



Patient attitudes toward pooled surgical waitlists in urogynecology

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Abstract

Introduction and hypothesis Pooled surgical waitlists are used to maximize the use of surgical resources; however, patients' views of this strategy are poorly understood. We sought to evaluate patients' attitudes toward a pooled waitlist for urogynecology and pelvic reconstructive surgical procedures.

Methods Patient and provider focus groups were used to inform the design of a survey that was distributed to patients at the time of consent for female pelvic reconstructive surgical procedures. All responses were collected anonymously. Patient attitudes toward surgical wait times and the potential for a pooled surgical waitlist were explored. Grouped responses by age, procedure type, and perceived disease severity were examined.

Results One hundred seventy-six patients were surveyed. Thirty-four percent were amenable to the option of a pooled surgical waitlist; 86% agreed or strongly agreed that they preferred to have their surgery performed by their own care provider. Only 18% would agree to be on a pooled surgical waitlist if it shortened their wait time. Older women (≥ 65 years) were more likely to disagree or strongly disagree that they "would like the option of having surgery done by the next available skilled surgeon" (56.2% vs. 72.0%, $p = 0.028$). Self-perceived severe disease and mid-urethral sling surgery were not associated with a higher acceptance of pooled surgical waitlists.

Conclusions Acceptance of pooled surgical waitlists among urogynecology patients was overall low, irrespective of disease severity. Improving our understanding of urogynecology patients' concerns and potentially negative perceptions of surgical waitlists is needed to ensure patient comfort and satisfaction are not compromised if this strategy is adopted.

Keywords Health services administration · Waiting lists · Pelvic organ prolapse · Urinary incontinence

Introduction

More than one in ten women will undergo pelvic floor reconstructive surgery for management of pelvic organ prolapse or urinary stress incontinence in their lifetime [1]. Waitlists for these procedures, particularly in publicly funded healthcare

systems, can span months despite the considerable impact pelvic floor disorders can have on patients' quality of life. Given the growing demographic of seniors [2], an even greater demand for pelvic reconstructive surgery is anticipated in the coming years [3]. Identifying effective strategies to reduce surgical wait times is therefore a high priority [4].

One proposed strategy to reduce surgical wait times is to 'pool' surgical waitlists. Systems in which patients remain under the care of the surgeon who first assessed and consented them for a given procedure can result in large differences in wait times for the same procedure as waitlists can vary between assigned providers. In systems with pooled surgical waitlists—such as those used at many centers in Canada, the UK, and Australia—the patient is assigned to the next available surgical time, even if it is not with the consultant by whom they were initially assessed. In principle, this approach more evenly distributes the workload as patients flow to surgeons who are not at full capacity [5]. It may also optimize the use of operating room time as shorter procedures could be added or used to replace canceled cases, and it could simplify

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scheduling as surgeons could more easily exchange responsibilities.

Although some healthcare providers view pooled surgical waitlists as a means of effectively sharing the workload and creating a greater sense of team work [6], data on physician and patient attitudes toward this system are limited and at times conflicting. A recent meta-analysis of 11 observational studies of single-entry models for access to elective surgical procedures suggested that pooled waiting lists or centralized intake and triage systems reduce wait times and are associated with high patient satisfaction, but their acceptance among general practitioners and surgeons was mixed [7]. Furthermore, gynecology patients' attitudes toward pooled waitlists have thus far not been examined.

We sought to evaluate patients' acceptance of a pooled waitlist for urogynecology and pelvic reconstructive surgical procedures. We hypothesized that patients would be accepting of this approach, particularly given that the high caseload at our center renders our wait times for these procedures among the longest in our region [3], and pooling of referrals for urogynecology consultations and urodynamic testing already occurs at our center. Understanding patients' perceptions of pooled waitlists is key to ensuring that patient comfort and satisfaction are upheld when restructuring models of surgical care.

