

Leaky Pipes:

AN ANALYSIS OF THE CLINICAL PATHWAY FOR BETTER OUTCOMES FOR INCREASED CONTINENCE ACROSS THE LIFESPAN

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Housekeeping Reminders

- All attendees are on mute
- **Handouts** are available on the NARA website: Resources>Quick Links Page
- **Questions for Speakers:** submit them using the Q&A button on the attendee control panel
- **Technical Questions:** submit them using the Chat button on the attendee control panel
- **Recording:** will be available on the NARA website: Resources>Quick Links Page

Objectives

- Continue to identify treatment option for incontinence
- Apply evaluation and treatment strategies to case examples across the care continuum
- Implement strategies to defend medical necessity / safeguard reimbursement
- Identify the clinical value trajectory for pelvic health services/programming

Current Evidence for NMES to Treat UI

- Over 30% of women with stress urinary incontinence cannot voluntarily contract the pelvic floor muscles with adequate force to control urine leakage.
Barroso, BJU Int, 2004
- 2013 Systematic review of 33 RCTs concluded that tibial nerve, intravaginal and sacral electrical stimulation have shown effectiveness in treating urge and refractory urinary incontinence.
Schreiner, in Braz J urol, 2013
- NMES as an adjunct to the exercise Plan of Care can address the impairment and deficit affecting PFM contraction
- NMES can assist to achieve higher force of contraction for those who have decreased muscle strength and decrease myotonia in those who cannot fully relax muscle.
Chéati, Neurolog Rehabil, 2013

"Evaluation of efficacy remains inconclusive because of the variations in stimulation parameters. More comparative trials are needed."

NMES for Posture Evidence

- Using a combination of core muscle strengthening and NMES over posterior back muscles yielded an additive effect on the recovery of trunk balance in patient with a acute of subacute stroke who have poor sitting balance.
KoEJ, Ann Rehabil Med, 2016
- Electrical stimulation decreased thoracic curve independent of exercise.
Celeny, Journal of Back and Musculoskeletal Rehab, 2015
- Electrical stimulation promotes neurophysiological changes. It appears that stimulus adaptation (accommodation) of specific circuits can strengthen the brain's ability to distinguish between and respond to such stimuli overtime.
Bilencou, Neuroscience Letters, 2010
- Trunk and gluteal stimulation acutely corrects anterior/posterior IP distribution, improving regional tissue health for sacral sitters. This correction requires constant application of NMES. The potential for positive changes in tissue health would be maximized by regular NMES use incorporating weight shifting.
WU, PMR, 2013

NMES for Intervention Options

Neurological Re-ed:

- Estim focuses on reducing motor neuron and muscle disuse atrophy. This improves the muscles ability to contract and therefore the patient's ability to participate in exercise.
- Patterned Estim is an example of this type of NMES

Muscle Re-ed:

- Estim focuses on muscle hypertrophy
- MFAC (Russian stim) or LVPC strength protocols are examples of this type of NMES

Functional Re-ed:

- Estim focuses on improving movement patterns or a muscle contraction during a functional activity
- Patterned Estim, LVPC or MFAC can all be used for functional NMES


Stress Incontinence Treatments

- PFM and Core Strengthening
- Improve Endurance
- Activity Modification
- Treat to Function
- Bladder Training



Urge Incontinence Treatments


- PFM down-training
- Stretching of synergistic muscles
- Manual techniques
- Bladder Retraining
- Collaboration with health care team



Case Study: Marco

Incontinence Care

- 78-year-old man
- Social history: Lives in FL with his wife
- PMH: DM Type 2 Diabetes, HTN, CAD
- Symptoms: Daytime urgency, Mixed incontinence (leak with urge and increased abdominal pressure)
- New Diagnosis: Dementia, Stage 2
- Evaluation: He sits postvoid rather than in proper position overactive pubic floor muscles



How do we help Marco?

- Find a pelvic floor therapist
 - Consider telehealth
- Check toilet positioning
- Provide written reminders
 - "Sit down and Relax"
 - "Drink water every hour"
- Engage, educate and spread awareness
 - Residents, staff, family, community



Marco: 2 Years Later

Incontinence Care

- SNF
- Dementia: stage 6
- Ambulatory
- Recurrent UTIs
- Repeated falls



How do we Help Marco?

