STUDY TITLE

In Office versus Telemedicine Preoperative Visit: A Randomized Controlled Trial

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STUDY OBJECTIVES

PRIMARY OBJECTIVE

To determine whether preoperative telemedicine appointments are non-inferior to in-office visits based on patient preoperative preparedness in women undergoing pelvic surgery as measured by a preoperative preparedness survey.

SECONDARY OBJECTIVES

1. Evaluate patient satisfaction using the S-CAHPS survey
2. Calculate the duration of visit for patient (minutes)
3. Calculate the duration of visit for provider (minutes)
4. Estimate round trip travel distance from patient home to clinic (miles)
5. Evaluate the number of office contacts from date of preoperative counseling to 6 weeks postoperatively.
    a. Patient initiated calls
    b. Nurse initiated calls

c. Scheduled office visits
d. Add on office visits

6. Evaluate canceled, no-show, and late visits
7. Calculate value proposition metrics for Atrium Health System

HYPOTHESIS

Telemedicine visits will be non-inferior to in-office visits in readying patients for surgery based on a preoperative preparedness survey. Additionally, we hypothesize that women will be equally satisfied with telemedicine preoperative visits as compared to in-office preoperative visits.

BACKGROUND

Preoperative patient education is an important perioperative element– facilitating expectation-setting, patient preparedness and the patient-surgeon relationship. The preoperative visit is traditionally a necessary in-office examination and counseling visit between a patient and surgeon prior to a scheduled surgical procedure. However, office visits incur additional time and travel costs to patients, which may be particularly burdensome to those with limited resources and those who live far from the office (1). In-office visits also require medical office resources such as an examination room, supplies, nursing staff and provider time. At the Women's Center for Pelvic Health, patients are scheduled for a preoperative medical clearance visit with the Carolinas Hospitalist Group in addition to a preoperative counseling visit in our office. Sometimes these visits are scheduled on different days resulting in increased travel and time requirements for our patients.

Patient counseling and patient-physician communication resources have expanded concurrent with technologic advancements. The Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services defines telehealth as the use of electronic information and telecommunications technologies to support and promote long-distance clinical health care, patient and professional health-related education, public health and health administration (2). Telemedicine communication technology is already being used in multiple medical fields including radiology, anesthesiology, internal medicine, and various surgical specialties (3-9). Patients report no difference in satisfaction when telemedicine is used for pre-anesthesia evaluations as compared to in-person evaluation. Additionally, no operative delays were noted on the day of surgery in these telemedicine-evaluated patients (7). Several general surgery pilot studies have also demonstrated that telemedicine postoperative visits are safe, efficient, improve patient satisfaction, and increase hospital revenue (8,9).

More studies are needed to evaluate perioperative telemedicine use for Female Pelvic Medicine and Reconstructive Surgery (FPMRS) patients. Women presenting to FPMRS clinics are excellent candidates for telemedicine visits as they often have internet access

and a desire to learn about their condition outside of the office setting through websites and social media (10,11). A recent randomized controlled trial revealed that telephone calls for postoperative follow up after surgical management of pelvic floor disorders resulted in non-inferior patient satisfaction without differences in clinical outcomes or adverse events (12). No studies to date evaluate FPMRS patient preoperative preparedness following a preoperative telemedicine visit. Further investigating this communication modality specific to our patient population needs will enhance our ability to provide evidence-based, patient-centered perioperative care.

STUDY DESIGN AND METHODS

This is a randomized controlled trial offered to patients who require a preoperative visit prior to scheduled pelvic reconstructive surgery at our institution. The study will be conducted at the Women's Center for Pelvic Health (WCPH) Mercy Hospital, Atrium Health, Charlotte, NC.

HUMAN SUBJECT RESEARCH AND INFORMED CONSENT

Each participant will be required to give verbal consent prior to beginning any study-related interventions or assessments. The verbal consent script will describe the study in detail and will disclose the planned uses of study data as well as potential risks to the participants. Each prospective subject will have the objectives of the study explained to them prior to enrollment. The subject will be given an opportunity to ask questions and decide whether or not to participate.

