Do patient goals vary with stage of prolapse?

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OBJECTIVES: To assess the relationship between stage of pelvic organ prolapse and self-expressed patient goals at initial urogynecologic evaluation.

STUDY DESIGN: From February to December of 2010, women presenting for evaluation of pelvic floor disorders were asked to identify up to 5 goals for treatment. Charts were reviewed for demographics. Patients were grouped according to stage of prolapse and goals were grouped into 9 categories.

RESULTS: Two hundred twenty-six women completed the questionnaire. Relief of urinary symptoms were the most commonly stated goal regardless of prolapse stage, pelvic organ prolapse quantitative-0 (59%), pelvic organ prolapse quantitative-I (78%), pelvic organ prolapse quantitative-II (55%), and pelvic organ prolapse quantitative-III (58%). Lifestyle, daily activity, and sexual function goals were the second, third, and fourth most common goals in all stages, respectively.

CONCLUSION: Resolution of urinary symptoms, ability to perform daily activities, and sexual function goals are at least as important as resolution of prolapse symptoms and may be the reason for seeking care.

Key words: patient-centered goals, pelvic organ prolapse, stage

Pelvic floor disorders are significant causes of symptoms that decrease womens’ quality of life and interfere with daily activity.1 Women seek care to address these symptoms and improve their quality of life. Treatment success is usually defined from the surgeon’s perspective; surgical tradition teaches the gynecologic surgeon to restore anatomy, and assumes that normal function will be restored. It is becoming apparent that patient-centric outcome measures are increasingly being used to assess patient satisfaction.2,3 Patient-identified or patient-centered goals have been described as the “fourth dimension” of pelvic floor disorder assessment, after physical findings, symptoms, and quality of life.4 Pelvic floor disorders (PFD) treatment goal attainment is known to be associated with improved condition-specific quality of life and patient satisfaction.5 Patient-selected goals can be used in assessing the efficacy of treatments in which objective measurements may not be as important as subjective improvement.6,7 For example, studies have shown that in disorders that affect quality of life, the patient’s perception of goal achievement impacts her overall satisfaction more than anatomic cure.5,8 Furthermore, objective cure of stress incontinence and pelvic organ prolapse were not shown to be the primary predictors of patient satisfaction after surgery. Rather, the degree to which they achieved their stated goals for surgical treatment were much more predictive of perceived success.8

The majority of studies evaluate the achievement of patient-centered goals in women undergoing surgical or nonsurgical treatment of their pelvic floor disorders.6,8-10 Patient goals can range from specific symptom relief to general lifestyle improvement.2,6,10 However, the association between patient goals in seeking care and stage of pelvic organ prolapse has not been previously studied. We searched Medline from 1952 to May 2011 using the key terms “patient,” “goal,” “prolapse,” and “pelvic floor,” and identified no studies that examined this relationship. Our aim was to assess self-reported goals at initial urogynecologic presentation and to determine whether patients’ goals differed by stage of prolapse. We believe that a better understanding of unmet patient expectations may identify opportunities for improving delivery of care.

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what important] and 4 [not very important]). Each patient underwent a complete history and physical examination, including measurement of pelvic organ prolapse with the pelvic organ prolapse quantitative (POPQ) system per our usual clinical protocol. In addition, all women who are new to our practice are requested to complete the short form of the Pelvic Floor Distress Inventory (PFDI-20) and if sexually active, the short form of the Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire (PISQ-12). Summary scores for the PFDI and subscale scores were calculated according to published algorithms. Prostate cancer stage, clinical diagnoses, PFDI-20, and PISQ-12 scores were obtained from chart abstraction. Clinical symptoms were obtained from history and not from items on the standardized questionnaires.

Patients were grouped according to stage of prolapse by the pelvic organ quantification examination that was performed at their initial evaluation. Goals were classified into categories of symptom relief (urinary, anorectal, pain, or prolapse), daily activity, sexual function, general health, information seeking, treatment planning, and anxiety resolution. The goal categories were created after reviewing all of the goals submitted. The development and assignment of categories were performed by physician reviewers (the first and second author), with assistance from the principal investigator.

There was no a priori sample size or power calculation. We used a sample size of convenience and aimed to obtain 200 surveys given our timetable and resources. All statistical tests were performed using SAS 9.2 (SAS Institute Inc, Cary, NC). All tests were 2 sided, and \( P \) values <.05 were considered statistically significant. Data are presented as mean and standard deviation (SD), median and interquartile range, or proportion. Comparisons between prolapse stage groups were made using a \( \chi^2 \) or Fisher exact test for categorical variables and parametric or nonparametric tests for continuous variables, as appropriate. Median values and interquartile ranges (IQR) were reported for nonnormal distributions.