- Toileting schedule
- Toileting position
- Bladder triggers
- Therapy
 - PT: Strength, ROM, balance, coordination, transfers, gait pattern
 - OT: Dexterity and fine motor skills, ability to manage clothing, toilet transfers, self-hygiene
 - ST: Compensatory cognitive strategies
- Engage, educate and spread awareness
 - Residents, staff, family, community



Services for Marco

97110 Muscle contract & relax Training; Coordination; Endurance; Coordination	97112 Neuromuscular Dexterity; Fine motor coordination	97535 Toileting – personal hygiene, clothing management ; Toileting Program ; UI product management; UTI management and prevention; Medication management
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Services for Marco

97530 Bladder triggers; Toileting position; Functional balance; Toilet transfer training; Bladder habit assessment and training	G0283 Supervised Estim	97032 Manual Estim
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Services for Marco


97140 Manual Techniques	90901 90912 90913 Biofeedback *LCD and practice
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Successful Outcomes

The Write Words to Achieve the Right Results



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Marco: Medical Necessity

Core Components

- Relevant History
- Complexities
- Prior Level of Function
- Objectivity
- Patient Reported Outcomes
- Supportive Diagnosis

IL Referral to PT

- 78 year old male
- Prior Medical History:
 - BPH, Type 2 Diabetes
 - HTN, CAD
- Social History:
 - Lives with wife
- New Diagnosis:
 - Demerol Stage 2
- Symptoms:
 - Urgency
 - Frequency
 - Leaks with urge and increased abdominal pressure

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Marco: Relevant History

- Medical, Complexities and Social
 - Patient had recent UTI 1 month ago, referred to PT after MD a.ppt for UTI, due to symptoms of urinary urgency and leakage.
 - UTI managed with oral antibiotic
 - New onset of symptoms
 - Benign Prostatic Hyperplasia (BPH) diagnosis x 3 years
 - HTN and CAD 5+ years
 - No cardiac pacemakers nor implantable stimulators
 - Type 2 Diabetes, 10 years
 - Medication managed, no insulin pumps
 - No history of cancer

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Marco: Relevant History

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- Medical, Complexities and Social (continued)
 - Patient and spouse live together in 1 bedroom L apt, estimated 900 total square foot. Patient drives them off-campus to church services, grocery shopping breakfast with men's club and grandchild's athletic events 1x/week. They enjoy light breakfast and lunch together in their apartment, and dinner with residents in on-campus dining room. He enjoys reading, walking and bird watching.
 - Patient is embarrassed by these new issues, and has stopped all community and social activity.
 - He wants to sleep in recliner chair so his wife won't be disrupted by his need to urinate during the night.
 - Patient has a new diagnosis of Dementia Stage 2, which he describes as occasionally forgetful for people's name, and where he puts things, like his apartment keys.

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Marco: Prior Level of Function

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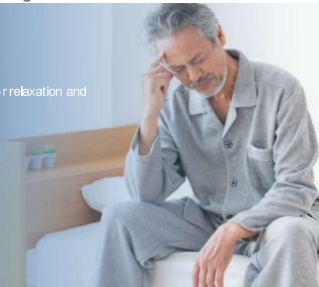
- Prior Level of Function:
 - Patient reports that until a month or so ago, he was able to toilet himself independently, including personal hygiene and clothing management, without continence products, absent of urinary urges or leakage, and slept through the night without need to use bathroom. Right hand dominance.
 - Bathroom has raised toilet seat with horizontal and vertical grab bars. Bathroom 15 feet from bedroom. Ambulates independently without AD, drives in community.
 - Successful conversationalist. Maintains personal medical and financial records for self and spouse. Has self-managed diabetes without assistance since diagnosis.
 - Consumes 12 oz coffee per day, reduced from 20 oz since retirement 10 years ago. 1 glass of red wine every evening with dinner, same for 50 years. Tomato sauce with pasta daily since childhood.

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Marco: Objective Data

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- Physical Impairments: Patient exhibits:
 - Posterior pelvic tilt, inclometer -4"
 - Inability to perform a voluntary pelvic floor relaxation and increased muscle tone
- Functional deficits: Patient demonstrates:
 - Ability to toilet self (0)
 - voids q30 mins, while standing at toilet
 - Use of urinal (0), 2x, during night
 - 3-4 urinary urge episodes per day



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Marco: Objective Data

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- Objective (continued):
 - Continuous leakages, (I) manages with disposable incontinence briefs (MD trained due to patients embarrassment)
 - Estimates cost of continence briefs, \$90/month
 - Using incontinence bedliners, "just in case"
 - Estimates cost as \$50/month
 - Comprehends conversation, able to consistently follow 2 step instructions.
 - Able to recall 3 words at 5 mins, and 10 minute intervals. Capacity for new learning is beyond daily needs; successfully attends to news on TV and conversation; observed well-preserved procedural memory, Accurate historian, per spouse, family interview and nursing consult.
 - Simulable to treatment technique: Voiding and intake diary

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Marco: Patient Reported Outcomes

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Patient Centric Considerations