Methods and materials

Survey design

The Department of Urogynecology at The Ottawa Hospital holds quarterly information sessions regarding prolapse and incontinence which are open to patients and the general public and are advertised through communication with general practitioners. Immediately following one of these sessions, women were invited to participate in a focus group. The aim of the focus group was to collect participants' opinions and to identify themes relevant to a pooled referral system for surgery. The focus group session was facilitated by a urogynecology fellow and resident physician, included seven women, and was limited to 2-h duration. A group interview structure was used as this is often perceived to be more comfortable for participants and can allow for discussion between participants to enable development of themes. Open-ended questions were used to elicit general concerns and opinions around the topic of a pooled referral strategy. A framework of important and recurrent themes was developed and informed survey development. The survey was subsequently piloted to 26 patients to gauge survey duration. No further revisions to the survey were deemed necessary (see Appendix 1).

Survey recruitment

Consecutive patients were invited to complete the survey once the decision to undergo pelvic floor surgery had been made at their consultation visit with one of five urogynecologists at The Ottawa Hospital between February 23 and December 20, 2018. The survey was provided to patients immediately after they had provided signed consent for surgery. Patients were given time to complete the survey without a healthcare provider present and return it to assistant staff after completion for placement in a secure box with other surveys in the office. Patients were aware that their data would be collected in an anonymous fashion and that their participation and survey responses would not affect their wait time for surgery. Women who were unable to independently complete the relevant consent form, who were unable to read in English or in French, or who declined to participate were excluded from the study.

Study outcomes

The primary outcome of interest was patient acceptance of pooled surgical waitlist based on their level of agreement on a five-point Likert scale with the statement "I would like the option of having my surgery done by the next available skilled surgeon, rather than wait for my own surgeon." Responses of "neutral," "agree," or "strongly agree" were considered to reflect patient acceptance, whereas "disagree" or "strongly disagree" were considered to reflect non-acceptance. Secondary outcomes included the influence of other factors on their acceptance of a pooled surgical wait list (e.g., the ability to meeting with the assigned surgeon, self-perceived severity of symptoms evaluated by the Global Impression Severity Scale [8, 9], and surgical wait time). Pre-specified potential confounders included age, self-reported severity of symptoms, patient-reported acceptable wait time for surgery, and type of procedure. Specifically, our group felt that mid-urethral sling (MUS) procedures were relatively short operations that were highly standardized with similar results across subspecialty providers, rendering patient acceptance of a pooled waitlist for this procedure of particular interest.

Sample size calculation

Approximately 500 procedures are performed yearly by our center's urogynecologists for urinary incontinence and pelvic organ prolapse. We estimated that 176 patients were needed to achieve a 90% confidence interval with a 5% margin of error for the primary outcome among 1 year of women undergoing surgery, assuming a conservative response distribution of 50%.

Statistical analysis

Categorical variables are reported as number (%) and were compared via χ^2 tests. Pre-specified stratified analyses of women aged ≥ 65 years versus < 65 years, of women with self-reported severe symptoms versus those with non-severe symptoms, and of women undergoing isolated MUS procedures versus other procedures were conducted. All analyses were performed using Stata 15.1 (StataCorp, LLC, College Station, TX, USA). A two-tailed α level of 0.05 was used to define statistical significance.

Funding

The study did not receive external funding. The Research Ethics Board at The Ottawa Hospital Research Institute approved the study (IRB approval #20180200-01H).

Results

Focus group results

Focus group participants identified the following surgeon characteristics as most important: empathy, competency, level of experience, knowledge of the patient's history, communication skills, and bedside manner. Symptom severity featured prominently when participants were asked questions regarding acceptable wait times. One participant had had a positive experience with a pooled referral system for oncologic surgery and another likened pooled surgical waitlists to the common practice of patients meeting their anesthesiologist on the day of a procedure. The groups were in consensus that they should have the option of meeting their surgeon before the procedure to have the opportunity to ask specific questions relating to consent, even if consent had already been obtained by an equally competent care provider.

Patient characteristics

Of 215 women approached, 176 (81%) completed the survey. Seventy-three patients (41.7%) were aged ≥ 65 years and 66 (37.5%) reported severe symptoms. The most common surgeries for which participants were listed were vaginal hysterectomy, prolapse repair, MUS, or a combination of these procedures (Table 1).

