Progress and Opportunities for Behavioral Interventions

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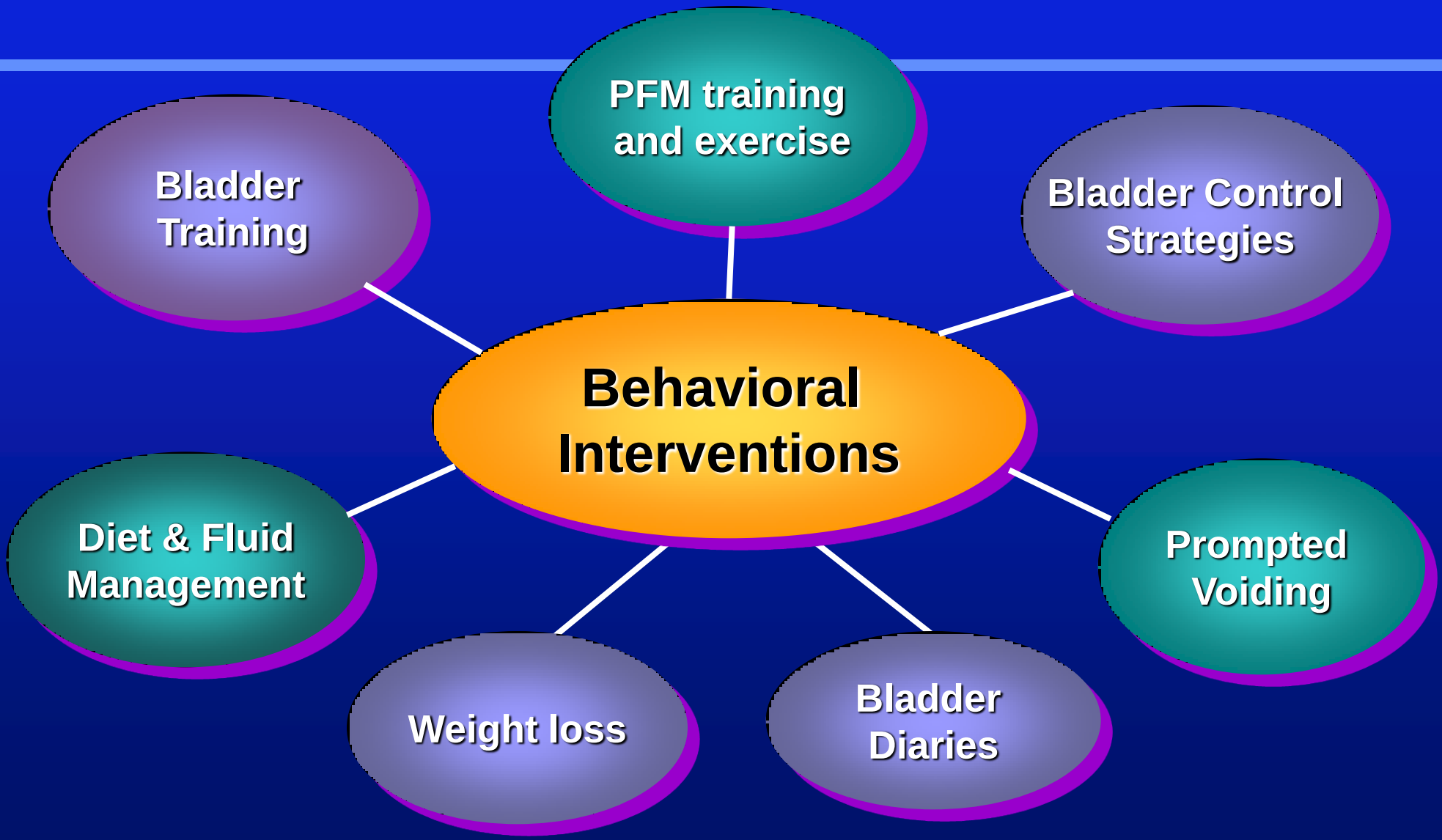
Behavioral Treatments

- Diverse group of therapies
- Modify incontinence through systematic changes in patient behavior or the environment
  - Teach continence skills
  - Change voiding habits
  - Life style modifications


