Improving Patient Understanding of Uterine Fibroid Surgery and Morcellation using Video-enhanced Intervention: A Pilot Feasibility Study

By

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12 April 2016
Date

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12 April 2016
Date
Abstract

Background: Uterine fibroids affect 80% of women and are the indication for approximately 200,000 surgeries annually in the United States. It is estimated that 63% of these surgeries are done using minimally invasive techniques. Laparoscopic hysterectomy and myomectomy for uterine fibroids are procedures that have been subject to recent controversy when they are paired with morcellation. These complex and controversial procedures provide a platform for investigation and improvement of preoperative patient education techniques.

Objectives: (1) To create a complete research design guiding the conduct of a patient centered feasibility study, to be undertaken at a later time, to measure how and why patients prefer different types of counseling/education (usual verbal counseling vs. video enhanced education/counseling) as they approach minimally invasive gynecologic surgery for uterine fibroids; (2) To prepare the investigation with grounding in the literature on the effectiveness of strategies to improve patient understanding, comfort, and satisfaction when they are used to explain a complicated and controversial surgical technique (e.g. morcellation and uterine fibroid surgery)

Methods: This is the research design for a multi-site pilot feasibility study aimed at recruiting 150 women undergoing laparoscopic hysterectomy or myomectomy for uterine fibroids where morcellation is anticipated for tissue extraction. The design grounds hypotheses and methods in the literature, develops or modifies educational tools and patient surveys to assess the tools’ effectiveness, and considers the recruitment and analysis obstacles associated with such a study. The general design includes proposing to recruit potential study participants at their preoperative surgical consultation. They would be offered the opportunity to participate in the
study after the decision to have surgery has been made, but before they sign surgical consent documentation. Those who are willing to participate will sign informed consent documentation. Participants will then proceed with their preoperative consultation visit and receive patient-centered preoperative counseling via their surgeon, after which they would then be offered the opportunity to view a supplemental educational video about their procedure (i.e. laparoscopic hysterectomy or myomectomy). The potential for the educational video to produce distress or discomfort means that randomization is not an appropriate design: patients should have the ability to “opt in” and, even after they have done so, to stop viewing the video if it becomes distressing. The contribution of this design to future research is its patient-centeredness, since it seeks to understand what kinds of patients seek and can benefit from what kinds of education. For these reasons, all participants’ completion of a baseline survey and the completion of follow-up surveys is critically important to our ability to analyze differences between patients who seek further education and those who do not, and to understand how those differences may be associated with their operative and postoperative experiences...
Acknowledgements

I am forever grateful for the unwavering support I have received from Dr. Tolleson-Rinehart and Dr. Siedhoff. You have pushed me to maximize my abilities academically and personally. I have become a better writer, researcher, and person as a result of your guidance and sacrifice. You have supported me through many of life's challenges. I've achieved a new level of understanding and respect for mentorship that I will perpetuate to those who follow. I look forward to what's in store in the future. Special thanks to Dr. Mireille Truong for helping us develop the scripts and the patient education videos. This project would not be possible without her hard work and diligence. I look forward to carrying out this project all the way through to publication with you all.
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Introduction

The decision to have surgery has lasting implications and should be accompanied by thorough, evidence-based, patient-focused counseling and education. Physicians differ widely in style, communication preferences, and overall ability to provide patients with counseling and education. Some counseling and education strategies may prove more effective at maximizing patient understanding and satisfaction than do others. With an emerging emphasis on patient-centered outcomes, there ought to be an accompanying sense of urgency for the development of effective instruments for measuring these outcomes. The objectives of this paper and pilot study are to craft the complete research design necessary to conduct a feasibility study (at a later time) of patients’ preferences for different types of counseling/education (usual verbal counseling vs. video enhanced education/counseling) as they approach minimally invasive gynecologic surgery for uterine fibroids; and to investigate the effectiveness of these different educational techniques’ capacity to improve understanding, comfort, and satisfaction in patients who will undergo a complicated and controversial surgical technique, morcellation for the removal of fibroid.

“Morcellation” is a form of minimally invasive surgery (MIS) because it is done laparoscopically. Morcellation involves the cutting of tissue into pieces or strips prior to removing it, and it is required for removing large tissue specimens in MIS. Recently, morcellation has received a great deal of attention, much of it unfavorable. It has been the subject of FDA safety communications (April and November 2014) and multiple lay press publications about the risk of the technique disseminating occult malignancy in gynecologic surgery for uterine fibroids. Gynecologic surgeons have made changes to this surgical technique in order to protect patients and to maintain the minimally invasive approach to this procedure. Despite recent emphasis on the risks associated with these procedures, decision analysis research indicates that these risks are balanced by the risks associated with open surgery (i.e. laparotomy). True patient understanding of the risks and benefits of minimally
invasive surgery (MIS) and the use of morcellation could be missed in traditional informed consent discussions. Evaluation and improvement of our current preoperative counseling and patient education strategies is essential to strengthening patient autonomy and informed decision-making ability.

**Background and Significance**

Since the mid-1980s quality has emerged as a prime target for improvement in health care; the Affordable Care Act explicitly seeks to encourage higher quality. The Institute of Medicine (IOM) defines quality as “the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge” ¹. Effective communication is one of the most important components of a meaningful physician-patient relationship. It is essential to establishing trust, facilitating patient education, and promoting patient autonomy. The decision to have a surgical procedure has lasting implications for patients. Patients require thorough, evidence-based counseling and education to make these important decisions.

Increasingly, quality is being evaluated in terms of its patient-centeredness. Standard methods of verbal preoperative counseling and education, though potentially effective, might not be suitable for all patient populations. Perioperative counseling should take into account the variables that will facilitate maximal patient understanding and patient autonomy, but research on the interactions of patient characteristics and needs and physician counseling and education styles is not yet rich enough to offer complete guidance. Without ensuring that patients understand the surgical procedures they are about to undergo, health care providers cannot be confident that patients are actually providing informed consent. Delivery of important and often complicated health information to patients without ensuring a high level of patient understanding, no matter who the patient is, goes against the essence of a meaningful physician-patient relationship and puts the concept of informed consent under scrutiny.
Recent controversy around MIS for uterine fibroids (e.g. hysterectomy and myomectomy) using morcellation makes these cases a good target for improvement in communication between physician and patient. The FDA released safety communications in April and November 2014 addressing the risk of disseminating occult malignancy in these surgeries. Although the FDA statement\(^2\) and lay press\(^3,4\) emphasize the risks associated with these procedures, decision analysis research\(^5\) indicates these risks are balanced by risks associated with the alternative technique, laparotomy. True understanding of the benefits of MIS and the risks associated with laparotomy may be missed or poorly understood in informed consent discussions. Given the context, it is important to evaluate the effectiveness of our current counseling methods, as well as create new ones, to strengthen patients’ ability to make informed decisions as they approach their upcoming procedure.

