Original Article

Patient counseling for pelvic organ prolapse surgery: methods used for patient education

Amy Nemirovsky[1]^, Alice M. Horowitz[2], Rena D. Malik[1]

[1]Division of Urology, Department of Surgery, University of Maryland School of Medicine, Baltimore, MD, USA; [2]Department of Behavioral and Community Health, University of Maryland School of Public Health, College Park, MD, USA

Contributions: (I) Conception and design: All authors; (II) Administrative support: All authors; (III) Provision of study materials or patients: RD Malik, A Nemirovsky; (IV) Collection and assembly of data: RD Malik, A Nemirovsky; (V) Data analysis and interpretation: RD Malik, A Nemirovsky; (VI) Manuscript writing: All authors; (VII) Final approval of manuscript: All authors.

Correspondence to: Rena D. Malik, MD. Division of Urology, Department of Surgery, University of Maryland School of Medicine, 29 S Greene St Suite 500, Baltimore, MD 21201, USA. Email: rmalik@som.umaryland.edu.

Background: Preoperative patient education is a critical element of surgical experience and positively associated with postoperative outcomes. Patients undergoing surgery for pelvic organ prolapse (POP) are often inadequately informed about their condition and procedure. Our objective was to characterize the methods, patient education materials (PEMs), and contents that providers employ for preoperative counseling.

Methods: A 73-item survey containing provider demographics, PEMs, resources, content, and provider communication techniques was created using REDCap. The survey link was distributed via email, Twitter, and Facebook, inviting attending physicians, trainees, physician assistants, nurse practitioners, and nurses who routinely treat POP to participate in the survey.

Results: A total of 89 surveys were included in the final analysis. Most respondents were attending physicians (87%). The most common primary in-office method of patient education was through personal interviews (78%). Supplemental methods of education included standardized print materials (70%), drawn or printed illustrations (57%), and models or props (38%). Most providers covered all of the following topics: anatomy and causes of POP, observation and pessary as alternate treatments, surgical approach, use of native tissues, and postoperative expectations. Many important complications of POP were mentioned but not discussed in detail. Simple language was the most common communication technique (96% of providers).

Conclusions: POP education is often completed by personal interviews supplemented by standardized print material and drawn or printed illustrations. Providers cover many POP topics in counseling but do not detail many complications of surgical treatment.

Keywords: Preoperative education; counseling; pelvic organ prolapse (POP); survey; health literacy

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^ ORCID: 0000-0003-1726-3424.

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Introduction

Pelvic organ prolapse (POP) is a pelvic floor disorder that occurs in up to 50% of women (1). POP can result in bothersome symptoms, including pelvic pressure, pelvic pain, a sensation of bulge, and back pain. Approximately 13% of women undergo POP surgery to alleviate these symptoms (2,3). Symptoms associated with POP are often complex, may overlap with other pelvic floor disorders, and may not be alleviated with prolapse surgery alone. Therefore, comprehensive counseling with expectation management is essential for women planning to undergo POP surgery.

Preoperative patient education is a crucial element of the surgical experience. Studies have shown that preoperative information and psychological preparation can enhance postoperative outcomes through improvements in postoperative pain, behavioral recovery, and even shorter postoperative hospital stay length (4,5). In other surgical subspecialties, implementation of a preoperative education program was shown to be associated with an almost 30% reduction in postoperative length of stay (6). In women undergoing pelvic reconstructive surgery, preparedness is associated with satisfaction, symptomatic improvement, and improved quality of life (7). Despite the benefit of preoperative counseling, multiple studies show that patients undergoing surgery for POP are often inadequately informed about their condition and procedure (8,9). Furthermore, due to the complexity of POP, it has been found that even patients with high health literacy, defined as patients who can readily obtain, read, and understand healthcare information (10), have difficulty understanding complex conditions such as POP (11).

