Out of Control: The Aging Bladder

R. Jeannine McCormick, MSN, CRNP
UAB Continence Clinic
Disclosure Statement:
I have no relevant financial or non-financial relationships to disclose.

The Kirklin Clinic
Learning Objectives:

Participants should be able to:

- Discuss pathology, clinical presentation and diagnosis of common types of urinary incontinence
- Describe primary and advanced management options for common types of urinary incontinence in a long term care setting
- Recognize that loss of bladder control has significant impact on quality of life, self-esteem and socialization
The "Normal" Bladder

Hollow, distensible, muscular organ
Reservoir of urine
Capacity ~400-600 mL
Desire ~200 mL
Normal void ~300 mL

Normal PVR is 100 mL or less
Voiding Patterns

- Under age 60
  - Every 4-5 hours
  - No waking at night to void

- Over age 60
  - Every 3-4 hours
  - Awakens once or more at night to void
Normal Kidney Function

• Filter waste products
  • Nephron – functional unit
  • Glomerulus – initial filtration
    • No protein filters through
    • Filters ~125 mL/min
      • 99% reabsorbed

• Functions
  • Fluid and electrolyte balance
  • Hormone production
    • Red blood cell formation
      • Erythropoietin
    • Blood pressure regulation
      • Renin
    • Bone mineralization
      • Calcitriol
Ureters

- Conduit from the kidney to the bladder
  - ½-inch diameter
  - Retroperitoneal
  - Peristaltic waves
  - Obstruction
    - Renal calculus
    - Renal colic
Urethra

• From the bladder to the external environment
• 2 sphincters
  • Internal – involuntary
  • External – voluntary
• Female
  • 3-5 cm
• Male
  • 6-7 cm

Ideal Urinary Performance

- Able to store a reasonable amount of urine at a pressure lower than kidney filtration pressure (25-40 cm H₂O)
  - For as long as convenient for an individual
- Rapid, on-demand emptying
Innervation of the Lower Urinary Tract (LUT)

The Normal Micturition Cycle

Bladder pressure

Storage phase

Emptying phase

Bladder filling

First sensation to void

Normal desire to void

Bladder filling

Normal Filling/Storage

- Spinal reflex mechanisms activate sympathetic and somatic pathways to the outlet
- Spinal reflex mechanisms activate sympathetic pathways to parasympathetic ganglia
- Tonic inhibitory systems in the brain suppress sympathetic excitatory outflow to the bladder
Normal Voiding

• Inhibition of sympathetic and somatic pathways
• Activation of spinobulbospinal parasympathetic reflex pathway passing through a micturition center in the rostral pons

Pathophysiology of Overactive Bladder

- Neurogenic
- Myogenic
- Combination
- Unknown

Urgency and Detrusor Activity

- Micromotion phenomena occur in the bladder wall
  - Local contractions can occur without an increase in tension or pressure
  - Local contractions can stimulate fast-stretch receptors, causing urge
- Urge, therefore, theoretically can occur in the absence of pressure increases
- “[T]he distinction between [urgency with or without detrusor overactivity] could be artifactual based on a misunderstanding of fundamental bladder wall processes”

Coordinated myogenic contractions and increased bladder pressure

Partial denervation alters smooth muscle

↑ Excitability
↑ Ability for activity to spread among cells

Coordinated myogenic contractions and increased bladder pressure

M2 and M3 Receptors

- Human bladder smooth muscle contains primarily M2 (66%) and M3 (33%) subtypes.
- Activation of M3 receptors evokes direct smooth muscle contraction (primary stimulus for bladder contraction).
- Stimulation of M2 receptors may cause contractions
  - Reverse sympathetically mediated smooth muscle relaxation.
- M2 receptors may have a more important functional role in the pathologic bladder
  - Neurogenic bladders
  - Aging
  - Hypertrophy.

Neurogenic Basis for Overactive Bladder

Ach = acetylcholine; DA = dopamine; ENK = enkephalins; GABA = \( \gamma \)-aminobutyric acid.

Neurogenic Etiology of Overactive Bladder

- Reduced suprapontine inhibition
- Damaged axonal paths in spinal cord
- Increased LUT afferent input
- Loss of peripheral inhibition
- Enhancement of excitatory neurotransmission in the micturition reflex pathway

Antimuscarinics for OAB Treatment

• Antimuscarinics are active during the filling phase when there is no activity in the cholinergic nerves
• Acetylcholine (ACh) can be generated and released from the urothelium and may also “leak” from cholinergic nerves during filling of the bladder

Bladder Effects of Antimuscarinics During Storage

- Leak of ACh from nerves and release from urothelium
- Enhancement of myogenic activity
- Increased afferent nerve activity
- Urgency, frequency +/- UUI

UUI = urge urinary incontinence.