Leiomyomata (fibroids) are common, affecting 80% of women, and leading to approximately 200,000 hysterectomies done for this indication each year in the United States. In 2012, 63% of those cases were performed using MIS. The benefits of MIS have been widely documented\(^6,7\), and include significant improvements in morbidity and mortality over open surgery. These benefits are also transferrable to women undergoing fertility preserving MIS for management of fibroids, such as myomectomy\(^8\).

Morcellation, however, has been associated with benign or malignant tissue dissemination. Morcellation is contraindicated in cases of known or suspected uterine malignancy, but preoperative identification of uterine malignancy remains challenging. Leiomyosarcoma (LMS), in particular, is both aggressive and impossible to differentiate reliably from benign myomatous disease. Recently, the practice of morcellation has come under increased scrutiny, and the FDA issued a safety communication about a specific type of morcellation, known as power morcellation. Power or electromechanical morcellation was approved by the US Food and Drug Administration (FDA) in 1995 and has facilitated increased use of MIS for many women with large uteri. Other types of morcellation include manual...
morcellation with a scalpel, through a minilaparotomy or colpotomy incision, with or without a specimen retrieval bag. No data yet demonstrate the comparative safety of various morcellation techniques. The exact prevalence of occult malignancy, the number of patients with cancer who have undergone surgery with morcellation, and the effect of morcellation on outcomes in these rare cases are not fully known.

Gynecologists, on the whole, think MIS has benefits for patients undergoing surgery for uterine fibroids. The controversial portrayal of morcellation, incomplete understanding on the part of patients, an incomplete outcomes evidence base, and the competing desire of physicians to provide patients with optimal surgical outcomes via MIS further complicates the role of the physician in promoting patient autonomy through education and counseling. The gynecologist’s duty to provide patients with preoperative counseling about the risks and benefits of surgery for uterine fibroids is clouded by patient (and, sometimes, physician) confusion surrounding morcellation, the FDA warnings, and the difficulty of communicating effectively with patients on these issues.

There may be parallels with similar types of counseling challenges in other gynecologic procedures. In sacrocolpopexy, a pelvic support procedure, women are consistently deficient in their understanding of the operative procedure; despite reportedly detailed preoperative discussion.\(^9\) Similar inadequacies in understanding were noted in another study examining patients’ experience, recall, and satisfaction in gynecologic emergency surgery.\(^{10}\)

In general, preoperative counseling should cater to the patient in such a way that it maximizes her level of understanding. Verbal consent may be insufficient in various circumstances, such as for patients with limited health literacy and especially for procedures involving nuanced decision points, such as in MIS for fibroids. Improved communication during the consent process can assert patient autonomy and improve the patient-centered experience. The value of these improvements needs to be investigated scientifically through the use of supplemental educational materials and/or decision aids, and patient assessment of these aids.
Understanding how patients with different levels of education, literacy, health literacy, socioeconomic status, and learning style respond to different counseling styles could lead to tailored counseling interventions, designed to “meet the patient where she is.” Getting to this point will require starting from the beginning, with pilot feasibility studies of patient education interventions and measurement of the patient variables that will let us understand the most effective improvement strategies. Our understanding of improved communication about MIS for fibroids could lead to designing new, evidence-based tools for surgeons to use in preoperative counseling.
Methods

Study Administration

The present paper is a complete research design intended to guide a multi-site pilot feasibility study aimed at recruiting 150 women undergoing laparoscopic hysterectomy or myomectomy for uterine fibroids where morcellation is anticipated for tissue extraction. Our intention is to conduct the pilot study at institutions such as the University of North Carolina at Chapel Hill, Duke University, and New York-Presbyterian/Columbia Hospital. The following pages develop the methods involved in creating patient education tools and patient-reported assessments both of the tools and their operative and postoperative experiences. The goal of this research design is to prepare a rigorous test of the comprehensibility and value of enhanced patient education, with particular attention to differences among patients that can help us understand when and how such enhanced education can be offered.

This feasibility study begins with the assumption that we cannot and should not randomize women to exposure to an enhanced education tool before we test that tool’s acceptability and comprehensibility. This first feasibility study, then, is designed as a kind of “proof of concept:” do willing volunteers find a detailed and even graphic video explanation of power morcellation to be a tolerable way to improve their understanding of the procedure? Thus the design requires the investigative team to ask patients to participate in the study during their routine preoperative consultation visit, after they have made the decision to have surgery, but before they have signed their surgical consent forms. Women who agree to participate will sign informed consent documentation. They will then proceed with their routine preoperative visit for their laparoscopic hysterectomy or myomectomy. During this preoperative visit, patients will receive the usual verbal preoperative counseling from their own providers, who will give them their usual explanations of the surgical procedure and morcellation.

Following the usual care patient-centered counseling, patients who agree to participate will be offered the opportunity to watch a supplemental educational video about their procedure -
- e.g. laparoscopic hysterectomy or myomectomy and morcellation. The educational video will explain what fibroids are, and it will discuss hysterectomy and myomectomy via various surgical approaches. It will discuss basic concepts of laparoscopy, morcellation, the controversy now surrounding morcellation, and the steps taken to protect the patient during morcellation procedures. The video differs from usual care verbal preoperative counseling by surgeons or other providers because it contains animations, diagrams, short clips of surgical footage, and other educational modes (see still images from the video in Figure 1). The video’s very extensive and even graphic information is what necessitates an initial test of its acceptability and comprehensibility to patients: before investigators can plan a randomized trial of this educational tool, we need patient reactions to and assessments of it.

Figure 1 about here

This design allows patients who have chosen to watch the video to stop it, and withdraw from further viewing of the supplemental educational material, at any point and for any reason, including feeling any emotional discomfort. We will ask all participants, including those who opt not to begin watching the video and those who choose to stop watching, to complete a baseline survey about their understanding of their procedure. We will also ask their consent to complete a follow-up survey during their postoperative visit, and we will seek their consent to link their surgical outcomes to their survey results by reviewing their charts (see the survey instruments in Appendix B). Once we have linked baseline and follow-up survey data and outcomes derived from chart review, we will anonymize the data. The baseline survey will be administered at the preoperative visit, and all women will complete the baseline survey following their counseling but before they have watched the video, should they choose to view it. We will gather demographic and cognitive information, such as patients’ level of education, and the ways they prefer to learn about their health.

The follow-up survey will be administered at the post-operative visit. The post-operative visit is generally scheduled at the surgeon’s discretion, but will likely be within 4-6 weeks
following the operation. Following their post-operative discussion and examination, we will invite those who had agreed to be approached again for completion of the follow-up survey.

In the postoperative survey, we will assess how informed they felt with regard to their procedure, their level of understanding of morcellation and the controversy surrounding it, what they understand about the procedure, how comfortable they feel about their ability to make an informed decision, and patient anxiety.

The follow-up survey will assess what patients remembered from their counseling experience, whether or not the surgical procedure/experience met their expectations based on their chosen counseling method, and patient satisfaction. We are cognizant of the possibility of recall bias and of retrospective attitude reconciliation, but in this initial feasibility study, the nature of patients’ recall of their counseling is actually a variable of analytical interest, and not just a “confounder.” We are particularly interested, for example, in what patients who viewed the video remembered about it.