To better understand the quality of preoperative counseling, we conducted a pilot study where we surveyed providers that counsel women with POP on their practice patterns. Our primary objective was to characterize the methods used, patient education materials (PEMs) offered, and content discussed by providers during preoperative counseling. Our secondary objective was to determine what communication techniques were being used to counsel patients. Our aim was to gather information on practice patterns and drive future hypotheses to determine potential areas of improvement in POP education. We present this article in accordance with the SURGE reporting checklist (available at https://gpm.amegroups.com/article/view/10.21037/gpm-23-16/rc).

Highlight box

Key findings

- Personal interviews is the most common primary in-office method of patient education and distributing standardized print materials is the most common supplementary method.
- Simple language and providing print materials are the most utilized communication techniques in pelvic organ prolapse (POP) counseling.
- Many important complications of POP procedures are not discussed in detail.

What is known and what is new?

- POP is a complex condition and patients undergoing surgery for POP are often inadequately informed about their condition and procedure.
- Our survey is the first to characterize the practice patterns of a sample of Female Pelvic Medicine and Reconstructive Surgery providers.

What is the implication, and what should change now?

- Evidence-based approaches for patient education for POP should be developed and implemented.
- Future investigations should evaluate educational preferences from the patient perspective.

Methods

Modified from prior practice pattern surveys (12,13), we created an anonymous survey containing 73 items to assess current practices in preoperative patient counseling for POP surgery (Appendix 1). The content of our questionnaire was created by experts in POP and health literacy. Attending physicians, trainees, physician assistants, nurse practitioners, and nurses who treat POP were invited to participate in this pilot study. The survey queried providers about four major themes: demographics of their practice, patient education methods and PEMs, topics discussed during counseling, and communication techniques. The survey inquired whether complications were discussed in detail, mentioned, or not discussed in the preoperative counseling. Providers were asked to estimate the average health literacy of their patient population from very poor to excellent.

A survey link was distributed by snowball sampling via e-mail, Twitter, and Facebook groups for Female Pelvic Medicine and Reconstructive Surgery (FPMRS) providers between May–September 2019. In the first phase in May 2019, the survey was emailed to a list of FPMRS providers to calculate a response rate for the survey. Providers were requested to take the survey only once. Data collection ended in September 2019. Providers who counseled less

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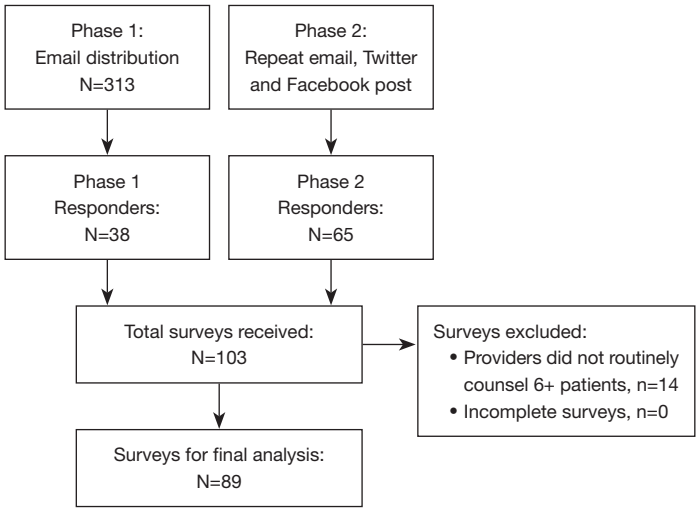

Figure 1 Diagram of survey target population used for final analysis.

than six patients per year (one every other month) were excluded. The survey was created, and data was managed on REDCap. Descriptive analysis was conducted via Stata/SE 14.2 (College Station, TX, USA). Means and standard deviations (SD) were computed for continuous variables.

Results

We received a total of 103 responses. Our response rate was about 12%. Fourteen participants were excluded because they did not annually counsel at least six patients for a total of 89 surveys included in the final analysis (*Figure 1*).