Potential Receptor Targets for OAB Therapy
Peeing is Not a Simple Process

- A **coordinated** activity between the **detrusor muscle** and **pelvic floor**
- **Detrusor** is normally turned **off** and in a **relaxed state** so bladder can fill
- When bladder is full, **voluntarily** relax external **sphincter muscles** to void
- Voiding Center in brain coordinates reflex
Assessment: Transient Causes of Incontinence “DRIP”

- Delirium
- Restricted mobility
- Infection, Inflammation, Impaction
- Polyuria, Pharmaceuticals, Psychological
Additional Causes of Incontinence

- Atrophic Vaginitis and Urethritis
- Endocrine disorders
- Neurological disease
- Pregnancy
- Surgery or cancer treatment
- Sleep apnea
Assessment
Contributing Causes: Pharmaceuticals

- Diuretics
- Narcotics
- Anticholinergics
- Psychotropics
- Cholinesterase inhibitors
- Alpha blockers or stimulants
- Calcium channel blockers
Container and Closure

What Could Go Wrong?

- **Container**
  - Urge incontinence (OAB) = too much squeeze spasms/leakage
  - Neurogenic = not enough squeeze (incomplete or poor emptying)

- **Closure**
  - Stress incontinence = not enough closure
  - BPH/ Prolapse/ blockage = too much closure
**Container: Urge Urinary Incontinence**

**Definition:**
Incontinence associated with urgency. Thought to be secondary to an uninhibited detrusor contraction.

Ellsworth, P. 1999
UUI: Most Common Causes

- Medication
- Bladder irritants
- Disease process
Symptoms of UUI

- Leakage with urgency
- Unable to delay going to the bathroom
- Bathroom mapping
- Leakage with triggers
  - Key-in-the-door
  - Closer proximity to the toilet
  - Running water
- May have frequency and nocturia
- May restrict fluids if away from home
Assessment of UUI

- History
- Medication review
- Bladder diary
- UA (urine culture if indicated)
- PVR
- CMG or simple bladder fill
### Your Daily Bladder Diary

This diary will help you and your health care team. Bladder diaries help show the causes of bladder control problems. The "sample" time columns will show how to use the diary.

<table>
<thead>
<tr>
<th>Time</th>
<th>Drinks</th>
<th>Urine</th>
<th>Accidental leaks</th>
<th>Did you feel a strong urge to go?</th>
<th>What were you doing at the time?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6:30 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6:45 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7:00 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7:15 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7:30 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:00 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:15 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:30 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:45 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:00 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:15 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:30 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:45 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:00 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:15 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:45 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:00 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:15 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:30 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:45 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1:00 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1:15 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1:30 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1:45 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2:00 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2:15 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2:30 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2:45 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:00 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:15 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:30 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:45 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4:00 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4:15 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4:30 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4:45 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5:00 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5:15 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5:30 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5:45 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6:00 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6:15 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6:30 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

 Voiding diary from:

http://kidney.niddk.nih.gov/kudiseases/pubs/diary/index.htm,
National Kidney and Disease Information Clearinghouse,
September 02/2010
Urinalysis

• Tests for:
  • Blood (kidney stones, infection)
  • Infection (bacteria)
  • Glucose or sugar (diabetes)
  • Protein (kidney diseases)
Elevated PVR is $\geq 200$ mL
Repeat if PVR is 100-200

Signs & symptoms:
- Dribbling, weak stream, intermittency, hesitancy, dysuria, frequency, nocturia

Risk increases with diabetes, prostate disease, neurological conditions, prior history of high PVR, medical treatment
CMG

- Incontinent
- Involuntary detrusor contraction
- Can't hold any longer
- Trying to hold
UUI Treatment Options

- Behavior Modification
- Fluid modifications
- Exercises
- Urge Strategy
- Medication modifications
- Timed Voids
- Limit or Avoid Bladder Irritants
UUI Additional Treatment Options

- OAB drugs
- Local HRT
- PTNS
- Neuromodulation InterStim
- Botox
- Biofeedback
- Electrical Stimulation
Fluid Intake