Acceptance of pooled surgical waitlists

Thirty-three patients (19.1%) agreed or strongly agreed that they would like the option of choosing a pooled surgical waitlist, whereas 27 (15.6%) were neutral. Therefore, in total 60 patients (34.1%) were considered amenable to the

proposed system. Sixty-six patients (40.7%) agreed or strongly agreed that the wait time for pelvic floor surgery was “too long,” but 113 (65.3%) disagreed or strongly disagreed with the idea of a pooled waitlist if it meant shortening the wait time. One hundred thirty-six patients (78.6%) communicated a preference of which surgeon performed their procedure, even if alternate surgeons were experienced, and 130 (75.6%) expressed feeling uncomfortable with meeting their surgeon for the first time on the day of the surgery. One hundred twenty-two patients (70.5%) agreed or strongly agreed that it was important to them to feel a “connection” with their surgeon regardless of their skill, and 128 (74.0%) agreed or strongly agreed that they would be more upset about a surgical complication if it occurred with a surgeon they had met only once prior to surgery (Table 2).

Age

Relative to younger women, women aged ≥ 65 years were more likely to rate their symptoms as severe, to feel that the wait time for pelvic floor surgery was “too long,” and to feel that an acceptable wait time for surgery was ≤ 2 months (50.7% vs. 28.2%, $p = 0.046$; 59% vs. 28%, $p < 0.001$; 46.6% vs. 23.5%, $p = 0.035$, respectively). However, older women were also more likely to disagree or strongly disagree that they would like the option of having their surgery performed by the next available skilled surgeon (56.2% vs. 72.0%, $p = 0.028$) and to agree or strongly agree that they would be more upset about a surgical complication if it occurred with a surgeon they had met only once prior to surgery (83.6% vs. 67.0%, $p = 0.018$); 79.5% of older women agreed or strongly agreed that “...it is important for [them] to feel a connection with [their] surgeon” compared with 64% of women under age 65, although this difference was not statistically significant ($p = 0.081$).

Patient-reported symptom severity

Women who perceived their condition to be severe were more likely to be aged ≥ 65 years (65% vs. 33% $p = 0.014$), to feel that the wait time for pelvic surgery was “too long” (61% vs. 22%, $p < 0.001$), and to report a reasonable wait time for surgery of ≤ 2 months (55% vs. 19%, $p < 0.001$). However, survey responses from women perceiving their condition to be severe were otherwise similar to those with self-reported non-severe symptoms, including their acceptance of a pooled surgical waitlist (Table 3).

One hundred fifty-three patients (86.9%) felt that a reasonable wait time for surgery was ≤ 6 months (Table 1). Potential acceptance of a pooled surgical waitlist (as defined by neutral or agreeable response to question 6) was associated with shorter perceived reasonable wait times for surgery ($p = 0.041$) (Table 3).

Table 1 Patient characteristics

	<i>n</i> = 176
Age, years	
25–44	29 (16.6%)
45–64	73 (41.7%)
≥ 65	73 (41.7%)
Surgery	
Vaginal hysterectomy ± prolapse repair ± mid-urethral sling	46 (26.1%)
Vaginal prolapse repair ± mid-urethral sling	69 (39.2%)
Mid-urethral sling alone	45 (25.6%)
Sacrocolpopexy	7 (4.0%)
Botox bladder injection	4 (2.3%)
Other	3 (1.7%)
Patient-reported symptom severity	
None	1 (0.6%)
Mild	3 (1.7%)
Moderate	79 (44.9%)
Severe	66 (37.5%)
Unsure/unknown	27 (15.3%)
Patient-reported acceptable wait time for surgery	
≤ 2 months	58 (33.1%)
2–6 months	95 (54.3%)
6–12 months	17 (9.7%)
12–18 months	1 (0.6%)
18 months–2 years	1 (0.6%)
Does not matter	3 (1.7%)

Isolated mid-urethral sling vs. other procedures

Relative to women undergoing other procedures, women listed for isolated MUS were more likely to be younger (17.8% vs. 50.0% aged ≥ 65 years, $p < 0.001$) and less likely to report their condition as severe (20.0% vs. 43.5%, $p =$

0.003). They were also less likely to feel that the wait time for pelvic floor surgery was “too long” (19.5% vs. 47.9%, $p < 0.001$), to express that having a “connection” with their surgeon was important to them (52.3% vs. 76.7%, $p = 0.005$), and to report that they would be more upset about a surgical complication if it occurred with a surgeon they had met only once prior to surgery (59.1% vs. 79.1%, $p = 0.030$). However, they were not more likely to oppose the option of a pooled waitlist (Table 3).