The majority of respondents were attending physicians (n=77), followed by physician assistants (n=6), trainees (n=5), and one nurse practitioner (*Table 1*). Approximately two-thirds of respondents were female. Provider age ranged from 29 to 67 with a mean and SD of 44±9 years. Half of the providers (51%) were less than 10 years out from training, and the majority worked in either urban teaching hospitals (64%) or private group practices (22%). Respondents reported counseling anywhere from 7 to 600 patients undergoing POP surgery per year with a mean of 100±101. Most providers (78%) reported their patient population to have a mix of government or commercial insurance and estimated the health literacy of their patient populations as either fair (43%) or good (42%). Respondents spent an average of 31±19 minutes counseling their patients. Counseling times ranged from 10 to 120 minutes, with an interquartile range of 20–40 minutes.

The most common primary in-office method of patient education was through personal interviews (78%) or speaking directly to the patient (*Table 2*). Other reported primary methods included the use of drawn or printed illustrations (n=10), using print materials such as brochures (n=9). One provider used models or props. Standardized print materials, drawn or printed illustrations, models or props, and websites were commonly used supplemental methods. The International Urogynecological Association (IUGA) was the most common source for print materials (30 of 62, 48%) used by half the providers that utilized print materials. The Society of Urodynamics, Female Pelvic Medicine, and Urogenital Reconstruction (SUFU) (37%) and American Urogynecologic Society (AUGS) (31%) were other popular sources. For those who referred patients to a website (n=13), AUGS (69%) and SUFU (54%) were the most common referred websites. Few providers used instructional videos (n=4) or smartphone applications (n=3); however, when used, YouTube and the AUGS POPQ Interactive Assessment Tool were the most popular, respectively.

All providers reported that they counseled women on the anatomy of POP, observation as a treatment option, and the use of native tissues during surgery. The majority of providers discussed various surgical approaches (99%), causes of POP (98%), the postoperative hospital course (98%), pessary as a treatment (96%), management of the uterus when applicable (96%), use of a Foley catheter postoperatively (96%), and the patients' role in recovery after surgery (96%). Fewer providers reported including the use of mesh (88%), pelvic floor physical therapy as a treatment option (84%), and postoperative use of analgesia

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Table 1 Demographic and practice characteristics of responding providers who counsel women for POP surgery (N=89)

Characteristic	Value
Provider type	
Attending physician	77 [87]
Physician assistant	6 [7]
Nurse practitioner	1 [1]
Trainee (resident or fellow)	5 [6]
Provider gender	
Female	58 [65]
Male	29 [33]
Prefer not to say	2 [2]
Age of provider (year)	44±9
20–29	1 [1]
30–39	30 [34]
40–49	37 [42]
50–59	17 [19]
60–69	4 [4]
Years of practice after training	
0–4	29 [33]
5–9	16 [18]
10–14	19 [21]
15–19	14 [16]
20+	11 [12]
Practice setting	
Urban teaching hospital	57 [64]
Group private practice	20 [22]
Urban non-teaching hospital	4 [4]
Rural hospital	4 [4]
Other	4 [4]
Patients counseled/year	100±101; 60 [25–120]
1st quartile	7–30
2nd quartile	31–60
3rd quartile	61–130
4th quartile	131–600
Payer mix	
Fairly even between commercial & government payers	69 [78]
Mostly commercial payers	3 [3]
Mix of cash and other payers	1 [1]
Mostly government payers	16 [18]
Health literacy of patient population	
Very poor	4 [4]
Poor	4 [4]
Fair	38 [43]
Good	37 [42]
Excellent	5 [6]
Time spent counseling (minutes)	31±19; 30 [20–40]

Data are presented as n [%], mean ± SD, or median [IQR]. POP, pelvic organ prolapse; SD, standard deviation; IQR, interquartile range.

(82%). Less than half (46%) discussed the use of biologics in surgery.