Subjects have the right to:

Voluntarily participate in the study
Withdraw or refuse participation in the study at any point without questioning
Understand the objective of the study
Understand the risks and benefits of the study
Have their confidentiality maintained

PARTICIPANT SCREENING AND ENROLLMENT

Patients who are planning to schedule pelvic reconstructive surgery with Women's Center for Pelvic Health and require a preoperative visit will be identified and screened against inclusion and exclusion criteria. If patients meet the requirements for the study, they will be invited to participate in the study. The patients who do not meet inclusion criteria will be documented. Patients who decline to participate will be documented and reason will be noted. Participants will be consented for enrollment into the study by physicians, fellow physicians, and/or the research team prior to surgery. Participants will be randomized to one of the two counseling groups at the time of verbal consent.

PROVIDER AND CLINICAL STAFF TRAINING

To ensure consistent scheduling and counseling, the principal investigator will provide in-service education to all participating providers and clinical staff who will be

scheduling and performing preoperative visits. All clinical staff, including nurses, schedulers, and physicians, will receive in-service training about the study protocol and guidelines.

INCLUSION CRITERIA

1. Females age 18 and greater
2. Visit location in North Carolina (or South Carolina during COVID)
3. Planning to undergo pelvic surgery at Mercy Hospital, One Day Surgery Center, or CMC Main Hospital.
4. Scheduled for enhanced recovery perioperative protocol
5. Require a preoperative visit
6. Access to internet and a virtual visit capable device
7. Telephone access

EXCLUSION CRITERIA

1. Non-English speaking
2. Inability to provide consent/decisionally impaired
3. Auditory impairment
4. Required preoperative in-office procedure such as endometrial biopsy

STUDY WITHDRAWAL

Participants may withdraw from the study at any point in time. Documentation of the reason for withdrawal will be captured in the data collection forms. There will be no risk to participants that choose to withdraw from the study.

PREOPERATIVE PERIOD

All consecutive patients planning to undergo pelvic surgery who require a preoperative visit will be identified, screened, and approached for participation in the study. Participants who do not meet the inclusion and exclusion criteria will be considered screen failures. Screen failures will be captured and the cause for screen failure will be documented.

Verbal consent will be obtained and accurate email address will be confirmed. Eligible subjects will be randomized using a computer-generated randomization scheme with patients assigned in a 1:1 ratio to either:

Study Group: Telemedicine preoperative counseling with an FPMRS fellow

Control Group: Standard in-office preoperative counseling with an FPMRS fellow

The allocation sequence will be in numerical, sealed, opaque envelopes. An envelope will be retrieved at the time of consent. The surgical scheduler will schedule the patient for their allocated preoperative visit.

Prior to their preoperative visit, participants will be emailed copies of the office ERAS informational booklet and International Urogynecology Association (IUGA) patient information handouts pertinent to their surgery. The preoperative visit at Women's Center for Pelvic Health is a counseling visit to review informed consent. Preoperative medical evaluation is accomplished through the Carolinas Hospitalist Group preoperative clinic or with the patient's primary care provider. Patients who require preoperative medical clearance will be scheduled for a preoperative visit with the Carolinas Hospitalist Group or their primary care provider in addition to their preoperative visit with the Women's Center for Pelvic Health. These visits will be documented in the total office visit data collection.

Women in the Telemedicine group will check in for their preoperative visit via an Atrium Information Systems (IS) approved virtual communication platform at the scheduled date and time. They will undergo preoperative counseling following a standardized checklist format. After telemedicine counseling has concluded, participants will be emailed a REDCap survey link to complete a survey regarding their preparation for surgery. (See Figure 2) If a participant has not completed the survey by the next business day, an email reminder will be sent to their email address on file. If they have not completed the survey within 2 business days, they will be contacted by phone for reminder or survey will be obtained in the preoperative area on day of surgery. If a participant in the Telemedicine group ultimately elects to have an in-office preoperative visit, they will be scheduled for in-office visit and analyzed as intention-to-treat.