Behavioral Interventions
PFM training and exercise
Bladder Training
Bladder Control Strategies
Diet & Fluid Management
Prompted Voiding
Weight loss
Bladder Diaries

Behavioral Treatment: Multi-component Programs

- **Pelvic floor muscle training**
- **Home practice and exercise**
- **Voiding schedules**
- **Bladder control techniques**
  - "Urge" strategies
  - "Stress" strategies
- **Self-monitoring (diaries)**
- **Motivation (reinforcement, encouragement)**

Basic Approaches to Skill-Based Behavioral Treatment

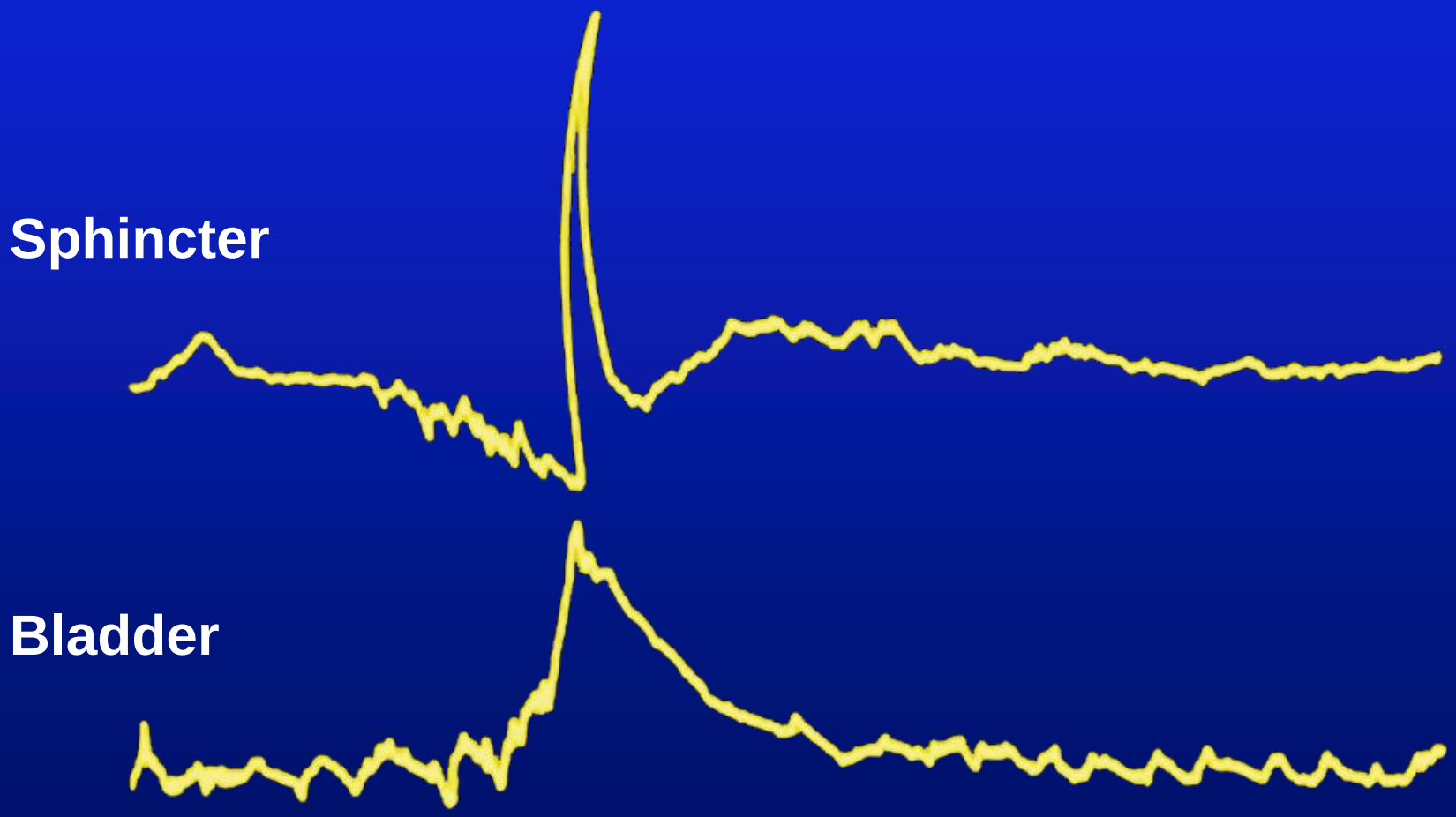
- **Bladder training**
  - Originally, goal was to modify bladder function
  - Focus on modifying voiding habits (incremental voiding schedules)
  - Urge control strategies (cognitive strategies)
- **Behavioral training ± Biofeedback**
  - Goal is to improve control by teaching skills
    - Pelvic floor muscle control, stress strategies, urge suppression strategies, cortical inhibition
  - More focus more on pelvic floor and bladder outlet