Mesh complications, when applicable (68%), urinary incontinence (66%), and the need for repeat surgery (52%) were discussed in detail by most providers. Urinary retention, injury to surrounding structures, storage lower urinary tract symptoms, dyspareunia, bleeding, infection, and constipation were more often mentioned rather than discussed. A substantial number of providers neither discussed nor mentioned constipation (17%) or dyspareunia (12%) as potential complications (*Figure 2A*).

When asked about communication techniques for counseling, most providers reported using simple language (95%), giving their patients printed materials (87%), using illustrations (87%), and speaking slowly (80%) most or all the time (*Figure 2B*). Very few providers routinely followed up with patients by telephone (11%) or asked how they learned best (10%). Ten respondents (11%) stated that they asked patients to provide evaluation or feedback for the counseling they received.

Discussion

There is growing evidence to support that women are inadequately informed prior to urogynecological procedures

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Table 2 Methods, materials, and topics of discussion used for patient counseling and education

Method/material	N [%]
Primary in-office method	
Personal interview	69 [78]
Drawn/printed illustration	10 [11]
Print material (brochures)	9 [10]
Models/props	1 [1]
Additional methods	
Standardized print material	62 [70]
Drawn or printed illustrations	51 [57]
Models or props	34 [38]
Websites	13 [15]
Instructional videos	4 [4]
Smartphone or tablet applications	3 [3]
Sources of print material	
IUGA	30 [34]
SUFU	23 [26]
AUGS	19 [21]
ICS	19 [21]
Urology Care Foundation	8 [9]
UpToDate®	2 [2]
Own materials	28 [31]
Other (majority reported industry material)	10 [11]
Websites	
AUGS	9 [10]
SUFU	7 [8]
Urology Care Foundation	3 [3]
ICS	2 [2]
IUGA	1 [1]
Medical online information services (i.e., MedlinePlus®, WebMD, etc.)	1 [1]
Other	2 [2]
Sources of video material	
YouTube	3 [3]
Own materials	1 [1]
Applications	
AUGS POP Q Interactive Assessment Tool	2 [2]
Topics included when counseling patients about POP	
Anatomy of POP	89 [100]
Observation as a treatment	89 [100]
Use of native tissues	89 [100]
Surgical approach	88 [99]
Causes of POP	87 [98]
Postoperative hospital course	87 [98]
Pessary as treatment	85 [96]
Management of uterus (if applicable)	85 [96]
Use of Foley catheter postoperatively	85 [96]
Patients' own role in postoperative recovery	85 [96]
Use of mesh	78 [88]
Pelvic floor physical therapy as a treatment	75 [84]
Postoperative use of analgesia	73 [82]
Use of biologics	41 [46]

IUGA, International Urogynecological Association; SUFU, Society of Urodynamics, Female Pelvic Medicine, and Urogenital Reconstruction; AUGS, American Urogynecologic Society; ICS, International Continence Society; POP, pelvic organ prolapse.

(8,9,11). As a result, women fail to receive the many proven benefits of proper preoperative surgical education. Our study sought to characterize healthcare practitioners' current practice patterns when counseling their patients on POP surgery. Our data revealed that a personal interview, where the provider engages in a dialogue with the patient, was the most common method of delivering preoperative patient education. Many providers reported supplementing a personal interview with instructions, illustrations, models, and references to websites or other materials. This is something that patients with POP desire, but do not always receive (14). Evidence suggests that written information as an adjunct to professional consultation can improve knowledge and recall (15). Fewer providers in our study opted to use educational videos, but this educational modality may be helpful as well. Patient-based educational videos developed for procedures ranging from sacral nerve stimulation to lung surgery were associated with improved patient knowledge and patient preparedness (16,17). Certain modalities and methods may be better than others. A study

