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PERIOPERATIVE HOME TELEHEALTH PROGRAM FOR POST-PROSTATECTOMY INCONTINENCE

Hypothesis / aims of study

Incontinence can be extremely burdensome and is common after prostate cancer surgery. Although incontinence improves or resolves over the first several months following prostatectomy, even transient incontinence can deter the return to employment and resumption of beneficial activity, since activity worsens stress incontinence. Also, studies show that a significant number of men have long-term post-prostatectomy incontinence sufficient to warrant wearing a pad [1]. At least six adequately powered, randomized controlled trials have shown that perioperative outpatient pelvic floor muscle training can hasten postoperative recovery of bladder control and reduce the severity of incontinence following radical prostatectomy [2,3]. However, most men undergoing prostatectomy do not receive this training. One reason is a lack of providers trained in male pelvic floor muscle rehabilitation. Also, men may have difficulty getting time off from work or not want to travel long distances to attend this training if it is available. To provide more men with perioperative pelvic floor rehabilitation, we developed a home telehealth program, based on an evidence-based in-clinic protocol that reduced post-prostatectomy incontinence. The program was then pilot tested to demonstrate feasibility and patient acceptance.

The aims of the innovative study were to convert a successful, clinic-based, perioperative rehabilitation program, including pelvic floor muscle training, progressive exercises, and bladder control techniques, to a home telehealth format and to do feasibility and pilot testing. The hypothesis was that men would use the program and find it beneficial.

Study design, materials and methods

This innovative study used a panel of experts including a urologist, geriatricians, and health educators with input from patients to develop a story-based series of lessons to assist the patients to master the evidence-based content which is shown in the Table.

Table - Content of Home Telehealth-Administered, Evidence-Based Perioperative Post-Prostatectomy Rehabilitation Program

Preoperative	Postoperative
1) Information about post-prostatectomy incontinence, prevalence and course 2) Goals of the rehabilitation program 3) Locating the pelvic floor muscles and proper contraction/relaxation technique 4) Building muscle strength and control	1) Resuming exercises 2) Wetness absorbing products 3) Building muscle strength 4) Bladder control techniques – stress, urge, post-void dribbling 5) Fluid management – drinking adequate fluid and avoiding caffeine 6) Maintaining control once continence is attained

Each daily session is 5-10 minutes in length, written on a 6th grade reading level, and accessed on a telehealth device. There were 2-4 weeks of daily sessions pre-operatively depending on how close to surgery the patient was enrolled. There were 60 sessions post-operatively, started as soon as their urinary catheter was removed. Adherence was monitored remotely via the telehealth device and patients were telephoned if they missed more than 3 daily sessions in a row.

Inclusion criteria: 1) men with prostate cancer scheduled to undergo a radical prostatectomy and 2) ability to read English (later versions in other languages are planned). Exclusion Criterion: self-reported incontinence prior to prostatectomy.

Evaluation of the home telehealth program was done with mixed quantitative and qualitative methods. The primary outcome was feasibility defined a priori as enrollment of at least 75% of men undergoing radical prostatectomy who met the inclusion criteria and then at least 75% of those men enrolled completing 90% or more telehealth sessions. Qualitative evaluation of the program included a semi-structured telephone interview after completion of the program. Interviews were taped for determination of themes by 2 coder analysts.

Results

Of 31 men scheduled to undergo radical prostatectomy and meeting inclusion/exclusion criteria, 30 (97%) were enrolled. Age ranged 53-70 years with a mean age of 62 years; 58% African American, 42% Caucasian. Of the 30 enrollees, 4 did not have surgery due to change in treatment plan to radiation therapy, leaving 26 who were eligible and participated in the home telehealth program. Of the 26 participants, only 1 declined to continue doing the sessions and dropped out of the study; 1 died of post-operative complications. Thus, 92% of participants completed the program. Three of the men needed telephone reminders to start using the device. All 24 completers did 100% of the sessions.

The qualitative data were very informative with themes of ease of use, usefulness of knowledge provided, helpfulness of the story format, and appreciation of the home setting for acquiring the information. Quotes highlighting the themes follow. Asked "What did you think about the information you received in the telehealth program?" - *"Once I started [the program] I couldn't believe that all the questions I should have asked the doctor were right there in the program and with answers. I didn't know what to ask so I just made the doctor think I had enough information. He [the urologist] asked me several times if I had any questions, but really, I would never have thought of those questions."* "Doing the program made it a lot easier and quicker to get back to normal." Asked about the exercises: *"At first, it was quite difficult, because I didn't realize or understand what they meant by it. But once I kept doing and doing it, and I figured out how to really do it, it was a piece of cake."* Asked about the stories: *"They make you want to use the machine more. It made you look forward to using it."* "I learned about different people having prostate cancer and they survived it and they are doing well." Asked about the overall program: *"I liked the how the program was set up, the way they told me to do it. Nobody disturbs you, nobody watches you, it is private."*

Interpretation of results

This evidence-based, home telehealth program including pelvic floor muscle training, progressive exercises, and bladder control techniques, met our benchmarks for feasibility during this pilot study: 97% of men scheduled for radical prostatectomy enrolled and 92% completed the program. Qualitative findings supported benefits of the program before and after prostatectomy.

Concluding message

Home telehealth is a feasible venue to teach pelvic floor muscle exercises and behavioral strategies to control urine leakage to men undergoing radical prostatectomy. A randomized, controlled trial of this home telehealth program is in progress.

References

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Disclosures

Funding: Source of Funding: VA Rehabilitation R&D-funded study (F6938R) to Dr. Goode. **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** Birmingham Veterans Affairs Medical Center Institutional Review Committee **Helsinki:** Yes **Informed Consent:** Yes