Urge Suppression Strategy

- Do NOT rush to the toilet
- Stop and stay still
- Squeeze pelvic floor muscles
- Relax rest of body
- Concentrate on suppressing urge
- Wait until the urge subsides
- Walk to bathroom at normal pace

Burgio et al. *Staying Dry: A Practical Guide to Bladder Control.* 1989

Detrusor Inhibition with Sphincter Contraction



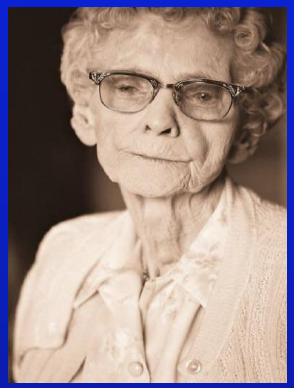
Burgio. Female Pelvic Floor Disorders: Investigation and Management. 1992

Effectiveness of Behavioral Treatment

- Behavioral treatments effective for reducing incontinence, urgency, frequency, and nocturia
  - Women and men
  - Young and old
  - Stress, urge, or mixed incontinence
  - Neurological conditions (stroke, Parkinson's)
  - Post-partum, post-prostatectomy
- Many cultural contexts
- Using several different training regimens
- Assessed by multiple outcome measures

Effectiveness of Behavioral Treatment

- **Most effective in outpatients**
  - More modest results in long-term care
- **More intensive, professionally supervised programs most effective**
  - ICI recommendations
- **Combining drug and behavior therapy can add benefit**



Advantages of Behavioral Treatment

- Safe
- Avoid side effects of medications
- Efficient
- Patient comfort
- Patient satisfaction
- Sense of control
- Can be combined with other treatments
- Does not preclude future treatment

Clinical Practice Guidelines

- ✓ **Least invasive treatment should be offered first**
- ✓ **Behavioral treatments** (pelvic floor muscle training with bladder control strategies, bladder training)

International Consultation on Incontinence (ICI), World Health Organization (WHO), American Urological Association (AUA), Society of Urodynamics and Female Pelvic Medicine and Urogenital Reconstruction (SUFU) & Agency for Healthcare Policy & Research (AHCPR)

Who are the Best Candidates for Behavioral Intervention?

- Literature is inconsistent on age and severity
- Many baseline clinical variables not consistently predictive of outcome:
  - Type of UI
  - Medical history
  - Obstetrical history
  - Urodynamic parameters
  - Prolapse
  - Voiding frequency
  - Body mass index
- Little to guide selection of best candidates

Limitations of Behavioral Treatment

- Relies on active patient participation
- Results are usually gradual
- Requires adequate mental status for self-administered programs
- Requires provider time
- Requires continued effort to sustain effects
- Most patients are not completely dry

Going in Two Directions

- **Efforts to enhance effectiveness**
  - Enhance with BF or Estim – good for teaching but may not add to efficacy
  - Combine with other treatments that may have additive or synergistic effects

- **Efforts to make easier to implement**
  - Less intensive, less supervision
  - Fewer visits

Barriers to Implementation

Despite guideline recommendations, most patients are not offered these treatments

- Lack of providers with expertise
- Provider time constraints
- Doubts/lack of knowledge about effectiveness
- Limited reimbursement
- Training/certification opportunities
- Lack of interest in learning skill set
- Medical model not ideal for behavioral treatments
  - Intensity (frequency of visits, duration of program)

Why Don’t People Seek Help?