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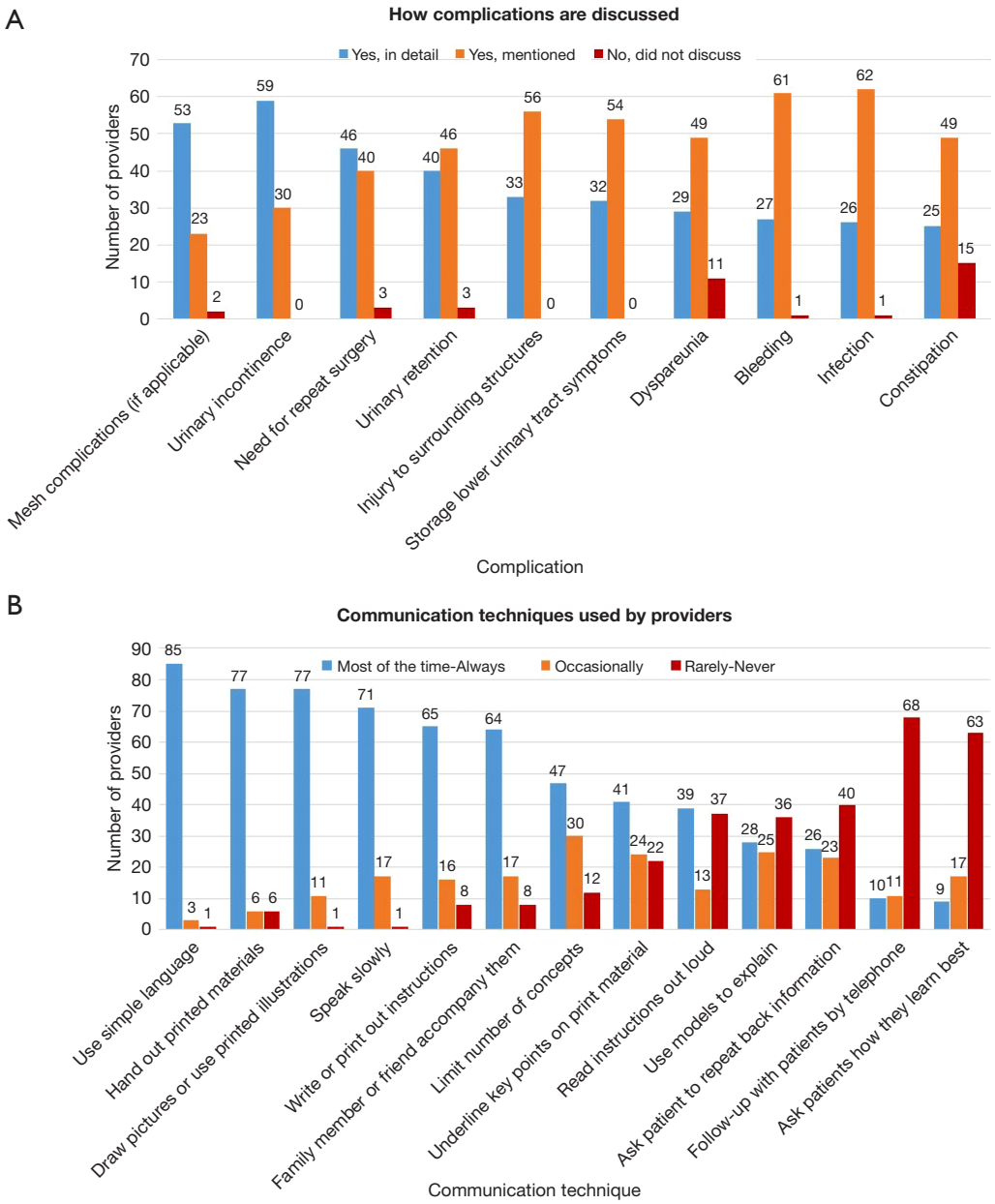