The baseline and follow-up surveys will be administered using UNC Qualtrics survey software. This will require that patients have private access to a computer in the clinic. Under optimal conditions, this can occur in patient rooms. For situations where this is not feasible, we will provide a paper version of the survey. The contents of the baseline and follow-up surveys can be found in the Methods Appendix.

**Inclusion Criteria**

Patients are eligible for the study if they

1. Provide consent to participate in the study;
2. Have not yet signed their surgical consent forms;
3. Have signed the informed consent before any study specific procedures are performed.
4. Are between 18 and 70 years of age
5. Intend to undergo laparoscopic hysterectomy or myomectomy for uterine fibroids where morcellation is anticipated to be needed for tissue extraction, but where other pathology (e.g. cancer) is not suspected

Exclusion Criteria

Patients are not eligible for the study if they fulfill any of the exclusion criteria below:

1. Unwillingness or inability to provide informed consent
2. Does not speak English
3. Pregnant: any patient who is undergoing elective gynecologic surgery for uterine fibroids (i.e. hysterectomy or myomectomy) will undergo urine or serum pregnancy testing during her preoperative visit. Those patients with positive pregnancy tests will not be included in this study. Results of pregnancy testing will be extracted clinically or via the medical record by the surgeon.
4. Is suspected of having uterine malignancy or other uterine conditions beyond uncomplicated leiomyomata

Survey Instruments

The first author completed the baseline and follow-up questionnaires by creating some new indicators (in consultation with his advisor) and combining them with publicly available questions provided by the Patient Reported Outcomes Measurement Information System (PROMIS) and the Consumer Assessment of Health Care Providers and Systems (CAHPS).

PROMIS is an NIH-supported research methodology, and the use of the PROMIS method generates rigorous patient-centered outcomes indicators of physical, mental, and social health. Using measures validated via the PROMIS method confers a number of benefits, especially for a pilot feasibility study like that of the present design. The measures have been developed according to a state of the art method of survey indicator development. They are
standardized, which allows for generalizability of results across conditions and institutions. They provide a high level of precision, which is a product of thorough and meticulous validation. PROMIS measures are versatile in their application, which allows for innovative administration in varying research areas and clinical fields. Most importantly, PROMIS measures have been constructed in such a way that they can be applied to individuals with varying educational, personal, and cultural backgrounds (e.g. literacy, numeracy, language, etc.) 11.

The CAHPS survey measures are based on two patient-centered care concepts: “The people who received care are the best and/or only source of the information”12 and “Consumers and patients identified the information as important to them”12. These measures seek to capture aspects of the patient care experience (e.g. physician-patient communication, patient understanding) that are key in the improvement of health care delivery and promotion of patient satisfaction. The survey materials are standardized for ease and precision of survey administration12. CAHPS measures have also been used widely in a variety of settings for more than two decades, and they are the result of the application of very rigorous survey methodology.

The incorporation of PROMIS and CAHPS items will strengthen the reliability and validity of this feasibility study’s results, and provides a foundation upon which to build our own original measures of patient comprehension of, and preference for, different educational modes.

Statistical Analysis

We will examine all data for completeness. Using univariate analysis, we will generate frequency distributions on all variables to determine data patterns and rates of missing data. We will establish associations among categorical and continuous variables using Chi-square and two-sample t-test analysis, respectively. Specifically, we will establish associations between the dependent variables (e.g. patient knowledge, understanding, satisfaction, anxiety) and important
independent demographic and cognitive variables (level of education, prior preference for involvement in health care decision-making, literacy). We will use paired t-test to compare patient satisfaction before and after the procedure with the understanding that patient opinions and feelings about their procedure and counseling are likely to change over time. We will use a multivariable ANCOVA model to assess the relationship between counseling method and outcomes of interest (e.g. patient understanding, patient satisfaction), controlling for confounders. We will use a p-value of <0.05 to determine statistical significance.

Discussion

Following execution of the pilot study, I anticipate that the patient education video will improve patient understanding and satisfaction, when compared to counseling alone, prior to MIS for uterine fibroids. Such improvements will likely persist in the follow-up survey results. Patient knowledge will likely correlate with patient level of education and health literacy. Given that pre-operative visits are subject to anxiety regardless of patient background, I anticipate that there will be subtle improvements in anxiety amongst video watchers that will not be statistically significant.

There will likely be a subset of the study population who will choose to “opt out” of watching the educational video, and I hypothesize that those who choose not to view the video will be more likely to offer “lack of time” as a reason than general discomfort. This will mainly have implications for feasibility of future studies involving potential randomization and inclusion of more surgical footage. We will pay special attention to determining which patients prefer audiovisual information vs. not and why when considering the development of a randomized controlled trial.
The video will especially be beneficial to patients with lower health literacy and levels of education given the additional time and repetition provided by our intervention. Individuals who choose to watch the video will likely recommend the video to others and would watch it over again if they had the opportunity.

Conclusion
Overall, the adoption of video-enhanced patient education interventions is extremely beneficial as a supplement to standard verbal pre-operative counseling. This study will provide guidance in determining which patients prefer and benefit most from such an intervention and why. If feasible, the results of this study will be used to guide future randomized controlled trials in MIS gynecologic surgery for uterine fibroids with the overall aim of improving the informed consent process and the doctor-patient relationship. By strengthening provider-patient communication we maximize patient autonomy and decision-making capacity.
References


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Figure 1. Examples of Graphic Elements in Educational Video

Hysterectomy Approaches with skin incisions

Myomectomy vs. Hysterectomy
Figure 1. continued

Opening Slide

Fibroid Uterus
Figure 1. Continued

Post-Operative Recovery (Open vs. Minimally Invasive Surgery)

Power Morcellation
Power Morcellation inside a bag

Hand Morcellation inside a bag

Figure 1. Continued
Figure 2. Methods Flow Chart
Appendix A, Limited Systematic Review

Methods

I performed a literature search for relevant articles using PubMed (MEDLINE) and EMBASE databases on June 9, 2015. The respective search strings are displayed in table 2. Search articles were limited to those written in the English language. The search strategy is outlined in Figure 1 and involved five stages: article identification through database searches, removal of duplicates, title and abstract screening, full-text assessment of articles for eligibility, and inclusion in the final qualitative review.

The first stage involved searching MEDLINE, which yielded 779 articles. Next, the EMBASE search yielded an additional 131 articles, for a total of 853 articles available for the second stage of screening. 20 duplicate articles were removed prior to title and abstract screening. Title and abstract screening deemed 833 articles irrelevant. Full-text review began with 20 articles. Studies were excluded if they were/had: Non-English speaking populations, no relation to laparoscopic surgery, not related to videos, and non-adult population. Furthermore, studies were included in the critical appraisal if they reported one of the three following outcomes: patient satisfaction, patient anxiety, and/or patient understanding/comprehension.