Women in the In-office group will present to WCPH for preoperative in-person counseling following a standardized checklist format. After in-office counseling has concluded, participants will be asked to complete a survey regarding preparation for surgery via a REDCap survey link on an Atrium IS approved iPad prior to leaving the office. (See Figure 2) If for any reason the patient did not complete the survey prior to leaving the office, the survey will be emailed to them in similar fashion as the telemedicine group.

PERIOPERATIVE PERIOD

Participants will present to Mercy Hospital, One Day Surgery Center, or CMC Main Hospital for their scheduled surgery. All participants will receive routine care according to the gynecologic enhanced recovery perioperative protocol. The gynecologic enhanced recovery perioperative protocol is a multimodal perioperative care pathway designed to achieve early recovery after surgery by maintaining preoperative organ function and reducing the physical stress of surgery on the body. This protocol includes many components including allowing patients to drink clear liquids up to 3 hours prior to their surgery, maintaining euvolemia intraoperatively, and early return to normal diet and activity after surgery. All patients undergoing pelvic reconstructive surgery are

scheduled for the enhanced recovery protocol, except for women having only minor procedures such as mid-urethral sling placement or cystoscopy.

POSTOPERATIVE PERIOD

All participants will undergo routine postoperative care. They will be scheduled for an in-office or virtual postoperative visit, on average 1-2 weeks after surgery and then an in-office visit at 6 weeks after surgery per our office standard practice. Following their 2-week postoperative visit, women will be asked to complete the preoperative subsection of the Surgical-CAHPS survey to evaluate patient satisfaction. This will be given to all patients in paper format prior to leaving the office or emailed to them via REDCap survey link. If a patient does not present to their 2-week postoperative appointment, they will be emailed a copy of the preoperative subsection of the S-CAHPS and this will be automatically uploaded into REDCap when submitted by the participant.

Following the 6 week postoperative visit, secondary data will then be extracted from the EMR via manual chart view.

RANDOMIZATION

An Atrium Health biostatistician will generate a randomization sequence using SAS Enterprise Guide 6.1. A permuted block randomization scheme will be used to assign patients in a 1:1 ratio to Telemedicine visit or In-office visit.

The study will not be blinded.

DATA COLLECTION AND MANAGEMENT

Data Collection Schedule

Case report forms will be developed by the investigators. Data will be collected prospectively per the schedule in Table 1. All study data will be recorded by research staff and securely maintained at the Mercy study site. The data flow will consist of paper data collection for eligibility assessment, baseline data, randomization, intervention group, primary and secondary outcomes, and protocol deviations.

Data will be entered by study staff into REDCap database that will be stored on a secure server at Atrium Health. Web-based survey responses will be linked to REDCap for automatic entry following participant submission of surveys. REDCap (Research Electronic Data Capture) is a secure, web-based application designed to support data capture for research studies providing: 1) an intuitive interface for validated data entry; 2) audit trails for tracking data manipulation and export procedures; 3) automated export procedures for seamless data downloads to common statistical packages; and 4) procedures for importing data from external sources (13).

Each patient will have a unique identification number to which only the principal and sub-investigators will have access. The data collection spreadsheet will not contain any patient identifiers and will be password protected. The master list that links the patients and their study information will be stored separately on a password protected hard drive. A back up copy of the file will be stored on a password protected hospital network drive. All hard copies of study data will be stored in a locked cabinet in the office of the research nurse, which will also be locked.

Table 1. Data Collection Schedule

	Prior to Preoperative visit	Preoperative visit	Period between Preop visit and surgery	Surgery	2 week postop visit	6 week postop visit
Informed consent	X					
Randomization	X					
Travel distance	X					
Internet Access/Usage	X	X				
Other Demographics*	X	X				
Patient Preparedness		X				
Patient Satisfaction					X	
Office visits		X	X		X	X
Cost metrics						X

*Other demographic data includes: Age, Race, Education level, Health literacy score, and number of prior surgeries.