Figure 2 Complications discussed and communication techniques used by providers. (A) Number of providers who detailed, mentioned, or did not describe complications of POP surgery; (B) frequency of communication techniques utilized by providers in counseling patients. POP, pelvic organ prolapse.

comparing an iPad application to standard verbal counseling found the application did not improve comprehension and was associated with worse information retention (18). The reasons why providers use specific patient education techniques are likely multifactorial. Familiarity and comfort with certain techniques may determine provider counseling preferences. Also, offering certain PEMs such as video links to watch at home may be viewed as less helpful based on preconceived notions that patients will not take the time to watch the video or lack of insight on which available videos are most accurate and understandable. This, however, would be a good area to focus some time on as patients are motivated to learn on their own and look to their providers to provide them with quality resources (14).

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Our survey found that providers seem to be thorough in explaining the condition of POP, the treatment options, and what can be expected after surgery. However, many providers only mention rather than discuss common complications in detail such as injury to surrounding structures and storage lower urinary tract symptoms. They do not mention complications such as dyspareunia at all. This is consistent with prior research that identified many providers believe that explaining the treatment and stating a list of complications is sufficient counseling (19). It has been demonstrated that nearly a third of patients counseled on sacrocolpopexy in preoperative visits believed there is no risk of recurrent prolapse after surgery on subsequent knowledge assessment immediately before their procedure (8). Based on our study results, this finding is not inconceivable. While most of our respondents mentioned the "need for repeat surgery" as a complication in their counseling, only half stated they described what that meant in detail. With studies showing that patients forget up to 80% of the information given by their healthcare practitioners (20), providers should make an effort to utilize strategies and communication techniques that improve patients' recall.

Our respondents did report using a variety of communication techniques to convey their counseling. Virtually all providers used simple language as a strategy. Our respondents described their patients as having fair or good health literacy; however, providers tend to overestimate the health literacy of their patients (21). Strategies that have been shown to improve patient verbal comprehension of the informed consent include discussion with test/feedback or repeat-back and interactive digital interventions (22). The repeat-back strategy was one of the less popular techniques in our study, used by about 30% of providers.

Other strategies for improved communication that were popular amongst respondents included "hand out printed material" and "write or print out instructions". Readability must be taken into consideration when distributing these types of resources. Based on literacy rates of the United States, the National Institutes of Health recommends that health materials be written at the sixth to seventh-grade level (23). Students in these grades are typically 11–13 years old. The grade level of PEMs from professional urologic and urogynecologic societies for POP materials has been estimated on average to be a twelfth-grade level (24), the last year of secondary school when students are about 18 years old. Therefore, it is important that providers assess the reading grade level of PEMs prior to administering them to patients to ensure they are appropriate for the average patient. Providers can assess the grade level of their materials by using the Readability function in Word proofing options, or one of many online tools that can test readability. Patients who do not speak the native language of the country they live in are also frequently seen in practice and must be considered. Communication can be improved with these patients by having access to reliable and accurate translation services and PEMs written in multiple languages in the office.

Patient education is not a one-size-fits-all approach. Certain techniques may work for some and not others, and patients are the best source on how they learn well or whether the counseling they received made sense to them. Only 11% of respondents reported requesting patient feedback on their counseling using after-visit surveys and questions. Providers should be asking for feedback more frequently and ask for it appropriately by avoiding yes/no questions like "do you have any more questions?". Instead, ask for feedback with "what questions do you have?".

Of course, patient education and implementation of these strategies take up valuable time, a limited resource for many providers. Our respondents spent an average of half an hour counseling patients. With the lack of qualitative analysis of actual counseling content in our survey, it is difficult to assess if this is sufficient. And, due to limitations of clinical practice, it may be challenging to spend more than 30 minutes with patients per visit. Studies have shown that implementing interventions such as teach-back may take as few as 2–3 additional minutes while improving patient comprehension compared to standard informed consent (22). Therefore, implementing these methods may be time-saving. We also can not underestimate the time it takes to learn these techniques. Health literacy and counseling patients are not heavily emphasized in most medical school curricula or residency programs. However, student-provided patient education can improve both quality of care and medical education (25). Implementing this curriculum early in medical education will help more seamlessly incorporate these techniques into clinical practice.