- 50-70 ounces daily
- Limit fluids 2 hours before bed

No Overnight Fluids
Known Bladder Irritants

- Caffeine
- Nicotine
- Artificial Sweeteners
- Alcohol
- Spicy Foods
- High Acid Foods (citrus, cranberry, tomatoes, vinegar)
- Milk
Pelvic Muscle Exercises

- Pelvic floor muscle exercises
  - Focus on strengthening pelvic musculature
  - Can be effective for stress and urge incontinence and also urinary frequency
  - Isolation and identification of the correct muscle is key
  - Squeezing and releasing repetition
  - Relaxation of muscle is just as important as the squeeze
The Wonders of Exercise and Bladder Diaries

• A volunteer sample of 197 women ages 55-92
• Randomized to 4 sessions of BFB assisted behavioral/exercises or Oxybutynin IR or Placebo
• Behavior treatment arm 80.7 % mean reduction in incontinence episodes
• Drug arm 68.5% reduction
• Placebo arm 39.4% reduction

• Outcome measures: bladder diary, patient perception

Burgio, K. 1998
Urge Strategy

Behavioral skills

**Urge control techniques**

- No rushing – sit, relax, and rest
- Practice slow deep breathing
- Use distraction until urge passes and bladder relaxes
- Walk calmly to the bathroom

Can use with delay voiding, to increase intervals between voids
Use at night to retrain and decrease nocturia
Freeze and Squeeze...

...or Rush and Spew
### Medications for Urge Incontinence

- **Oxybutynin**  
  ER and IR available in generic anticholinergic/antispasmodic  
  - Extended Release 5-30 mg oral daily  
  - Immediate Release 2.5-5 mg oral BID-TID  
  - Available in pill, patch and gel

- **Tolterodine**  
  IR in generic muscarinic antagonist  
  - Extended Release 2 mg, 4 mg oral daily  
  - Immediate Release 1 mg, 2 mg BID

- **Trospium**  
  ER and IR in generic anticholinergic/antispasmodic  
  - Extended Release 60 mg daily should be taken on an empty stomach  
  - Immediate release

- **Darifenacin** 7.5 and 15 mg oral daily anticholinergic/antispasmodic

- **Solifenacin** 5 and 10 mg oral daily anticholinergic/antispasmodic

- **Fesoterodine** 4 and 8 mg oral daily muscarinic receptor antagonist

- **Mirabegron** 25 and 50 mg oral daily Beta-3 adrenergic agonist
Side Effects of Medications

• Dry Mouth
• Constipation
• Dry eyes / Blurred vision
• Urinary Retention /UTI
• Dyspepsia/ Nausea
• CNS effects (Headache, Somnolence, Confusion)
• Hypertension (Mirabegron)
Additional Treatment Options for UUI

Sacral Neuromodulation
• 6 month RCT compared to SMT (medications) in patients with OAB 76% vs 49% responders
• 12 month non-randomized data of patients with UUI
  79% report clinical success with 45% completely dry

- Siegel, S. 2014
PTNS: Percutaneous Tibial Nerve Stimulation

Global Response Assessment Outcomes after 12 PTNS Treatments for Subjects with UI

- Peters, K. 2012
Closure: Stress Incontinence

Definition:
loss of urine due to poor urethral support or incompetent sphincter and usually due to physical activity
Stress Incontinence Causes

- Surgery
  - childbirth
  - prostatectomy
  - pelvic surgery
- Vaginal atrophy
- Weak pelvic floor
Urinary Incontinence (UI) in Women

- Extremely prevalent in women
- Pregnancy increases risk
- 1/3 of women who deliver vaginally will be incontinent
Symptoms of SUI

- Leakage with cough, sneeze, laughing
- Leakage with bending, lifting and position changes
- Leakage with exercise
Assessment of Stress Incontinence

- CMG (low leak point pressure)
- Q tip test
- Supine empty stress test
- History
Stress Incontinence Treatment Options

- Pelvic Muscle Exercises
- Stress Strategy
- Off label meds (Imipramine, Duloxetine, Pseudoephedrine HCL)
- Surgery  TVT/TOT  AUS  male sling
- Incontinence Pessary
- Clamps
- Local HRT
- Weight loss
- Collagen
- Electrical Stimulation
Modify the closure

- Anticipate activities that may cause you to leak urine
- Squeeze the pelvic floor muscle right before and during the activity
- Remember “Squeeze before You Sneeze”
Additional Points on the Stress Strategy

• If you forget to squeeze your muscles and urine leaks, squeeze as soon as you can. It will not prevent that leak, but will help to link the behavior with the activity and decrease or prevent future leaks.
• Mastering the stress strategy is much like learning to drive a straight shift, it takes practice and careful timing.
• Eventually, use of the strategy will become automatic.
SUI Conservative Management: Penile Clamps and Pessaries
Medications for SUI

Drug treatment for SUI is currently very limited.