Source of records to be reviewed

- Canopy EMR (electronic medical record)
- Preoperative Preparedness Survey
- S-CAHPS survey

Confidentiality of data

Electronic data will be stored to safe-guard confidentiality using a password protected computer. Principal investigator, Co-Investigator, Research Coordinator nurse, and Statisticians will have access to harvested patient data. Harvested patient data will be stored until final statistical analysis completed and manuscript accepted and published.

OUTCOME MEASURES

Primary Outcome Measure

a. **Patient Preoperative Preparedness:** Participants will complete a Preoperative Preparedness Survey following the preoperative visit. This will be graded on a 6-point Likert scale with responses ranging from “Strongly

Agree" to "Strongly Disagree". The summary score of 11 items will be calculated as the measurement of primary outcome. See Figure 2.

Secondary Outcome Measure

a. **Patient Satisfaction:** Patients will complete the preoperative portion of the Consumer Assessment of Healthcare Providers and Systems Surgical Care Survey (S-CAHPS) following the 2-week postoperative visit. S-CAHPS is a validated standardized questionnaire for adults developed by the American College of Surgeons (ACS) and other surgical specialty societies to assess patients' experiences before, during, and after surgery. The preoperative portion of this survey includes questions regarding Patient Satisfaction, Physician Communication, and Shared Decision Making. See Figure 3.
b. **Duration of visit:** Each preoperative visit will be timed to evaluate patient and provider visit duration. Timing will begin for the Telemedicine group upon connection to the virtual waiting room and will conclude after all counseling is completed and the virtual visit is disconnected. The duration of virtual visit counseling time with the provider will also be calculated. Timing for the in-office group will begin at time of patient check-in at the front desk and will conclude with patient check-out.
c. **Miles patient traveled:** Round trip travel distance from patient's home address to office will be evaluated via a HIPPA compliant map-based search engine for each participant.
d. **Office contacts:** The total number and type of office contact between the preoperative visit and the 6-week postoperative visit will be collected via manual chart review. Type of office contact visits include patient-initiated calls, nurse-initiated calls, scheduled office visits, and add-on office visits.
e. **Canceled, No-show, and late visits:** If patients call to cancel their appointment this will be considered a canceled preoperative visit. Rescheduled appointment will be noted. Patients who arrive to their visit later than 10 minutes will be considered late for each group. If patients do not present for their visit, it will be considered a No-show appointment.
f. **Calculated value proposition metrics:** The length of visit will be compared between groups. Office schedules will be analyzed and will determine the percentages of new patient visits and preoperative visits. If preoperative visits are replaced with new patient visits over a month, based on institutional data, anticipated new operative cases and projected revenue impact on the health care system will be determined. Costs of video based virtual visit platform will also be calculated.

STATISTICAL CONSIDERATIONS

Statistical Methods

The primary analysis will compare summary scores of preparedness between both study groups. Non-inferiority of virtual visit compared with in-person visit

would be claimed if the upper limit of the one-sided 95% confidence interval for the mean differences of scores between two groups will not exceed the pre-specified margin of 9 points. Descriptive statistics will be calculated to assess level of preparedness for each question. Secondary outcomes, demographics, and other baseline variables will be compared between the two groups using the Chi squared test or Fisher's exact test for categorical data, Student's t test for normally distributed data, and the Wilcoxon rank sum test for ordinal data or continuous data that are not normally distributed.

Sample Size Calculation

Sample size calculations were based on two-group non-inferiority comparisons of patient preoperative preparedness for surgery using two-sample t-test. The following assumptions were made: the margin of non-inferiority is 9.0 and the data are drawn from populations with standard deviations of 15.0. A sample size of 45 in each arm is needed to achieve a power of 0.8 with α=0.025. Considering a 30% drop out rate, we will require 59 patients in each group and a total of 118 participants. The power was calculated by using the PASS 15 (2017, NCSS, LLC. Kaysville, Utah, USA).