Our study was not without limitations. Firstly, we were unable to evaluate the construct validity or reliability of our survey. Due to the anonymous nature of our study, we could not ascertain that responders were actually our target population of urology or FPMRS providers or that the same provider did not complete the survey more than once. Our survey was likely limited by sampling bias, where those more interested in patient education were more likely to respond. This type of bias would skew the results

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to appear that more providers are using diverse counseling methods, discussing more content, and utilizing more communication techniques than actually are. Response bias, specifically desirability bias, would also skew the data in this direction as respondents would answer questions in a way that made them look more favorably. In addition, recall bias may have caused providers to report they discussed certain complications and used communication techniques when they did not. Therefore, our data likely overestimates the actual practices of the target provider population.

Our survey was substantially lengthy, with 73 items, to be thorough in characterizing preoperative counseling practices for POP surgery. Although our survey took about five minutes to complete in pretesting, this may have resulted in some nonresponse bias. Our survey could have benefited from a larger sample size with more diversity of provider types. Moreover, we could not ascertain the exact wording utilized during patient counseling and the emphasis placed on symptomatic relief after treatment.

Conclusions

Patient education for POP is a clearly defined challenge for providers. In order to improve patient education delivery, current practices must be identified. Despite its limitations, our survey is the first to characterize the practice patterns of a sample of FPMRS providers, which can guide future studies to develop and implement evidence-based approaches to patient education for POP. Future investigations should evaluate educational preferences from the patient perspective.

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Footnote

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Conflicts of Interest: All authors have completed the ICMJE uniform disclosure form (available at https://gpm.amegroups.com/article/view/10.21037/gpm-23-16/coif). The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. There's no human experiments involved, therefore ethic approval or informed consent is not required for this study.

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Supplementary

Appendix 1

Practice Patterns in patient education for POP surgery

Record ID	_____
Do you routinely operate and/or counsel patients in preparation for pelvic organ prolapse surgery?	◯ Yes ◯ No
Who primarily counsels patients about their surgeries in your practice?	☐ Attending physician ☐ Urology trainee (resident or fellow) ☐ Physician Assistant ☐ Nurse Practitioner ☐ Registered Nurse ☐ LPN/LVN ☐ Medical Assistant ☐ Other
Do you counsel at least 6 or more patients in preparation for pelvic organ prolapse surgery per year?	◯ Yes ◯ No
Approximate the number of patients you counsel for surgery per year. Estimate with an exact number.	_____
What is your position?	◯ Attending Physician ◯ Urology trainee (resident or fellow) ◯ Physician Assistant ◯ Nurse Practitioner ◯ Registered Nurse ◯ LPN/LVN ◯ Medical Assistant
How many years have you been in practice after completing your training?	◯ 0-4 ◯ 5-9 ◯ 10-14 ◯ 15-19 ◯ 20+
What type of practice setting do you work in?	◯ Urban Teaching Hospital ◯ Urban Community (Non-Teaching) Hospital ◯ Rural Teaching Hospital ◯ Rural Community (Non-Teaching) Hospital ◯ Government/VA Hospital ◯ Other
Use the following slider to approximate the health literacy of the patient population whom you counsel:	Very Low Health Literacy — Very High Health Literacy *(Place a mark on the scale above)*
Approximate the number of pelvic organ prolapse surgeries performed at your practice per year. Estimate with an exact number.	_____
Of those surgeries performed in the last year, how many were vaginal prolapse repairs? Estimate with an exact number.	_____

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Of those surgeries performed in the last year, how many were abdominal prolapse repairs? Estimate with an exact number.	_____
Of those surgeries performed in the last year, how many were laparoscopic or robotic? Estimate with an exact number.	_____