- Stigmatized condition
- Not bothered by it… yet
- I’m not incontinent. It’s getting better.
- I just can’t tell my doctor.
- It’s a normal part of bearing children.
- It’s a natural part of growing older.
- I’m too old.
- Incontinence is not treatable.

Implementation Science

- Study barriers and facilitators to adoption of behavioral treatments
- Develop interventions to facilitate help seeking
- Study the process of successful implementation
- Encourage/support change in provider behavior
  - Screen for symptoms
  - Refer for treatment
  - Offer self-administered treatments

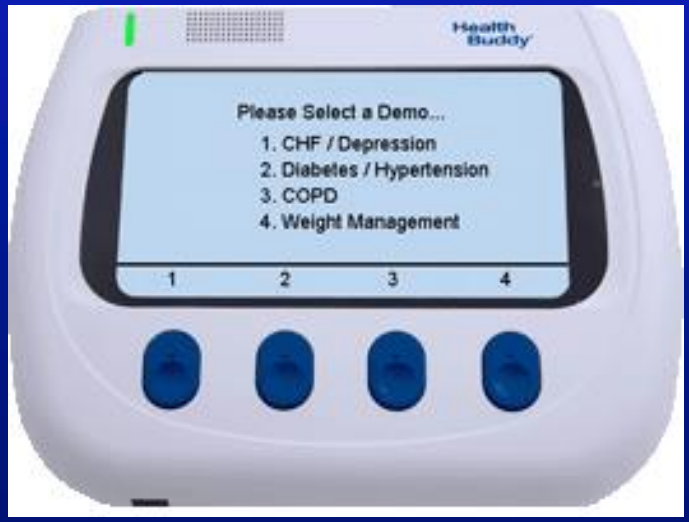
Alternate Delivery Models

- Written or web-based materials for self-help
  - Brochures, books
  - Step-by-step, self-help booklets
  - DVDs, audiotapes
- Group classes
  - Pregnant women, older women
- Nontraditional venues
  - Senior centers
  - Fitness centers
  - Assisted-living centers

Holroyd-Leduc et al 2011, Sjostrom et al 2015, Diokno et al 2004, Pereira et al 2011, Dugan et 2013, Burgio et al 1989

Telehealth Technology

- Telehealth technologies enable health care services to be provided that cross the usual constraining boundaries of geographic distance and time
- Telephone visits
- Home messaging devices
  - Health Buddy
  - Enable individualized programming
- Internet-based - website
- Tablet/Smart Phone app
- Interactive audio/video



Potential for Prevention

- At-risk populations
  - Older women
  - Antenatal and postnatal women
  - Men undergoing prostatectomy
- Behavioral Interventions
  - Low risk & effective for treating symptoms
  - Potential for prevention
- Think upstream – population-based education
  - What behaviors promote sustained continence?
  - What behavioral skills might be taught that could also preserve continence in the context of aging?

Knowledge Gaps: Other Behavioral Interventions

- **Weight loss**
  - Women: Grade A
  - Men: Grade B
- **Fluid management**
  - Women: Grade B
- **Caffeine reduction**
  - Grade B
- **Bladder irritants:** lacking evidence

International Consultation on Incontinence 2016; Subak et al 2008

Knowledge Gaps: Other Behavioral Interventions

- **Smoking abstinence:** Grade C
- **Moderate physical activity:** Grade C (women)
- **Strenuous physical activity:** lacking evidence
- **Constipation:** lacking evidence
- **Complementary and alternative medicine**
  - Yoga
  - Deep breathing

International Consultation on Incontinence 2016; Huang et al 2014

Other Research Opportunities

- What are the best ways to optimize and sustain adherence to behavioral programs?
- What are the optimal regimens for maintenance?
- What are the best ways to combine treatments
- Understudied populations:
  - Men
  - Racially/ethnically diverse populations
  - Neurological conditions
  - People with mild cognitive impairment