There are no FDA approved medications for SUI. OFF Label use only.

- Imipramine 10 mg TID
- Pseudoephedrine 30-60 mg QID
- Duloxetine 40 mg BID
- "In 3 randomized, placebo controlled clinical trials, patients receiving duloxetine had statistically significant and clinically relevant reduction in the number of incontinence episodes..."
Medications: Local HRT for both SUI and UUI

- Estradiol vaginal cream 0.001% Apply pea size amount with fingertip 2 times weekly at bedtime
- Conjugated estrogen vaginal cream 0.625 mg/g Apply pea size 3 times a week
  - Estradiol vaginal tablets (Vagifem) 10 mg 2-3 times a week
  - Estradiol ring (Estring) change every 3 months
Atrophic Vaginitis

Appearance is usually thin, dry and pale tissues. The labia are small and often the minora are absent.

Responds to topical estrogen
AUS

AUS Patient Satisfaction

- Very satisfied: 18%
- Satisfied: 6%
- Neutral: 4%
- Dissatisfied: 28%
- Very dissatisfied: 44%

Cleveland Clinic

Balloon Reservoir

Inflatable Cuff

Pump
Urethral Support Surgery

TVT/ TOT
Mixed Urinary Incontinence

Definition:
When stress and urge incontinence are both present
A CONTAINER AND CLOSURE problem
Overflow Incontinence

Definition: Bladder leakage that occurs due to incomplete emptying of the bladder. Poor or limited emptying may be due to the bladder not working (contracting) as it should or the urethra is partially blocked.
Overflow Incontinence: May be a CONTAINER or CLOSURE Problem

- Enlarged prostate
- Vaginal prolapse
- Stricture or blockage
  - bladder stone or growth
  - urethra trauma/ damage
  - DSD (Detrusor Sphincter Dyssnergia)
- Lack of bladder contraction (Atonic Bladder)
  - damaged nerves
  - DM
Symptoms of Overflow Incontinence

- Sensation of incomplete bladder emptying
- Urinary frequency
- Decreased or weak stream
- Urinary hesitancy
- Suprapubic Distention
- Loss of urine without urge or warning
- Possible bulge from vagina
Assessment of Overflow Incontinence

- PVR by ultrasound or catheterization
- Distention of suprapubic area
- Rule out Impaction
- Review Medications
- BUN/ creatinine
- Prostate exam (Rule out Prostate CA)
- UA
- Exam for prolapse
Overflow Incontinence Treatment

- Bladder emptying techniques
- Reduce prolapse
  - Pessary
  - Surgery
- Treat BPH
  - TURP
  - Medication alpha blocker

- Medications
  - for bladder contractility
  - to relax bladder neck
- CIC or IDFC
- InterStim
- Manage Constipation
Overflow Incontinence: Medications

Identify and treat cause if possible

CLOSE

Reduce prostate and relax bladder neck with alpha blockers

- **Tamsulosin** 0.4 mg daily alpha 1A blocker
- **Terazosin** Begin with 1 mg@ HS and titrate to 10 mg daily
- **Silodosin** 4 – 8 mg daily
- **Finasteride** 5 mg once daily Type II 5 alpha-reductase inhibitor
- **Dutasteride** 0.5 mg daily Type I & II 5 alpha-reductase inhibitor - May be used in combination with Tamsulosin
Overflow Medications

Increase bladder contractility CONTAINER
Bethanechol CL 10-50 mg TID to QID cholinergic

Treat muscle spasms of external sphincter CLOSURE
Diazepam 2-5 mg nightly to TID
Baclofen 5-10 mg nightly to TID
Pelvic Prolapse
Pessary for Prolapse
Functional Incontinence

Definition:
incontinence due to limited mobility, environment or financial restraints or mental impairment
Functional Incontinence Causes

- Limited mobility
- Disease process
- Arthritis
- Balance issues
- Memory Impairment
- Depression
- Environmental limitations
- Physical barriers
- Financial limitations
Assessment for Functional Incontinence