Patient Education

How much time is spent on counseling the patient in preparation for pelvic organ prolapse surgery? Estimate exact time in minutes.	_____
What is your primary, in-office method of delivery for patient education?	◯ Personal interview ◯ Standardized print material (i.e. Brochures) ◯ Instructional videos ◯ Models/Props ◯ Hand drawings ◯ Websites ◯ Tablet or Phone Apps ◯ Other
If other, please describe:	_____
What additional methods, if any, do you use for patient education? Include primary method in selection and select all that apply.	☐ Personal interview ☐ Standardized print material (i.e. Brochures) ☐ Instructional videos ☐ Models/Props ☐ Hand drawings ☐ Websites ☐ Tablet or Phone Apps ☐ Other
If other, please describe:	_____
Do you use materials from any of the following organizations?	☐ Society of Urodynamics, Female Pelvic Medicine & Urogenital Reconstruction (SUFU) ☐ International Urogynecological Association (IUGA) ☐ Urology Care Foundation ☐ American Urogynecologic Society (AUGS) ☐ International Continence Society (ICS) ☐ None of the Above ☐ Other
If other, please describe:	_____

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Which sources do you use for standardized print material?	☐ Society of Urodynamics, Female Pelvic Medicine & Urogenital Reconstruction (SUFU) ☐ International Urogynecological Association (IUGA) ☐ Urology Care Foundation ☐ American Urogynecologic Society (ICS) ☐ Own material ☐ Other
If other, please describe:	_____
Which sources do you use for instructional videos?	☐ Society of Urodynamics, Female Pelvic Medicine & Urogenital Reconstruction (SUFU) ☐ International Urogynecological Association (IUGA) ☐ Urology Care Foundation ☐ American Urogynecologic Society (AUGS) ☐ International Continence Society (ICS) ☐ YouTube ☐ Own material ☐ Other
If other, please describe:	_____
Which websites do you refer to patients?	☐ Society of Urodynamics, Female Pelvic Medicine & Urogenital Reconstruction (SUFU) ☐ International Urogynecological Association (IUGA) ☐ Urology Care Foundation ☐ American Urogynecologic Society (AUGS) ☐ International Continence Society (ICS) ☐ Medical online information service (i.e. MedlinePlus, Uptodate, Webmd etc,) ☐ Other
If other, please describe:	_____
Which apps do you refer to your patients? Please list below.	_____
Do you use any of the following health literacy strategies in counseling patients? Select all that apply	☐ Repetition ☐ Teach back ☐ Use of graphics or images ☐ Written materials provided in 4th or 5th grade reading level ☐ Use of simple language ☐ None of the above ☐ Other
If other, please describe:	_____

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Do you counsel on the following topics when preparing a patient for pelvic organ prolapse surgery?	No	Yes
Causes of pelvic organ prolapse	○	○
Anatomy of pelvic organ prolapse	○	○
Alternatives to surgery	○	○
Pelvic Floor Physical Therapy	○	○
Pessary	○	○
Approaches to surgery (i.e. vaginal, open, robotic)	○	○
Native Tissues	○	○
Mesh	○	○
Biologics	○	○
Management of uterus	○	○
What will happen during hospital stay	○	○
Use of foley catheter	○	○
Patients' own role in recovery after surgery (i.e. mobility, oral intake)	○	○
Use of Analgesia	○	○

Do you discuss the following postoperative complications when counseling your patient on pelvic organ prolapse surgery?	No	Yes, mentioned	Yes, explained in detail	N/A
Urinary incontinence	○	○	○	○
Dyspareunia	○	○	○	○
Mesh complications (If applicable)	○	○	○	○
Constipation	○	○	○	○
Urinary retention	○	○	○	○
Injury to surrounding structures	○	○	○	○
Need for repeat surgery	○	○	○	○
Infection	○	○	○	○
Bleeding	○	○	○	○

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