Discussion

In this study of women listed for urogynecology surgery, 19% of women agreed or strongly agreed that they would like the option of a pooled surgical waitlist, with overall 34% being amenable (neutral or agreeable) to this strategy. Acceptance was lower among women aged ≥ 65 years. Symptom severity and planned surgical procedure, including isolated MUS, were not clearly predictive of patient acceptance of a pooled waitlist.

Our findings differ from studies in other surgical fields, in which pooled surgical waitlists were found to be generally more acceptable to patients [7]. Ramchandani et al. surveyed ophthalmologists, general practitioners, and patients listed for cataract surgery, finding that 82% of patients were accepting of a pooled waitlist system, whereas 67% of ophthalmologists were not because of concerns about complex cases not being suitable for pooling, differences in operating technique and criteria for surgery that could exist between surgeons, potential medicolegal implications, and devaluing the operation or operator [5]. In a retrospective study by Halliday et al. [10], patients undergoing spinal surgery after the introduction of a

Table 2 Survey questions and responses

	Disagree/strongly disagree (1 or 2)	Neutral (3)	Agree/strongly agree (4 or 5)
Q1. The waiting time for pelvic floor surgery is too long	32 (19.8%)	64 (39.5%)	66 (40.7%)
Q2. I do not have a preference of who does my surgery so long as they are experienced	136 (78.6%)	8 (4.6%)	29 (16.8%)
Q3. I would feel comfortable meeting my surgeon for the first time on the day of my surgery	130 (75.6%)	12 (7.0%)	30 (17.4%)
Q4. Regardless of their skill, it is important for me to feel a connection with my surgeon	23 (13.3%)	28 (16.2%)	122 (70.5%)
Q5. I would feel more upset about a surgical complication if it occurred with a surgeon that I had met only once before surgery (rather than my own specific care provider)	16 (9.2%)	29 (16.8%)	128 (74.0%)
Q6. I would like the option of having my surgery done by the next available skilled surgeon, rather than wait for my own surgeon. (This is called a pooled waiting list)	113 (65.3%)	27 (15.6%)	33 (19.1%)
Q7. I would choose to be on a pooled waiting list for surgery if I knew that the wait time was shorter	113 (65.3%)	28 (16.2%)	32 (18.5%)
Q8. I would prefer to have my surgery done by my own care provider rather than a surgeon on a pooled waiting list	9 (5.3%)	14 (8.3%)	146 (86.4%)

Table 3 Patient characteristics based on acceptance of a pooled surgical waitlist

	Not accepting of a pooled surgical waitlist (<i>n</i> = 113)	Accepting of a pooled surgical wait list (<i>n</i> = 60)	<i>P</i>
Age, years			0.071
25–44	22 (19.5%)	7 (11.9%)	
45–64	50 (44.2%)	20 (33.9%)	
≥65	41 (36.3%)	32 (54.2%)	
Surgery			0.85
Vag hyst ± prolapse repair ± MUS	30 (26.5%)	14 (23.3%)	
Vaginal prolapse repair ± MUS	44 (38.9%)	25 (41.7%)	
MUS alone	29 (25.7%)	15 (25.0%)	
Sacropopexy	4 (3.5%)	3 (5.0%)	
Botox bladder injection	2 (1.8%)	2 (3.3%)	
Other	3 (2.7%)	0 (0.0%)	
Self-reported symptom severity			0.84
None	1 (0.9%)	0 (0.0%)	
Mild	2 (1.8%)	1 (1.7%)	
Moderate	52 (46.0%)	26 (43.3%)	
Severe	39 (34.5%)	25 (41.7%)	
Unsure/unknown	19 (16.8%)	8 (13.3%)	
Patient-reported acceptable wait time for surgery			0.041
≤ 2 months	28 (24.8%)	29 (49.2%)	
2–6 months	69 (61.1%)	25 (42.4%)	
6–12 months	13 (11.5%)	4 (6.8%)	
12–18 months	1 (0.9%)	0 (0.0%)	
18 months–2 years	1 (0.9%)	0 (0.0%)	
Does not matter	1 (0.9%)	1 (1.7%)	

MUS mid-urethral sling, *vag hyst* vaginal hysterectomy

pooled surgical waitlist had similar satisfaction to those prior to its introduction, with high patient satisfaction rates in both systems. In their study, patients had the option of being on both waitlists and thus could opt out of the pool if they desired. A Canadian survey of arthroplasty patients found that 40% of those awaiting surgery and 35% of those who had already undergone surgery would or would have considered switching surgeons to shorten their wait time [11].