- Patient Reported Outcome considerations:
 - International Prostate Symptom Score
 - Incontinence Questionnaire
 - Incontinence Quality of Life Scale
 - Prostatitis Symptom Questionnaire
 - Reports concern of tripping to get to bathroom quickly
 - Falls Efficacy
 - Patient Specific Functional Rating Scale

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Marco: IL Care Plan Considerations

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- Goals for underlying impairments
 - Examples
 - Patient will improve kyphotic posture by 3 cm as measured by Occiput to Wall Test in order to allow for a full ROM of the pelvic floor muscle
 - Patient will be able to perform ROM of 12 to 6 on the pelvic clock exercise
 - Patient will increase intake of non-irritating fluids x 24 ounces per day
 - Patient will decrease intake of irritating fluids x 16 ounces per day

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Marco: IL Care Plan Considerations



- Goals for functional deficits
- Examples
 - Patient will reduce the number of daytime urgency/incontinence episodes to (xxx)
 - Patient will eliminate night-time voiding episodes
 - Patient will increase time between voiding episodes x 1 hour as cued by auditory tool (e.g., Alexa)
 - Patient will reduce the need for incontinence brief changes to 3x/day

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Marco: IL Care Plan Considerations



- Goals for quality of life
- Examples
 - Patient's score on the PRO (insert title) will improve to (score) in order to (insert depending upon PRO selected)
 - Patient and family will reduce expenditure on monthly continence products from \$\$ to \$\$
 - Patient will resume weekly social activities off-campus
 - Patient will return to sleeping with spouse in bed at night

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Marco: Supportive Diagnosis




- History, Symptoms and findings:
 - Urges
 - Frequency
 - Continuous leakage
 - Pelvic muscle function
- Supportive Diagnoses:**
 - Mixed Incontinence: N39.46
 - Continuous Leakage: N39.45
 - Postural (urinary) incontinence: N39.492

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Marco: Session Considerations

AVOID:

- Non-patient centric
- Repetition
- Drills
- "Worksheet" reporting
- Duplication
- Long lists
- Irrelevant
- Clinician subjectivity



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Marco: Session Considerations

- Physical assistance was provided to...
- Guided instruction in...
- Supervised instruction provided in...
 - E.g., Guided instruction and physical assistance was provided in pelvic floor exercise to promote muscle relaxation; patient required need for skilled supervision throughout exercise for technique accuracy
 - E.g., Guided instruction and physical assistance was provided in pelvic floor exercise to promote muscle relaxation; patient required need for skilled supervision throughout exercise for technique accuracy; exercise were performed concurrently with electrical stimulation (type, with/without the velocity settings, purpose)
 - E.g., Progressed patient in pelvic floor exercise to facilitate muscle relaxation

Cueing hierarchy: Tactile, verbal, visual Exercise frequency / sets / perceived level of difficulty

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Marco: Session Considerations

- Established...
- Progressed patient in...
- Modification of...
- Instruction provided to patient in...

Examples

- Established voiding and fluid intake diary with patient and spouse – patient to identify and record time and amount of liquid intake, and time and size of urge to void.
- Progressed patient in distinguishing bladder vs. non bladder irritants and entry into diary.
- Instruction provided to patient and spouse in relationship between bladder irritant type and use, to behaviors exhibited.
- Modification of diary to include size / time of leakage in diary, as well as type of intake.

Cueing hierarchy: Tactile, verbal, visual Successful carryover and perceived level of difficulty

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Marco: Session Considerations

Attended Estim 97032 and Supervised Estim G0283

- Purpose, impairment and function
- Waveform type, and rationale
- Skin assessment pre and post modality
- Pad placement – location determination and assessment
- Instruction need
- Palpation need

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Marco: Session Considerations

Attended Estim 97032 and Supervised Estim G0283

- Pre/post treatment skin inspections completed – assessed for rash and/or infection related to hygiene/leakage episodes.
- Therapist palpated and accurately identified muscle belly regions for pad placement for effective muscle relaxation. Pad placement adjusted during treatment to reassess pelvic tilt; modified estim plan to facilitate movement towards neutral position.
- Therapist demonstrated postural pelvic position correction to obtain neutral pelvic girdle position for muscle relaxation efficacy. Patient able to return demonstrate postural correction at 50% throughout estim treatment using mirror as a mirror to facilitate patient's kinesthetic awareness.
- Modified pad placement prior to estim initiation to facilitate muscle relaxation
- Patient positioned with (e.g., bolster roll under right knee, towel roll in left axilla, half trunk rotation, etc.) to expose (eg muscle tendon, groin/ tension organ region, muscle belly, etc.) for proper pad placement and maximum muscle stimulation.
- Post estim, patient is able to correct posture to carry over pelvic tilt to 10 degrees