STUDY DOCUMENTATION AND MONITORING

Documentation

All study documents included in this protocol that will be presented to subjects will be submitted to the IRB for review. The site will maintain a study binder that will include the following:

- Enrollment log of patients that have consented to be in the study (electronic version)
- Protocol deviation log (electronic version)
- Adverse event log (electronic version)
- Investigator protocol and amendments
- IRB submissions, modifications, and renewals
- Data safety monitoring committee reports
- IRB approved verbal consent forms
- Data collection forms

Study Monitoring

The Principal Investigator will monitor the study and assess the need for amendments as the study progresses. The PI will review the progress of each subject on the study and will apprise the IRB of adverse events or unexpected problems that may influence the IRB's decision to allow the trial to continue, in accordance with the IRB's standard operating procedures and policies. A protocol revision may be necessary for reasons including but not limited to rights, confidentiality of participants, welfare of participants, and thus, an

amendment will be required. Appropriate approvals (i.e., IRB) of the revised protocol must be obtained prior to implementation.

An independent, external physician will be appointed to serve as the Data safety monitor and will review the study data every 6 months. Data and safety monitoring responsibilities will consist of review of the research protocol and ongoing study activities, including review of data quality and completeness, review of fidelity to the study protocol, review of adequacy of participant recruitment and retention, review of adverse events, and making recommendations to the study PI and to the IRB concerning trial continuation, modification, or conclusion. Such monitoring helps to safeguard subject safety, ensure data quality, and provide ongoing training and support to ensure compliance. The PI (Elizabeth Braxton, MD) will be responsible for ensuring that the study complies with the data safety monitors' requests.

Data Safety Monitoring

Biannual reports detailing the study progress and subject status, any adverse events, and any protocol deviation will be submitted to the safety monitor for review. The research coordinator will inform all study staff members of any unanticipated problems involving risks to study subjects or others.

Protocol Deviations

Protocol deviations will be documented and logged on the Protocol Deviations log (electronic version). This will be done for every protocol related deviation related to any portion of the study timeline. Deviations will be reviewed and evaluated on an ongoing basis, and, as necessary, appropriate corrective and preventive actions (including notification, re-training, or discontinuation) will be put in place.

References:

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13. Harris PA, Thielke R, Payne J, Gonzalez N, Conde JG. Research electronic data capture (REDCap)- a metadata-driven methodology and workflow process for providing translational research informatics support. J Biomed Inform. 2009 Apr; 42(2):377-81.]