### Results

During the study period, there were 963 eligible patients. Patients were enrolled in the study when the research fellow was present in clinic. Therefore, 481 patients were offered enrollment. Of those confirmed eligible, 226 women (47%) completed the questionnaire and had a total number of 631 goals. The percentage of patients in the POPQ stages 0, 1, 2, and 3 groups were 28% (n = 63), 30% (n = 67), 26% (n = 60), and 16% (n = 36), respectively. No patients had stage 4 prolapse. The majority (91%) of patients were white. The mean patient age increased with prolapse stage; women with stage 3 prolapse were on average 20 years older than those with POPQ-0 (62.7 ± 10.7 vs 43.0 ± 13.1; \( P < .001 \)). The majority of patients rated all of their goals as very important, so this was not formally analyzed.

In the patients with POPQ-0, 84% described themselves as sexually active and 81% noted having had vaginal intercourse in the last year. Rates of sexual activity decreased slightly with increasing prolapse stages. In patients with POPQ-I, POPQ-II, and POPQ-III, the rates of vaginal intercourse in the last year were 64%, 63%, and 61%, respectively. This was similar to the self-described sexually active status rates in each group (POPQ-I: 67%, POPQ-II: 64%, and POPQ-III: 64%, respectively), but these differences were not statistically significant (\( P < .05 \)).

In patients with no prolapse (POPQ-0), 87% described themselves as being in good, very good, or excellent health, whereas only 13% described themselves as being in fair or poor health. Interestingly, for patients with advanced prolapse (POPQ-III), all patients described themselves as being in good, very good, or excellent health, despite average older age and higher severity of pelvic floor condition. Thirty-eight percent of patients with stage 3 prolapse stated their pelvic floor condition was severe, compared with 19% in the stage 0 group (\( P < .23 \)). The frequency of patients reporting severe pelvic floor dysfunction was similar in patients with stage 2 and 3 prolapse (22% and 23%, respectively). Table 1 highlights the demographics and self-described characteristics between patient groups.

Relief of urinary symptoms was the most commonly stated goal regardless of prolapse stage, POPQ-0 (59%), POPQ-I (78%), POPQ-II (55%), and POPQ-III (58%). For patients with POPQ-0, general health/lifestyle (29%), sexual function/activity (27%), and pain relief (27%) were the next most common goals. Patients with POPQ-I and II also listed general health/lifestyle and daily activity/exercise as priorities. Notably, in the POPQ-II group, only 15% of patients listed relief of prolapse symptoms as a treatment goal. After relief of urinary symptoms, common goals for patients with stage 3 prolapse included daily activity/exercise (36%), sexual function/activity (25%), and anorectal symptom relief (25%). Though all of the POPQ-III patients experienced prolapse symptoms as documented in their medical histories, 42% of patients in this group did not report that relief of prolapse symptoms was a treatment goal. Table 2 highlights these results.

Defecatory symptoms increased as prolapse stage increased, as evidenced by the rate of anorectal symptoms in each group. None of the patients in the POPQ-0 group reported anorectal symptoms goals, but this increased from 16% in POPQ-I, 20% in POPQ-II, 25% in the POPQ-III group, and was statistically significant (\( P < .001 \)). This may also be related to older age in stage III group.

Symptoms category data that was obtained from clinical chart review are summarized in Table 3. Urinary incontinence and overactive bladder syndrome symptoms were high in all groups (60-88%). Prolapse symptoms increased by prolapse stages, with 83% of POPQ-II patients and 100% of POPQ-III patients reporting symptoms.

Because patients with stage 3 prolapse were significantly older than those with no prolapse, we performed a subanalysis to evaluate the effect of age on patient goals. With the exception of pelvic organ prolapse goals among patients with POPQ stage 3 (\( P < .01 \)), there was no effect of age on stated goals for all other
categories. POP-Q stage was the only factor that remained a significant factor for stated goals.

Among patients with stage 3 prolapse, the median PISQ-12 scores are slightly lower in patients with more advanced prolapse, but this difference was not statistically significant ($P = .26$). This may be due to the low numbers of patients in the stage 3 group who completed a PISQ-12 questionnaire. The PFDI-20 scores were higher in patients with stage 2 and 3 prolapse, reflecting the greater distress these patients experience. The subscales of the PFDI include the pelvic organ prolapse distress inventory (POPDI-6), colorectal-anal distress inventory (CRADI-8), and urinary distress inventory (UDI-6) are shown in Table 4. These subscales demonstrate that the urinary symptoms are the largest contribution to the distress that patients in POPQ-0, POPQ-I, and POPQ-II experience. Even in stage 3 prolapse patients, the urinary contribution (as evidenced by the median UDI-6 score of 25) to patient symptoms is substantial.