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Marco: SNF 2 years later

IL Status at Discharge: PT

- Remained in L
- Reduced to 1 ug/day
- Toileting with 2 leakages/day
- Extended voiding to q3 hours
- Eliminated nighttime voids
- Continence product downgraded from brief to pad, with monthly costs estimated at \$40
- Relaxed pelvic floor muscles
- Pelvis in neutral position
- Returned to active on/off campus activities
- Returned to sleeping w/ wife at night

SNF Admission: PT, OT, SLP

- 78 year old male
- Prior Medical History:
 - BPH, Type 2 Diabetes
 - HTN, CAD
 - Recurrent UTIs and Falls
- Social History:
 - Lives with wife
- New Diagnosis:
 - Dementia Stage 6
- Symptoms:
 - Urgency
 - Frequency
 - Leaks with urge

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Marco: SNF Care Planning

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- Given clinical presentation during evaluation, Dementia Stage 6, goal considerations:
 - Goals for underlying impairments...
 - Improve kyphotic posture by 3 cm as measured by Occiput to Wall Test in order to allow for a full contraction of the pelvic floor muscle
- AND Goals for functional deficits
 - Patient will reduce the number of daytime incontinence episodes to (xx) as assisted by trained caregivers with use of toileting program
 - Patient will change disposable continence undergarments x 2 hours as assisted by trained caregivers with use of toileting program
- AND Goals for quality of life:
 - Improve status to return to IL with spouse, with nursing, and/or family assistance to maintain voiding, with good hygiene, low risk of infection

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Quality Measures

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Collaboration and Interdisciplinary Planning

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- Quality Payment Program | MIPS:
 - #48 – Urinary Incontinence, women, assessment and presence of
 - #50 – Urinary Incontinence, women, assessment and presence of
- SNF Quality Reporting Program
 - Percentage of Residents experiencing new or worsened incontinence
 - New or worsened bowel or bladder incontinence during a time frame

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**Collaboration and
Interdisciplinary Planning**

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- MDS Coding: Continence
 - H0200 Urinary Toileting Program
 - H0300 Urinary Continence
 - H0400 Bowel Continence
 - H0500 Bowel Toileting Program
 - H0600 Bowel Patterns
- MDS Associated sections:
 - Cognitive Patterns
 - Pain
 - Falls
 - Skin

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**Operational / Financial
Considerations**

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- Costs to patient or facility
 - Briefs / pads
 - Laundry
 - Caregivers
 - Medications
- Revenue Gain
 - Billing codes for treatments
 - Increased referrals

Resources: additional resources available on request

1. Frawley, Helena, Shelly, Beth, Morin, Melanie, et al., An International Continence Society (ICS) report on the terminology for pelvic floor muscle assessment. *Neurology and Urodynamics*. 2021; 40: 1217 – 1260.
2. Fricke, A., Lark, S., Fink, P., Mundel, T., Shultz, S. Exercise Interventions to Improve Pelvic Floor Muscle Functioning in Older Women With Urinary Incontinence: A Systematic Review. *Journal of Women's Health Physical Therapy*, 45(3), 115-125.
3. Fisher, S., Stanich, S., Hong, I., McGaugh, J., Jang, H., Galloway, R., Utsey, C. Fall Risk Reduction in the Elderly Through the Physical Therapy Management of Incontinence. *Journal of Women's Health Physical Therapy*, 43(1), 4-9.
4. Stefanacci, R., Yeaw, J., Shah, D., Newman, D., Kincaid, A., Mudd, P. Impact of Urinary Incontinence Related to Overactive Bladder on Long-Term Care Residents and Facilities: A Perspective From Directors of Nursing. *Journal of Gerontological Nursing*, 48(7), 38-46.

Resources: additional resources available on request

- 5. Bernard, S., Pellichero, A., Mclean, L., Moffet, H. Responsiveness of Health-Related Quality of Life Patient-Reported Outcome Measures in Women Receiving Conservative Treatment for Urinary Incontinence: A Systematic Review. *Journal of Women's Health Physical Therapy*, 45(2), 57-67.
- 6. Pelvic Pizzol, D., Demurtas, J., Celotto, S., Maggi, S., Smith, L., Angiolelli, G., Trott, M., Yang, L., Veronese, N. Urinary incontinence and quality of life: a systematic review and meta-analysis. *Aging Clinic and Experimental Research*, 33(1), 25-35.
- 7. CMS Publication 100-02, *Medicare Benefit Policy Manual*, Chapter 15. <https://www.cms.gov/regulations-and-guidance/guidance/manuals/internet-only-manuals-ioms-items/cms012673>
- 8. CMS Publication 100-03, *Medicare National Coverage Decisions (NCD) Manual*, <https://www.cms.gov/regulations-and-guidance/guidance/manuals/internet-only-manuals-ioms-items/cms014961>

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Q and A