Patient Knowledge

Ellet et al. performed a randomized controlled trial of 41 patients undergoing laparoscopic surgery for pelvic pain. All patients underwent a standard informed consent process and were then randomized to the multimedia module (intervention, n=21) vs. not (control, n=20). The multimedia module (MM) group demonstrated superior knowledge scores 11.3 (0.49) vs. 7.9 (0.50) in the control group (p<0.0001) (maximum score, 14). There was no significant difference in knowledge scores after 6 weeks (8.4 vs. 7.8, p=.44)\textsuperscript{13}. 
In the systematic review by Nehme et al., 16 of 22 (73%) studies showed statistically significant improvements in patient comprehension among the Multimedia Module (MM) participants. None of the included studies showed better comprehension among the control group versus the MM group\(^\text{15}\). Three randomized controlled trials included in the Cochrane Review by Gurusamy et al reported data on patient knowledge. When comparing formal education to standard care, there was no significant difference in patient knowledge (SMD 0.19, 95% CI -0.02 to 0.41)\(^\text{14}\).

Patient Satisfaction

Sahai et al reported patient satisfaction using the Client Satisfaction Questionnaire (CSQ-8) in a prospective study of 43 patients (14 male, 29 female) undergoing laparoscopic nephrectomy for various indications\(^\text{16}\). The mean CSQ-8 score was 29.8 for all groups (video viewers vs. Non-viewers), with a maximum of 32 points. Nehme et al reported patient satisfaction being rated "very high" in 75% of the 33 studies that evaluated a variety of MM modalities\(^\text{15}\). In two trials review by Gurusamy et al, patient satisfaction was found to be significantly higher in the patient education group using the fixed effect model (SMD 0.34; 95% CI 0.04 to 0.65) despite there being no significant difference with respect to patient anxiety (SMD –0.37; 95% CI –0.82 to 0.09)\(^\text{14}\).

Patient Anxiety

Of the studies included in this limited systematic review, only Nehme et al evaluated studies that used validated instruments. Nehme et al included 12 studies (10 RCTs, 2 NRCTs) that measured patient anxiety. 11 of the 12 studies used unmodified, validated anxiety instruments. 5 of the 12 studied anxiety prior to the MM consent process and all 12 measured anxiety shortly afterward. All but one of these studies showed a reduction in post-tool anxiety in the MM group, with three studies showing a statistically significant difference\(^\text{15}\).
Video Acceptance

Ellet et al demonstrated a high level of acceptance and preference for multimedia modules as adjuncts to the standard informed consent process. 18 women (86%) in the intervention group and 12 (60%) in the control group reported preferring a multimedia style of informed consent in the future.\textsuperscript{14}

In the Sahai study, 33% of participants declined viewing a video due to discomfort with the idea of watching surgical footage. Of those patients who chose to view the educational video, 95% found it useful and 81% felt that showing the video preoperatively to all laparoscopic patients would be of great value to their level of understanding. Interestingly, 75% of video viewers requested a copy of their own surgery for later viewing.\textsuperscript{16}

Conclusions

Only a paucity of evidence is applicable to the minimally invasive gynecologic surgery population. The evidence available does not rely on validated instruments to measure patient satisfaction, anxiety, and understanding. This systematic review makes it clear we need dedicated research that focuses on patient-centered studies to enhance preoperative counseling within ambulatory gynecologic surgery.
# Table 1.

## TABLE X: Systematic Review of Relevant Literature

Studies listed alphabetically by primary author

<table>
<thead>
<tr>
<th>Citation</th>
<th>Study/Paper purpose</th>
<th>Study Design</th>
<th>Methods</th>
<th>Results</th>
<th>Quality Rating; Strengths (+)</th>
<th>Limitations (-)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ellett (2014)</td>
<td>To determine whether providing additional information to the standard consent process, via multimedia module (MM), improves patient knowledge about laparoscopy without increasing anxiety</td>
<td>Randomized Controlled Trial</td>
<td>Steps:</td>
<td>Knowledge, [Mean (SE)]: - MM group demonstrated superior knowledge scores 11.3 (0.49) vs 7.9 (0.50) in the control group (p&lt;0.001) (maximum score, 14). - 6 week knowledge scores were 8.4 (0.53) with MM vs. 7.8 (0.50) in the control group (p=.44).</td>
<td></td>
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<tr>
<td></td>
<td>Setting: Two outpatient gynecology clinics: one private hospital, one public teaching hospital</td>
<td>Setting: Two outpatient gynecology clinics: one private hospital, one public teaching hospital</td>
<td>- Standard informed consent process - Randomization to MM (intervention, n=21) vs. not (control, n=20) * Surgeon was blinded to group assignments  * All patients completed knowledge questionnaire and the Spielberger short-form State-Trait Anxiety Inventory  * 6 weeks after recruitment, participants completed instruments a second time to assess knowledge retention and anxiety</td>
<td>Anxiety: - No difference in anxiety levels between groups at intervention or after 6 weeks</td>
<td>Acceptance: - 18 women (86%) in the intervention group and 12 women (60%) of the control group report preferring this style of intervention in the future</td>
<td>Quality: Good (+) High quality study design (+) Generalizable to laparoscopic gynecologic surgery (-) Surgeons providing consent were aware of patients potential trial involvement (-) Reporting bias→ non-validated knowledge questionnaire (-) Possible intrinsic differences in public teaching vs. private patients. No demographics provided</td>
</tr>
<tr>
<td>Sahai (2006)</td>
<td>To assess the effect of video-assisted informed consent on patient understanding and satisfaction</td>
<td>Pilot, Prospective cohort (non-randomized)</td>
<td>Setting: Urology pre-assessment clinic</td>
<td>Population: Data were collected on 43 patients undergoing laparoscopic nephrectomy (various indications) - 14 male, 29 female. Mean age 44 years</td>
<td>Steps: - Outpatient clinic, decision for surgery, discussion, provision of information leaflet - Pre-assessment clinic, anesthesia work-up - Patient admission onto the ward, video presentation with discussion, informed consent with surgeon - Surgery - Patients given option to view pictures or video images of their surgery - Telephone assessment of consent by CSQ-8 and self-constructed questionnaire (4 weeks after surgery)</td>
<td>Patient Satisfaction: - Mean CSQ-8 score of 29.8 for all groups (maximum of 32)</td>
</tr>
</tbody>
</table>
Nehme (2013)

To compare multimedia and standard consent with respect to patient comprehension, anxiety, and satisfaction for various surgical/interventional procedures

**Systematic Review**

-33 studies using a variety of MM technology
-19 RCTs, 4 NRCTs, 7 prospective studies, 1 case series, 1 case report, 1 large retrospective survey

-Wide range of procedures including laparoscopic urology, cholecystectomy, and tubal ligation

**Outcome measures:**
-age, educational level, comprehension/understanding, anxiety, length of MM intervention time, and patient satisfaction
-22 studies measured patient comprehension post-intervention, 12 assessed anxiety, 29 assessed patient satisfaction

**Comprehension:**
-21 of 22 studies demonstrated statistical significant improvements in comprehension in the MM group (73.7% achieved statistical significance).