Figure 1: Consort Flow Diagram

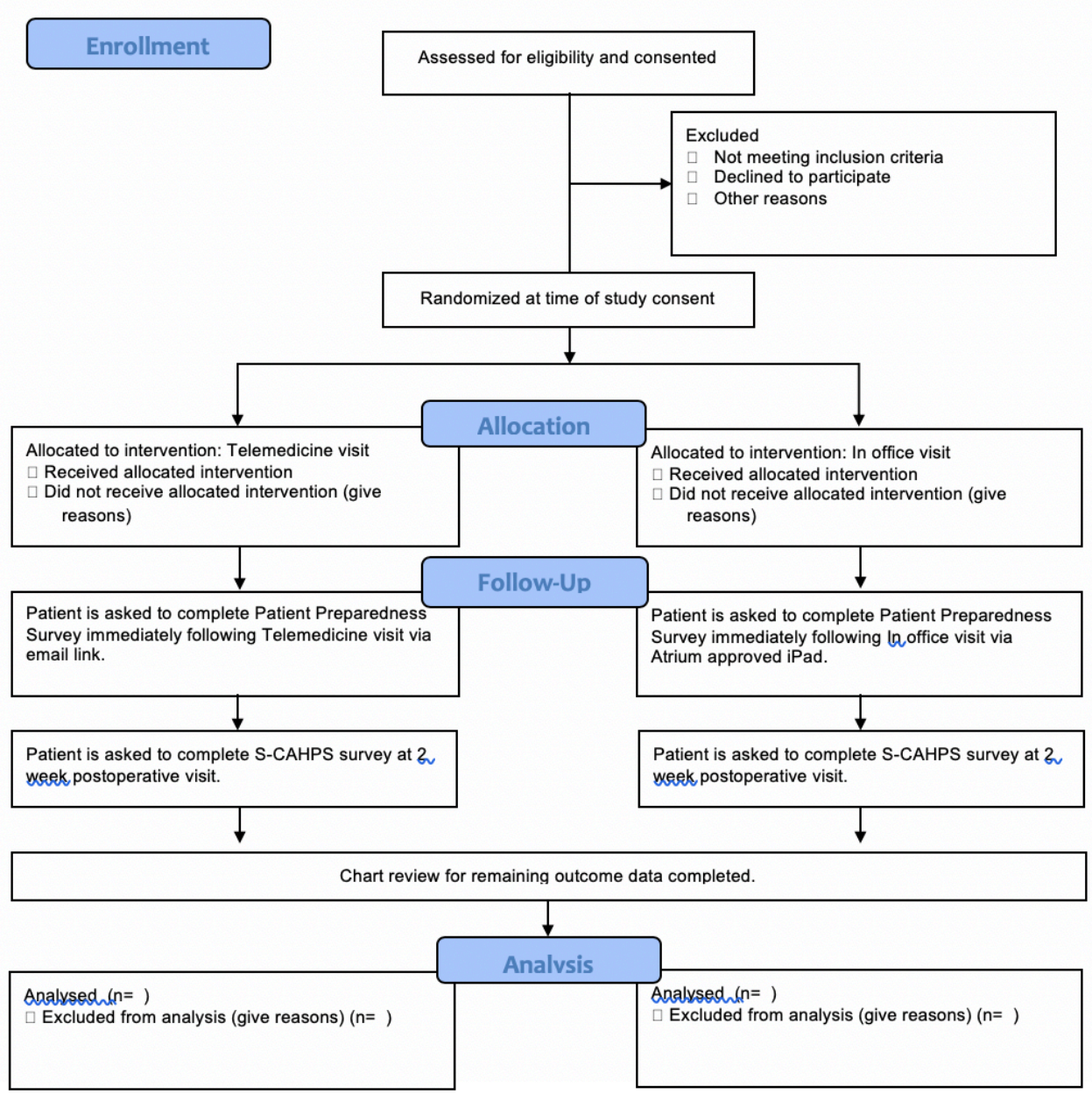

Figure 2: Preoperative Preparedness Survey

Your Privacy is Protected. All information that would let someone identify you or your family will be kept private. The Women's Center for Pelvic Health will not share your personal information with anyone. Your responses to this survey are also completely **confidential**.

Your Participation is Voluntary. You may choose to answer this survey or not. If you choose not to, this will not affect the health care you get.

What To Do When You're Done. Once you complete the survey, please click the submit button. Your survey will be saved to our secure database.

If you want to know more about this study, please call Elizabeth Braxton, MD at 803-261-3377 or email at Elizabeth.braxton@atriumhealth.org

Survey Instructions

Answer each question by clicking the box to the left of your answer. When you have selected your desired response, please click "Next".

1 ☒ Yes
2 ☐ No

1. I know about the *Alternatives* to the planned surgery.

1☐ Strongly agree
2☐ Agree
3☐ Somewhat agree
4☐ Somewhat disagree
5☐ Disagree
6☐ Strongly disagree

2. I understand the *Purpose* of the planned surgery (what this surgery can accomplish).

1☐ Strongly agree
2☐ Agree
3☐ Somewhat agree
4☐ Somewhat disagree
5☐ Disagree
6☐ Strongly disagree

3. I understand the *Benefits* of the planned surgery (how this surgery should help me).

1☐ Strongly agree
2☐ Agree
3☐ Somewhat agree
4☐ Somewhat disagree
5☐ Disagree
6☐ Strongly disagree

4. I understand the *Risks* of the planned surgery (what are the chances of something not going the way my doctor and I want it to go?).