Patients' willingness to accept longer wait times to be cared for by a physician with whom they have an established relationship has been previously suggested for chronic health conditions [12–14]. The social stigma and embarrassment associated with pelvic floor disorders [15–17] may further render women with these conditions accepting of longer wait times and less accepting of undergoing procedures by surgeons they are unfamiliar with. The surgical goals of pelvic reconstruction may also play a role as they are based on an understanding of patient priorities (e.g., maintaining sexual function). In addition, although pelvic floor disorders can have a considerable

impact on patients' quality of life [18–20], they are rarely life-threatening, which may contribute to women's willingness to wait.

In a Swedish survey, older patients and women were more likely to express a desire to choose their care provider [12], suggesting that the provider-patient connection may be more valued in this patient population. Our finding that overall 70.5% of women agreed or strongly agreed with the statement “regardless of their skill, it is important for me to feel a connection with my surgeon” suggests that the surgeon-patient relationship is important to our population of patients. This is further supported by our findings that despite being less satisfied with wait times, older women were less agreeable to having their surgery performed by a surgeon other than their known care provider.

It has been suggested that patients undergoing simple elective procedures or those who feel that a delay in treatment may affect outcomes are more willing to switch providers [21, 22]. Given that 74% of respondents in our study agreed or strongly agreed that they would feel more upset about a surgical complication if it occurred with a surgeon that they had met only once before surgery, low-risk urogynecology procedures would likely be more amenable to pooling, which aligns with surgeon opinions in other fields [5, 10]. However, although MUS procedures are generally relatively short and associated with a low risk of complications, patients were not clearly more accepting of a pooled surgical waitlist for this surgery. It is possible that recent media attention on mesh complications, particularly following warnings from regulatory bodies in several countries, may render certain patients reluctant to view MUS as a simple procedure [23–27]. Data on medical errors with pooled surgical waitlists are limited; however, some reports have at least partly attributed procedural errors to this system [28].

Limitations of our study include the risk of non-response bias, with women who completed the survey potentially having stronger opinions on pooled waitlists. However, this risk of bias is at least partly mitigated by our high survey response rate. We chose to conduct the survey immediately after patients provided consent for surgery as this would likely be when patients would be offered the opportunity to enter a pooled surgical waitlist if this was implemented within our system. However, having already met their surgeon, already having a physician-patient relationship, or having had previous experiences with surgery (positive or negative) may have biased participants' survey responses away from acceptance of pooling. Survey respondents included both patients referred to our pool of urogynecologists and to specific individuals within our division, which could have influenced their perceptions. Furthermore, we did not assess whether patients had prior exposure to a pooled waitlist system for prior surgeries, which could alter survey responses. Although beyond the scope of this study, an area of future research interest may

include assessment of specific patient or surgeon factors associated with acceptance of a pooled surgical waitlist. Lastly, we explored patients' acceptance of a pooled waitlist for surgical urogynecology procedures only. Patient attitudes toward pooled waitlists for less invasive urogynecology procedures such as intradetrusor botox, cystoscopy, and urethral bulking were not explored. However, given that these procedures are not performed in operating rooms at many centers, the potential benefits in terms of resource utilization may be more limited.

In conclusion, in this survey of 176 women undergoing urogynecology surgery, 34% were accepting of the option of a pooled surgical waitlist. Women aged ≥ 65 years were less likely to be accepting of this system. Self-perceived symptom severity and planned isolated MUS were not associated with a higher acceptance of pooled surgical waitlists. A better understanding of patients' concerns and potentially negative perceptions of urogynecology surgical waitlists is needed to ensure patient comfort and satisfaction are not compromised if this strategy is adopted.

Compliance with ethical standards

Conflicts of interest Khalil: speaker's honoraria from Pfizer, Allergan, Astellas, and Duchesnay.

Clancy and Zee have no disclosures of conflicts of interest.

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