-Anxiety:
-11 of 12 studies showed a reduction in post-tool anxiety in the MM group
-3 studies showed a statistically significant difference

**Satisfaction:**
-Patient satisfaction across all studies was rated “very high”
-Reported in 75% of the studies assessed

**Quality:** Fair
(+) Study design and inclusion of a high proportion of RCTs
(-) Absence of a validated tool for comprehension
(-) Satisfaction is poorly defined in the included studies
(-) Small proportion of the studies include laparoscopic surgery (generalizability)

**Comprehension:**
-16 of 22 studies demonstrated statistical significant improvements in comprehension in the MM group (73.7% achieved statistical significance).

-Anxiety:
-11 of 12 studies showed a reduction in post-tool anxiety in the MM group
-3 studies showed a statistically significant difference

**Satisfaction:**
-Patient satisfaction across all studies was rated “very high”
-Reported in 75% of the studies assessed
<table>
<thead>
<tr>
<th>Gurusamy (2014)</th>
<th>To compare the benefits and harms of formal preoperative patient education for patients undergoing laparoscopic cholecystectomy</th>
<th>Cochrane Systematic Review</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Studies: RCTs were included regardless of blinding, language, sample size, or publication status.</td>
<td>Patient Knowledge:</td>
</tr>
<tr>
<td></td>
<td>Population: Patients undergoing laparoscopic cholecystectomy regardless of secondary care vs. tertiary care setting.</td>
<td>- Three trials</td>
</tr>
<tr>
<td></td>
<td>Interventions: Formal patient education (videos, interactive videos, audios, leaflets, face-to-face lectures) vs. no formal patient education.</td>
<td>- No significant difference in patient knowledge between the two groups (SMD 0.19; 95% CI -0.02 to 0.41)</td>
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<tr>
<td></td>
<td>Primary Outcomes: Surgery-related mortality and morbidity, Quality of life.</td>
<td>Patient Satisfaction/Anxiety:</td>
</tr>
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<td></td>
<td>Secondary Outcomes:</td>
<td>- Two trials</td>
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<td></td>
<td>- Patient satisfaction was significantly higher in the patient education group using the fixed effect model (SMD 0.34; 95% CI 0.04 to 0.65)</td>
</tr>
<tr>
<td>Quality: Fair</td>
<td>(+) Study design, inclusion of RCTs</td>
<td>- No significant difference in patient anxiety between the two groups (SMD -0.37; 95% CI -0.82 to 0.09)</td>
</tr>
<tr>
<td>Quality: Fair</td>
<td>(-) Applicable only to laparoscopic cholecystectomy</td>
<td>(-) Varying methods of knowledge assessment in each trial (heterogeneity)</td>
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<tr>
<td></td>
<td>(-) Assessors were not blinded</td>
<td>(-) Assessors were not blinded</td>
</tr>
</tbody>
</table>

used “custom satisfaction surveys”
References for Limited Systematic Review:


<table>
<thead>
<tr>
<th>MEDLINE</th>
<th>EMBASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>AND</td>
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</tbody>
</table>
Figure 1. Limited Systematic Review Flow Chart

Records identified through database searching
Pubmed n=779
Embase n=131

Records after duplicates removed
(n = 853)

Title and Abstract Screening

Records excluded
(n = 833)

Full-text articles assessed for eligibility
(n = 20)

Full-text articles excluded, with reasons
(n = 16)
- Non-English Speaking Population
- Not related to Laparoscopic Surgery
- Non-Video
- Non-adult

Studies included in qualitative synthesis
(n = 4)

Appendix B, Methods

Hysterectomy Script

Hello, my name is Dr. Mireille Truong
And my name is Dr. Benjamin Harris.
We created this video to help you better understand your decisions about surgery for fibroids and answer questions that you may have about the surgery,

What are fibroids?
Fibroids are non-cancerous growths, or benign tumors, that develop in the uterus. They can grow in the any of the different layers of the uterus: on the outer layer, middle layer or the inner layer. Fibroids are very common, but some people are more prone to develop fibroids. Usually, they don’t cause any symptoms but they can sometimes cause heavy bleeding, pain, pressure or problems related to pregnancy.

How do you treat fibroids?
When fibroids cause symptoms, surgery is one way of treating them. The two main surgeries done for fibroids include myomectomy (removal of just the fibroids) and hysterectomy (removal of the uterus with the fibroids). The only permanent treatment for them is hysterectomy. You and your surgeon have discussed these options and with the advice of your surgeon, you have decided that hysterectomy is the best treatment for you.

What is removed during a hysterectomy?
Other than the uterus, there are additional parts that may be removed at the time of your hysterectomy which include:
(1) the ovaries,  
(2) the fallopian tubes  
(3) the cervix.

**Should I remove my ovaries?**

There are different reasons to remove ovaries, but the most common is to prevent development of ovarian cancer in the future. Generally the ovaries are not removed unless you are at high risk for ovarian cancer or you are over the age of 65. On the other hand, removing your ovaries can cause you to go into early menopause, increase your risk of osteoporosis (weakening of the bones), heart disease, dementia (memory loss) and decrease your life expectancy.

**What about my fallopian tubes?**

We generally recommend removing the tubes during hysterectomy. After a hysterectomy, fallopian tubes have no function as they are needed only for pregnancy. In fact, removing them may reduce your risk of certain types of cancer, such as ovarian cancer.

**What about my cervix?**

The cervix is the opening of the uterus and is the bottom part of the uterus that attaches to the vagina. If a woman decides to keep her cervix during hysterectomy, the surgeon removes the uterus here. This is called a supracervical hysterectomy.

**What are the benefits of removing my cervix?**

Removing the cervix can:

- Decrease your risk of having cervical cancer
- Decrease your risk of having future surgery to remove the cervix
- Prevent you from having “cyclical bleeding” after the hysterectomy (as some women can have spotting monthly if the cervix is left in place)
And lastly, you no longer need pap smears

Note that if you had an abnormal pap smear in the past, your cervix should be removed.

**What are the benefits of keeping my cervix?**

Keeping the cervix can:

- Shorten recovery (women can resume intercourse earlier)
- And also means no risk of having problems with the vaginal incision (such as reopening or infection of the vagina)

But if you keep the cervix, you still need to get pap smears

**Will removing the cervix affect my sexual function or make my vagina fall out?**

No. Studies have not shown any true benefit in regards to changing sexual function or preventing “prolapse” (meaning the falling down of organs or the vagina itself) whether the cervix is removed or left in place.

**What are the different ways a hysterectomy can be performed?**

A hysterectomy can be performed by laparotomy (therefore through a large incision, either horizontally or vertically) or like many surgeries, hysterectomy can now be performed minimally
invasively by laparoscopy or robotic surgery (where small incisions that are less than 1 cm are made) or vaginally (without any incisions on the abdomen).

Although a minimally invasive hysterectomy is preferred over a laparotomy or large incision, this may not be the best option for you based on various factors such as the size of your uterus and the number of fibroids and whether you’ve had previous surgeries or vaginal deliveries. This should be discussed with your doctor.

What are the benefits of having the surgery done by laparoscopy instead of the more traditional laparotomy way?