1☐ Strongly agree
2☐ Agree
3☐ Somewhat agree
4☐ Somewhat disagree
5☐ Disagree
6☐ Strongly disagree

5. I understand the *Complications* of the planned surgery (what problems can come from this surgery?).

1☐ Strongly agree
2☐ Agree
3☐ Somewhat agree
4☐ Somewhat disagree
5☐ Disagree
6☐ Strongly disagree

6. I feel prepared about *what to expect after surgery* <u>while I am in the hospital</u>.

1☐ Strongly agree
2☐ Agree
3☐ Somewhat agree
4☐ Somewhat disagree
5☐ Disagree
6☐ Strongly disagree

7. I feel prepared about *what to expect after surgery* <u>when I am at home</u>.

1☐ Strongly agree
2☐ Agree
3☐ Somewhat agree
4☐ Somewhat disagree
5☐ Disagree
6☐ Strongly disagree

8. I feel prepared to cope with a *catheter* after the surgery <u>while I am at the hospital</u>.

1☐ Strongly agree
2☐ Agree
3☐ Somewhat agree
4☐ Somewhat disagree
5☐ Disagree
6☐ Strongly disagree

9. I feel prepared to cope with a *catheter* after the surgery <u>when I am at home</u>.

1☐ Strongly agree
2☐ Agree
3☐ Somewhat agree
4☐ Somewhat disagree
5☐ Disagree
6☐ Strongly disagree

10. My doctors and nurses have spent enough time preparing me for my upcoming surgery.

1☐ Strongly agree
2☐ Agree
3☐ Somewhat agree
4☐ Somewhat disagree
5☐ Disagree
6☐ Strongly disagree

11. Overall, I feel prepared for my upcoming surgery.

1☐ Strongly agree
2☐ Agree
3☐ Somewhat agree
4☐ Somewhat disagree
5☐ Disagree
6☐ Strongly disagree

Think about the type of preoperative visit you had prior to your surgery.

12. Please select the type of visit you had:

1☐ In-office visit
2☐ Virtual visit

13. How satisfied are you with the visit that you had before your surgery?

1☐ Very satisfied
2☐ Satisfied
3☐ Neither satisfied or dissatisfied
4☐ Not satisfied
5☐ Very dissatisfied

14. How would you rate the level of convenience of the visit (virtual or in-person)?

1☐ Very convenient
2☐ Convenient
3☐ Neither convenient or inconvenient
4☐ Not convenient
5☐ Very inconvenient

15. If you need to have surgery in the future, would you like to have this type of visit again?

1☐ Yes
2☐ No
3☐ Not sure

16. Would you recommend the type of visit you had to a friend?

1☐ Yes
2☐ No
3☐ Not sure

17. If in the future our clinic offered the option to have a preoperative visit using virtual visit technology or an in-person clinic visit, which would you prefer?

1☐ Virtual visit
2☐ In-person clinic visit
3☐ No preference

18. What types of technology have you used in the past to access health care services or personal health information? Select all that apply:

1☐ Video conferencing (virtual visit)
2☐ Email
3☐ Text messaging
4☐ Patient Portal (e.g. My Carolinas)
5☐ Mobile health (accessing health services of personal health data via mobile devices)
6☐ Other: _____
7☐ None

The following questions will help us determine comfort level with health information.

19. How often do you have someone (like a family member, friend, hospital/clinic worker, or caregiver) help you read hospital materials?

1☐ None of the time
2☐ A little of the time
3☐ Some of the time
4☐ Most of the time
5☐ All of the time

20. How often do you have problems learning about your medical condition because of difficulty understanding written information?

1 ☐ None of the time
2 ☐ A little of the time
3 ☐ Some of the time
4 ☐ Most of the time
5 ☐ All of the time

21. How confident are you filling out forms by yourself?

1 ☐ Extremely
2 ☐ Quite a bit
3 ☐ Somewhat
4 ☐ A little bit
5 ☐ Not at all

Figure 3. Postoperative visit survey

Your Privacy is Protected. All information that would let someone identify you or your family will be kept private. The Women's Center for Pelvic Health will not share your personal information with anyone. Your responses to this survey are also completely **confidential**.

Your Participation is Voluntary. You may choose to answer this survey or not. If you choose not to, this will not affect the health care you get.

What To Do When You're Done. Once you complete the survey, please return the survey to your nurse.

If you want to know more about this study, please call Elizabeth Braxton, MD at 803-261-3377 or email at Elizabeth.braxton@atriumhealth.org

Survey Instructions

Answer each question by clicking the box to the left of your answer. When you have selected your desired response, please click "Next".