• History
• PT evaluation for mobility
• Mental status evaluation
• Mood evaluation
• Home evaluation
• Reflexes and sensitivity assessment
• Resources
Treatment for Functional incontinence

• Improve Mobility if possible  PT referral
• Provide devices/ equipment
  • potty chair / urinal
  • condom cath / IDFC
  • adult briefs
  • Clothing modifications
• Timed/assisted voids
• Evaluate and assist with resources
Nocturnal Enuresis

Definition:
Urine loss while asleep
Nocturnal Enuresis Causes

- Stress Incontinence
- Sleep Apnea
- Overflow
- Medications
- Spinal cord / Neurological
- Small bladder capacity / DO
- Use of sleeping aids
Assessment/ Treatment of NE

• Sleep study – CPAP
• Management of edema, fluid intake
• Management of DM
• Modification of medications
• Behavior modification

• Medications for Treatment :
  - Imipramine
  - DDAVP
Age-related Changes in Bladder

- More urine is produced during the night or when lying flat
- Bladder capacity is less
- Amount of urine left in the bladder after urination may be greater (higher PVR)
- Bladder contractions occur more frequently
- Delayed urge sensation
Urinary Incontinence (UI) in the Aged Population

- Affects the elderly more than any other age group
- Can affect anyone across the lifespan
- UI present in about 30% elderly living in the community
- As general population “grays” incidence should increase
Why The Aging Female Population Does Not Seek Medical Attention for Urinary Incontinence

1. Perception of severity
2. Perception of being a "normal part of aging"
3. Self care and methods of coping
4. Limited knowledge of treatment options
5. Comfort and relationship with provider

Strickland, R. Urologic Nursing, Vol 34 # 2
Cost of Incontinence

• In 2000, the cost of bladder incontinence among adults:
  • Estimated to be $19.5 Billion
  • $5.3 Billion by institutional residents
    • The majority (50-75%) being for “routine care” pads, protection and laundry
    • Greater incontinence severity resulting in higher annual cost

In addition to financial burden, additional costs are:
• Emotional burden- feelings of shame and embarrassment
• Additional burden to caregivers- psychological and physical
• Decreased quality of life
• Depression
• Decline in mental health
• Increased risk of falls

Gorina, Y.
Incontinence Treatments in the Nursing Home

• Habit training/Scheduled Voiding
  • Independent voiding or a program provided by the caregiver where toileting occurs on a fixed schedule at regular times (usually every 2-4 hours, 8x per day)
  • Usually involves times around daily events
    • Day (meals), evening, night
  • Maintain record of resident’s voiding patterns
  • May include check and change program
Incontinence Treatments in the Nursing Home

• Habit training/scheduled voiding research
  • 82% of voiding episodes occur during the same hourly blocks of time
  • No expectation a normal voiding pattern will occur
  • Match toileting to voiding habits and patterns
  • 86% improvement
  • For cognitively impaired, institute visual cues for toileting & bathroom location
Management of Urine Leakage

• Toilet substitutes
  • Portable devices (2 categories)
    • Commode seats or bedside commodes
    • Hand held devices (bedpan or urinal)
  • Indications
    • Inaccessible toilet areas
    • Nocturnal frequency and urgency
    • Decreased mobility
Management of Urine Leakage: External Devices

Definition:
• External devices which are secured to the skin with adhesive or straps and are connected to a tube and collecting bag

Indications:
• Urinary incontinence
• Preferable to indwelling urethral catheterization

Complications:
• UTI
• Mechanical Irritation
  • Erosion
  • Maceration
  • Dermatitis
  • Ischemia
References


• Peters, K. Percutaneous Tibial Nerve Stimulationfor the Long-Term Treatment of Overactive Bladder;3 Year Results of the STEP Study. *J of Urology*. 2013;189: 2194-2201.


References

• Incontinence Management Training Module
  http://borun.medsch.ucla.edu/default.htm

• Newmann, DK. Incontinence products and devices for the elderly.
  Urol Nurs 2004

• Siegel, S. et al. Results of a prospective, randomized, multicenter study evaluating sacral neuromodulation with InterStim therapy compared to standard medical therapy at 6-months in subjects with mild symptoms of overactive bladder. Neurourol Urodyn. 2014 Jan10. doi:10.1002/nau.22544
References Continued

• Ellsworth, P. Caldamone, A. The Little Black Book of Urology, second edition. Sudsbury MA : Jones and Bartlett; 2007


Thank you for your time and attention