With laparoscopy or robotic surgery,

- You have smaller incisions, which means smaller scars and better appearance on your abdomen
- A shorter hospital stay—some women actually go home the same day of surgery compared to laparotomy where women stay in the hospital for 2-3 days
- A shorter overall recovery (1-2 weeks compared to 6-8 weeks with a laparotomy)
- There is also a decreased risk of certain types of complications during surgery such as:
  - Less bleeding during surgery and less chance of needing a blood transfusion
  - Less chance of getting an infection in your incision
  - Less chance of having problems with your incision such as your incision opening
  - Or getting a hernia, or bulge, in your incision
  - Lastly, you have less chances of getting a blood clot in your leg or lung

How is the uterus removed?

First, this is what a uterus with fibroids looks like during surgery.

Sometimes, the uterus can be directly removed through the vagina-like this. But if the fibroids are too large or if you decided to have a supracervical hysterectomy, the only way to remove the uterus is by
cutting it into smaller pieces so it can fit either through the vagina or through a small abdominal incision as seen here. Cutting tissue is also known as “morcellation”.

**Are there any risks with morcellation?**

Cutting uterine tissue causes no problems in the vast majority of cases. One problem that surgeons have become more aware of is the rare situation when the uterus contains cancerous tumors instead of benign fibroids tumors. This type of cancerous tumor, called sarcoma, can be challenging to detect before surgery because no perfect test exists. If a woman has a uterus that contains an unexpected sarcoma, cutting into it can spread the cancer. This is why the FDA has issued a safety communication on the specific use of power morcellator, which is an electric device that cuts tissue into smaller pieces.

Thankfully this cancerous tumor is very rare. The risk of having a hidden sarcoma is 1:350 though many studies have shown that this risk is even less than that. This means there is less than a 0.3% risk of having this type of cancerous tumor present in the uterus. Your risk of having complications from a laparotomy (so a large incision surgery) or from anesthesia is actually much higher than your risk of having a hidden cancer.

**What are the different ways to cut and remove the uterus?**

One way is to use an instrument called a power morcellator inside the abdomen, use an electric spinning blade to cut a larger piece of tissue into small strips, similar to peeling an apple, that will fit through the small incisions. The biggest advantage of using power morcellators is the ability to remove fibroids through very small incisions without having to make additional incisions or larger incisions.

Another way to use the power morcellator is to place the uterus in a bag first, then use the morcellator to remove the tissue. This has the potential advantage of catching pieces of fibroid and preventing
them from falling and staying in the abdomen. The disadvantages are that it can be technically challenging to place the fibroid in a bag if the fibroid is very large and can take longer than using the morcellator without a bag. This means more time in the operating room.

A more traditional way is: manual cutting of the tissue, outside of the abdomen, but with the specimen placed inside a bag, again to prevent spreading of pieces of tissue inside the abdomen. This technique does NOT require a power morcellator, as it is done by hand cutting the specimen and removing it through an only slightly larger incision, generally through the belly button. This incision is still very small and becomes barely visible after it heals.

What should I consider when making a decision on the type of hysterectomy?

In deciding the approach for your hysterectomy, you have to weigh the rare, but serious risk of having a hidden cancer, versus the benefits of having the surgery done through tiny incisions.

Some key points to remember when deciding on surgery are that:
- There are several important advantages to doing surgery minimally invasively (either vaginally or laparoscopically) such as faster recovery and decreased risks of complications
- There is a very small risk of a having a hidden cancer but thankfully this type of cancer is very rare and there are ways to make this risk even smaller during surgery
- There are risks and benefits of either removing or keeping the ovaries, the fallopian tubes and the cervix
- In deciding how you want your hysterectomy done, you and your surgeon should consider all of the risks and benefits and make the right decision for you

This concludes the video on hysterectomy for fibroids. We hope that this video was helpful in making your decision on how to take care of your fibroids.
Myomectomy Script

Hello, my name is Dr. Mireille Truong
And my name is Dr. Benjamin Harris.
We created this video to help you better understand your decisions about surgery for fibroids and answer questions that you may have about the surgery,

What are fibroids?
Fibroids are non-cancerous growths, or benign tumors, that develop in the uterus. They can grow in the any of the different layers of the uterus: on the outer layer, middle layer or the inner layer. Fibroids are very common, but some people are more prone to develop fibroids. Usually, they don't cause any symptoms but they can sometimes cause heavy bleeding, pain, pressure or problems related to pregnancy.

How do you treat fibroids?
When fibroids cause symptoms, surgery is one way of treating them. The two main surgeries done for fibroids include myomectomy (removal of just the fibroids) and hysterectomy (removal of the uterus with the fibroids). The only permanent treatment for them is hysterectomy. You and your surgeon have discussed these options and with the advice of your surgeon, you have decided that myomectomy is the best treatment for you.

How are fibroids removed?
The fibroids can be removed in different ways depending on the size and location of the fibroids. This includes:
-Hysteroscopy
-Laparoscopy or robotic surgery
-And Laparotomy

When the fibroids are small and are on the inner layer of the uterus, they can be removed by hysteroscopy where a small camera is placed inside the uterus by going through the vagina and the fibroid is shaved off. This is generally a very short outpatient procedure that does not involve any incisions or cuts on your abdomen or vagina.

However sometimes when the fibroids are large, are located in the other layers of the uterus, and/or there are multiple fibroids, abdominal incisions are needed. This can be done either by laparotomy (therefore through a large incision, either horizontally or vertically) or like many surgeries, myomectomy or removal of fibroids can now be performed minimally invasively by laparoscopy or robotic surgery (where small incisions that are less than 1 cm are made).

Although a minimally invasive myomectomy is preferred over a laparotomy or large incision, this may not be the best option for you based on various factors such as the size of your uterus and the number of fibroids. This should be discussed with your doctor.

**What are the benefits of having the surgery done by laparoscopy instead of the more traditional laparotomy way?**

With laparoscopy or robotic surgery,
-You have smaller incisions, which means smaller scars and better appearance on your abdomen
-A shorter hospital stay—some women actually go home the same day of surgery compared to laparotomy where women stay in the hospital for 2-3 days
- A shorter overall recovery (1-2 weeks compared to 6-8 weeks with a laparotomy)
- There is also a decreased risk of certain types of complications during surgery such as:
  - Less bleeding during surgery and less chance of needing a blood transfusion
  - Less chance of getting an infection in your incision
  - Less chance of having problems with your incision such as your incision opening
  - Or getting a hernia, or bulge, in your incision
  - Lastly, you have less chances of getting a blood clot in your leg or lung

**How are the fibroids removed through such a small incision?**

First, this is what a uterus with fibroids looks like during surgery.

To remove large fibroids through tiny incisions requires a special technique known as “morcellation.” Morcellation just means cutting tissue during surgery.

**Are there any risks with morcellation?**

Cutting uterine tissue causes no problems in the vast majority of cases. One problem that surgeons have become more aware of is the rare situation when the uterus contains cancerous tumors instead of benign fibroids tumors. This type of cancerous tumor, called sarcoma, can be challenging to detect before surgery because no perfect test exists. If a woman has a uterus that contains an unexpected sarcoma, cutting into it can spread the cancer. This is why the FDA has issued a safety communication on the specific use of power morcellator, which is an electric device that cuts tissue into smaller pieces.