1 ☒ Yes
2 ☐ No

1. **Before your surgery, how many visits did you have with your surgeon and their assistant surgeons?**

[1] ☐ None
[2] ☐ 1 visit
[3] ☐ 2 visits
[4] ☐ 3 visits
[5] ☐ 4 to 6 visits
[6] ☐ 7 or more visits

2. **A health provider could be a doctor, nurse, or anyone else you would see for health care. Before your surgery, did anyone in your surgeon's office give you all the information you needed about your surgery?**

[1] ☐ Yes, definitely
[2] ☐ Yes, somewhat
[3] ☐ No

3. **Before your surgery, did anyone in your surgeon's office give you easy to understand instructions about getting ready for your surgery?**

[1] ☐ Yes, definitely
[2] ☐ Yes, somewhat
[3] ☐ No

4. **During your visits before your surgery, did your surgeon or their assistant surgeon tell you there was more than one way to treat your condition?**

[1] ☐ Yes
[2] ☐ No

5. During your visits before your surgery, did your surgeon or their assistant surgeon ask which way to treat your condition you thought was best for you?

[1] ☐ Yes
[2] ☐ No

6. During your visits before your surgery, did your surgeon or their assistant surgeon talk with you about the reasons you might want to have the surgery?

[1] ☐ Not at all
[2] ☐ A little
[3] ☐ Some
[4] ☐ A lot

7. During your visits before your surgery, did your surgeon or their assistant surgeon talk with you about the reasons you might not want to have the surgery?

[1] ☐ Not at all
[2] ☐ A little
[3] ☐ Some
[4] ☐ A lot

8. During the visits before your surgery, did your surgeon or their assistant surgeon listen carefully to you?

[1] ☐ Yes, definitely
[2] ☐ Yes, somewhat
[3] ☐ No

9. During your visits before your surgery, did your surgeon or their assistant surgeon spend enough time with you?

[1] ☐ Yes, definitely
[2] ☐ Yes, somewhat
[3] ☐ No

10. During your visits before your surgery, did your surgeon or their assistant surgeon encourage you to ask questions?

[1] ☐ Yes, definitely
[2] ☐ Yes, somewhat
[3] ☐ No

11. During your visits before your surgery, did your surgeon or their assistant surgeon show respect for what you had to say?

[1] ☐ Yes, definitely
[2] ☐ Yes, somewhat
[3] ☐ No

12. During your visits before your surgery, did anyone in your surgeon's office use pictures, drawings, models, or videos to help explain things to you?

[1] ☐ Yes
[2] ☐ No

13. Did these pictures, drawings, models, or videos help you better understand your condition and its treatments?

[1] ☐ Yes, definitely
[2] ☐ Yes, somewhat
[3] ☐ No**,** these were not helpful.
[4] ☐ No, my surgeon's office did not use these.

Think about the type of preoperative visit you had prior to your surgery.

14. Please select the type of visit you had:

1 ☐ In-office visit
2 ☐ Virtual visit

15. How satisfied are you with the visit that you had before your surgery?

1 ☐ Very satisfied
2 ☐ Satisfied
3 ☐ Neither satisfied or dissatisfied
4 ☐ Not satisfied
5 ☐ Very dissatisfied

16. How would you rate the level of convenience of the visit (virtual or in-person)?

1 ☐ Very convenient
2 ☐ Convenient
3 ☐ Neither convenient or inconvenient
4 ☐ Not convenient
5 ☐ Very inconvenient

17. If you need to have surgery in the future, would you like to have this type of visit again?

1 ☐ Yes
2 ☐ No
3 ☐ Not sure

18. Would you recommend the type of visit you had to a friend?

1 ☐ Yes
2 ☐ No
3 ☐ Not sure

19. **If in the future our clinic offered the option to have a preoperative visit using virtual visit technology or an in-person clinic visit, which would you prefer?**

[1] ☐ Virtual visit
[2] ☐ In-person clinic visit
[3] ☐ No preference