<td>71.0 (67.6-74.3)</td>
</tr>
<tr>
<td>3</td>
<td>77.2 (73.7-80.7)</td>
</tr>
<tr>
<td>4</td>
<td>82.7 (79.1-86.3)</td>
</tr>
<tr>
<td>5</td>
<td>87.5 (83.7-91.3)</td>
</tr>
</tbody>
</table>

**Study Duration:** 5 years.
Improving Patient Adherence by Addressing Expectations

- Effects on urgency
- Limiting incontinence
- Decreasing nocturia
- Improved quality of life
- Tolerability of medication

Options for the Unsatisfied Patient

- Sacral Nerve Stimulation
- Percutaneous Tibial Nerve Stimulation
- Onabotulinum Toxin A

Take Home Message

- Overactive bladder doesn’t take your life — it *steals* it from you
- The untreated 85% is in the PCP office
- OAB can be diagnosed and treated in the primary care office efficiently, effectively, and safely

Treating OAB Takes a Village

- Be willing to discuss his/her symptoms
- Make recommended lifestyle changes
- Adhere to prescribed medication

- Assess OAB
- Set realistic patient expectations/goals
- Provide initial treatment of OAB
- Refer appropriate patients

- Treat refractory or complicated OAB
- Educate PCPs to better manage OAB

Reporting in Practice

2 PRS Measures to Report

- 48 (NQF 0098) Urinary Incontinence: Assessments of presence or absence of urinary incontinence in women 65 years and older
- 50 (QF 0100): urinary incontinence: plan of care for urinary incontinence and women age 65 years and older
Build PQRS OAB Reporting into Your Workflow

1. Add the appropriate questions to your patient history questionnaire
2. Develop detailed questions for patients with a problem to be discussed documented by assistant, PA, and/or physician
3. PE as needed
4. For claims reporting, submit Measure with the appropriate visit once per year per patient
5. Audit charts periodically to determine if all eligible patients have been reported