Thankfully this cancerous tumor is very rare. The risk of having a hidden sarcoma is 1:350 though many studies have shown that this risk is even less than that. This means there is less than a 0.3%
risk of having this type of cancerous tumor present in the uterus. Your risk of having complications from a laparotomy (so a large incision surgery) or from anesthesia is actually much higher than your risk of having a hidden cancer.

If there were concern you might have sarcoma, your doctor would have recommended a hysterectomy. In deciding to have a myomectomy, you and your surgeon have determined the benefit of keeping the uterus far outweighs the tiny risk of cancer.

**What are the different ways to cut and remove the fibroids?**

One way is to use an instrument called a power morcellator inside the abdomen, use an electric spinning blade to cut a larger piece of tissue into small strips, similar to peeling an apple, that will fit through the small incisions. The biggest advantage of using power morcellators is the ability to remove fibroids through very small incisions without having to make additional incisions or larger incisions.

Another way to use the power morcellator is to place the uterus in a bag first, then use the morcellator to remove the tissue. This has the potential advantage of catching pieces of fibroid and preventing them from falling and staying in the abdomen. The disadvantages are that it can be technically challenging to place the fibroid in a bag if the fibroid is very large and can take longer than using the morcellator without a bag. This means more time in the operating room.
A more traditional way is: manual cutting of the tissue, outside of the abdomen, but with the specimen placed inside a bag, again to prevent spreading of pieces of tissue inside the abdomen. This technique does NOT require a power morcellator, as it is done by hand cutting the specimen and removing it through an only slightly larger incision, generally through the belly button. This incision is still very small and becomes barely visible after it heals.

What should I consider when making a decision on the type of myomectomy?

In deciding the approach for your myomectomy, you have to weigh the rare, but serious risk of having a hidden cancer, versus the benefits of having the surgery done through tiny incisions.

Some key points to remember when deciding on surgery are that:
- There are several important advantages to doing surgery minimally invasively (either vaginally or laparoscopically) such as faster recovery and decreased risks of complications
- There is a very small risk of a having a hidden cancer but thankfully this type of cancer is very rare and there are ways to make this risk even smaller during surgery
- If there were any serious concern your fibroids were cancerous, hysterectomy, not myomectomy would be recommended
- In deciding how you want your myomectomy done, you and your surgeon should consider all of the risks and benefits and make the right decision for you

This concludes the video on myomectomy for fibroids. We hope that this video was helpful in making your decision on how to take care of your fibroids
Baseline Survey:

Q1 Hello! Thank you for your willingness to take this survey about your experiences before your surgery. We are asking you to answer some questions about your health condition and your visit with your surgeon. We will also ask you to answer some questions that will help us to learn more about you. This survey will help us improve the care we provide for you. [consent information] This survey will take approximately 10 minutes to complete. Researchers: Benjamin S. Harris, MD, Matthew T. Siedhoff, MD, MSCRSue Tolleson-Rinehart, PhD Please choose from one of the answers below:

- I am willing to take the survey. (1)
- No thank you, I do not want to take the survey. (2)

If No thank you, I do not want... Is Selected, Then Skip To End of Survey

Q2 First, we would like to ask you some questions about your health.

Q3 You are seeing the surgeon because you have been having a problem with abnormal uterine bleeding. We'd like to ask you some questions about what you have learned about the problem.

Q4 Have you had a chance to learn about your health problem? That is, your abnormal bleeding is caused by uterine fibroids. Have you had a chance to learn about fibroids?

- Yes, I've learned a lot (1)
- Yes, I've learned some (2)
- No, I don't think I've learned about them (3)

If No, I don't think I've lear... Is Selected, Then Skip To How comfortable are you with particip...

Q5 People learn about health and health care in many ways. Please check all the ways you have learned about your abnormal uterine bleeding.

- from my doctor (1)
- from others in my doctor's office, like nurses or other health care professionals (2)
- from friends and family (3)
- from the internet (4)
- from books or magazines (5)
- from health programs on TV (6)

Q6 These days, many people expect to participate in decisions about their health care. Other people prefer to leave these decisions to the doctor. Please use the slider bar below to show how comfortable you are participating in the decisions about your health care. 0 means "I'd rather leave it entirely to my doctor." 100 means "I want to take complete charge of the decision"

______ My decision making preferences (1)
Q7  Now we’d like for you to think about your office visit before your surgery. Please think about that visit and answer the questions below.

Q8  Did your surgeon...

<table>
<thead>
<tr>
<th></th>
<th>Not at all (1)</th>
<th>A little (2)</th>
<th>Some (3)</th>
<th>A lot (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talk with you about the reasons you might want to have the surgery? (1)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Talk with you about the reasons you might NOT want to have the surgery? (2)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Q9  Did your surgeon...

<table>
<thead>
<tr>
<th></th>
<th>Yes (1)</th>
<th>No (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tell you there was more than one way to treat your condition? (1)</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Ask which way to treat your condition was best for you? (2)</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Use pictures, drawings, models, or videos to help explain things to you? (3)</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

If Use pictures, drawings, mod... Is Selected, Then Skip To Did these pictures, drawings, m...If Use pictures, drawings, mod... Is Selected, Then Skip To Did your surgeon talk with you about ...

Q10 Did these pictures, drawings, models, or videos help you better understand your condition and its treatment?
- Yes, definitely (4)
- Yes, somewhat (2)
- No (3)

Q11 Did your surgeon talk with you about any questions or concerns?
- Yes (1)
- No (2)

If Yes Is Selected, Then Skip To Did your surgeon give you easy to und...If No Is Selected, Then Skip To Did your surgeon explain things...
Q12 Did your surgeon give you easy to understand information about these health questions or concerns?
- Yes, definitely (1)
- Yes, somewhat (2)
- No (3)

Q13 Did your surgeon explain things in a way that was easy to understand?
- Yes, definitely (1)
- Yes, somewhat (2)
- No (3)

Q14 As you have prepared for your surgery, can you tell us how you have felt about it?

<table>
<thead>
<tr>
<th>Feeling Description</th>
<th>Never (1)</th>
<th>Rarely (2)</th>
<th>Sometimes (3)</th>
<th>Often (4)</th>
<th>Always (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I felt fearful...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. I felt anxious...</td>
<td></td>
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</tr>
<tr>
<td>2. I felt worried...</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. I found it hard to focus on anything other than my anxiety...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I felt nervous...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I felt uneasy...</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>6. I felt tense...</td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Q15 During this office visit...

<table>
<thead>
<tr>
<th>Question Description</th>
<th>Yes, definitely (1)</th>
<th>Yes, somewhat (2)</th>
<th>No (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did your surgeon answer all your questions to your satisfaction? (1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Were you satisfied with how your surgeon provided information about your surgery? (2)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q16 Next, we would like to ask some questions in order to learn more about you.
Q17 In general, how would you rate your overall health?
- Excellent (1)
- Very good (2)
- Good (3)
- Fair (4)
- Poor (5)

Q18 In general, how would you rate your overall mental or emotional health?
- Excellent (1)
- Very Good (2)
- Good (3)
- Fair (4)
- Poor (5)

Q19 What is your age?
- 18 to 24 years (1)
- 25 to 34 years (2)
- 35 to 44 years (3)
- 45 to 54 years (4)
- 55 to 64 years (5)
- 65 or older (6)

Q20 Not counting this surgery, about how many other surgeries have you had?
- None (1)
- 1 surgery (2)
- 2 surgeries (3)
- 3 to 5 surgeries (4)
- 6 to 9 surgeries (5)
- 10 or more (6)

Q21 What is the highest grade or level of school that you have completed?
- 8th grade or less (1)
- Some high school, but did not graduate (2)
- High school graduate or GED (3)
- Some college or 2-year degree (4)
- 4-year college graduate (5)
- More than 4-year college degree (6)

Q22 Are you of Hispanic or Latino origin or descent?
- Yes, Hispanic or Latino (1)
- No, not Hispanic or Latino (2)
Q23 What is your race? Please mark one or more.

- White (1)
- Black or African American (2)
- Asian (3)
- Native Hawaiian or Other Pacific Islander (4)
- American Indian or Alaska Native (5)
- Other (6)

Q24 Did someone help you complete this survey?

- Yes (1)
- No (2)

If No is selected, then skip to End of Survey

Q25 How did that person help you? Mark all that apply.

- Read the questions to me (1)
- Wrote down the answers I gave (2)
- Answered the questions for me (3)
- Translated the questions into my language (4)
- Helped in some other way (5) ____________________
Follow-up Survey:

Q1 Hello! Thank you for your willingness to take this second survey about your experience with your surgery. We very much appreciate having your thoughts and comments! We are asking you to answer some questions about your experience with your surgeon. We will also ask you to answer some questions that will help us to learn more about your experience with the counseling you received before your surgery. This survey will help us improve the care we provide for you and other women.[consent information] This survey will take approximately 5 minutes to complete. Researchers: Benjamin S. Harris, MD Matthew T. Siedhoff, MD, MSCR Sue Tolleson-Rinehart, PhD Please choose from one of the answers below:

- I am willing to take the survey. (1)
- No thank you, I do not want to take the survey. (2)

If No thank you, I do not want... Is Selected, Then Skip To End of Survey

Q2 As you remember, before your surgery, we asked you some questions about your health condition and we asked you to view an educational video. Now, if you'll allow us, we would like you to think about your experience. You may feel you've answered some of these questions before. Please answer them again now, since we very much want to know your thoughts since the surgery. Please choose from one of the answers below:

- Yes, I viewed the educational video (1)
- No, I did not view the educational video (2)

If No, I did not view the educ... Is Selected, Then Skip To If you decided to NOT view the video ...If Yes, I viewed the education... Is Selected, Then Skip To Please provide answers to the followi...

Q3 Please choose the answer that comes closest to your own view.

<table>
<thead>
<tr>
<th>Did these pictures, drawings, models, or videos help you better understand your condition and its treatment? (1)</th>
<th>Yes, definitely (1)</th>
<th>Yes, somewhat (2)</th>
<th>No (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>If you had to do it all over again, would you have wanted to watch the video? (2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Would you recommend the video to someone else? (3)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If Yes, definitely Is Selected, Then Skip To Please tell us which surgical procedu...If Yes, somewhat Is Selected, Then Skip To Please tell us which surgical procedu...If No Is Selected, Then Skip To Please tell us which surgical procedu...

Q4 Would you tell us why you decided NOT to view the video before your surgery? Please choose all that apply!
- Lack of time (1)
- Lack of interest (2)
- the idea of a video made me uncomfortable (3)
- I prefer written information (4)
- I prefer the spoken word of the surgeon (5)
- Other (6) ____________________

Q5 Please tell us which kind of surgery you had.
- Laparoscopic Hysterectomy (removal of the uterus, with the fibroids) (1)
- Laparoscopic Myomectomy (removal of just the fibroids) (2)
- I do not know (3)

Q6 We really want to know how you are feeling after your surgery. Your recovery is very important to us. Please use the slider bar to show how you are feeling after your surgery. 0 means "This is the worst feeling I have ever experienced". 100 means "I feel excellent".
   ______ Physically (1)
   _____ Mentally (2)
   _____ Emotionally (3)

Q7 These days, many people expect to participate in decisions about their health care. Other people prefer to leave these decisions to the doctor. After your overall experience with your surgery, please use the slider bar below to show how comfortable you are participating in the decisions about your health care. 0 means "I'd rather leave it entirely to my doctor." 100 means "I want to take complete charge of the decision"
   _____ My decision making preferences (1)

Q8 During the visit before your surgery...
### Q9

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes, definitely (1)</th>
<th>Yes, somewhat (2)</th>
<th>No (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did your surgeon answer all your questions to your satisfaction? (1)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Were you satisfied with how your surgeon provided information about your surgery? (2)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Did your surgeon explain things in a way that was easy to understand? (3)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

### Q10
Did your surgeon talk with you about any questions or concerns?
- Yes (1)
- No (2)

If Yes Is Selected, Then Skip To Did your surgeon give you easy to und...If No Is Selected, Then Skip To During the visit before your surgery,...

### Q11
Did your surgeon give you information about these health questions or concerns that was easy for you to understand?
- Yes, definitely (1)
- Yes, somewhat (2)
- No (3)

### Q12
During the visit before your surgery, did you fill out any forms at your surgeon's office?
- Yes (1)
- No (2)

If Yes Is Selected, Then Skip To During that visit...If No Is Selected, Then Skip To Overall, how often did your surgeon...
Q13

<table>
<thead>
<tr>
<th></th>
<th>Never (1)</th>
<th>Sometimes (2)</th>
<th>Usually (3)</th>
<th>Always (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>How often did someone explain the purpose of a form before you signed it? (1)</td>
<td></td>
<td>○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How often were you offered help to fill out a form at your surgeon’s office? (2)</td>
<td>○</td>
<td>○</td>
<td></td>
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</tr>
</tbody>
</table>

Q14 Overall, how often did your surgeon...

<table>
<thead>
<tr>
<th></th>
<th>Never (1)</th>
<th>Sometimes (2)</th>
<th>Usually (3)</th>
<th>Always (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use medical words you did not understand? (1)</td>
<td></td>
<td>○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Give you all the information you wanted about your health? (2)</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide explanations that were easy to understand? (3)</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q15 Looking back, did your counseling and education you received meet your expectations? Please use the slider bar to show us how well it met expectations. 0 means "it completely failed" and 100 means "it completely met my expectations." And even if the education counseling met your expectations, did it prepare you for the surgery and your recovery? Please use the second slider bar to tell us how prepared for everything you felt. 0 means "regardless of the counseling and education, I felt completely unprepared." 100 means "I was completely prepared for my surgery and recovery."

_____ Expectations about counseling and education (1)
_____ Feeling prepared for surgery and recovery (2)

Q16 Thank you so much for answering our questions! Is there anything else you would like to tell us?