**Comment**

Our study is consistent with previous reports that patients have specific goals in mind when seeking urogynecologic care. Despite having prolapse on physical examination, patients may have goals other than repair of their prolapse. Lifestyle factors seem to play a large role, with many women focusing on return to missed activities (e.g., I want to go back to my exercise routine), whereas others focused on a resolution of a specific symptom (e.g., I don’t want to leak when I cough).²

It is interesting to note that patients with moderate and advanced prolapse often have goals that are similar to their counterparts without prolapse. This is demonstrated in our study, particularly because urinary symptom relief was the largest goal category regardless of prolapse stage. Further, although stage 3 patients frequently experience symptoms related to prolapse, the resolution of other types of symptoms may be equally or more important. Patient with stage 3 prolapse...
prolapse (defined as leading edge below +1 cm from the hymen, but not below total vaginal length-2 cm) have a significant vaginal bulge. Surprisingly, 42% of these patients did not list prolapse symptom relief as a treatment goal even though 100% of them admitted to symptoms during their medical intake. Anorectal symptoms, sexual function, and daily activities were also high priorities. It may be that the “fixing the bulge” is not a priority for these women as much as preventing urinary leakage, improving urgency, or performing activities that they are currently unable to do. Our PISQ and PFDI data confirm that distress and bother are more likely related to urinary symptoms that patients may incorrectly attribute to prolapse (eg, I want my prolapse fixed so that my overactive bladder symptoms go away). Given the high prevalence of urinary incontinence and overactive bladder symptoms, it appears that patients’ concerns about hygiene, frustration with leaking and changing pads are often the primary concern. Urinary symptoms, particularly overactive bladder symptoms, are well known to severely affect quality of life.8 Again, these results reinforce that restoring anatomy may be a secondary priority to resolving symptoms that interfere with quality of life.

Notably, sexual function goals were prevalent in patients (ranging from 10 – 27%) with all stages of prolapse. Although women with stage 3 prolapse are on average 20 years older than patients with no prolapse, 25% of them had goals that were directed toward improved sexual functioning and 64% described themselves as sexually active. This is a reminder to clinicians that patients age 60 + are often still sexually active and this aspect of their life is still important to their sense of well being.

Our study provides a window into patient expectations for seeking care from specialists in pelvic floor disorders. Standard questionnaires helped us quantify the bother, but were not our primary interest. The strengths of our study include the large number of patients in each category, the open-ended fashion of asking...

### TABLE 2
**Categories of patient-selected goals**

<table>
<thead>
<tr>
<th>Goal category</th>
<th>POPQ 0 n (%)</th>
<th>POPQ 1 n (%)</th>
<th>POPQ 2 n (%)</th>
<th>POPQ 3 n (%)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pelvic organ prolapse symptom resolution (eg, I want to fix the bulge)</td>
<td>3 (4.8)</td>
<td>1 (1.5)</td>
<td>9 (15.0)</td>
<td>21 (58.3)</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Urinary symptom resolution (eg, To stop leaking urine when I cough/needling pads)</td>
<td>37 (58.7)</td>
<td>52 (77.6)</td>
<td>33 (55.0)</td>
<td>21 (58.3)</td>
<td>.03</td>
</tr>
<tr>
<td>Anorectal symptom resolution (eg, To have bowel movements more easily)</td>
<td>0 (0.0)</td>
<td>11 (16.4)</td>
<td>12 (20.0)</td>
<td>9 (25.0)</td>
<td>.001</td>
</tr>
<tr>
<td>Pain symptom resolution (eg, To relieve the pain in my lower abdomen)</td>
<td>17 (27.0)</td>
<td>8 (11.9)</td>
<td>11 (18.3)</td>
<td>7 (19.4)</td>
<td>.19</td>
</tr>
<tr>
<td>Daily activity/exercise (eg, To be able to dance again)</td>
<td>13 (20.6)</td>
<td>13 (19.4)</td>
<td>16 (26.7)</td>
<td>13 (36.1)</td>
<td>.24</td>
</tr>
<tr>
<td>Sexual function/activity (eg, To have my sex life back)</td>
<td>17 (27.0)</td>
<td>6 (9.0)</td>
<td>12 (20.0)</td>
<td>9 (25.0)</td>
<td>.05</td>
</tr>
<tr>
<td>General health/lifestyle/healing/recovery (eg, To feel well again)</td>
<td>18 (28.6)</td>
<td>15 (22.4)</td>
<td>23 (38.3)</td>
<td>8 (22.2)</td>
<td>.19</td>
</tr>
<tr>
<td>Information seeking/treatment planning (eg, To understand my problem)</td>
<td>16 (25.4)</td>
<td>8 (11.9)</td>
<td>13 (21.7)</td>
<td>5 (13.9)</td>
<td>.19</td>
</tr>
<tr>
<td>Emotional/anxiety resolution (eg, To stop worrying about my bladder problem)</td>
<td>11 (17.4)</td>
<td>5 (7.5)</td>
<td>10 (16.7)</td>
<td>2 (5.6)</td>
<td>.14</td>
</tr>
</tbody>
</table>

POPO, pelvic organ prolapse quantitative.


### TABLE 3
**Categories of symptoms**

<table>
<thead>
<tr>
<th>Category</th>
<th>POPQ 0 n (%)</th>
<th>POPQ 1 n (%)</th>
<th>POPQ 2 n (%)</th>
<th>POPQ 3 n (%)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incontinence</td>
<td>41 (65.1)</td>
<td>59 (88.1)</td>
<td>36 (60.0)</td>
<td>22 (61.1)</td>
<td>.002</td>
</tr>
<tr>
<td>Pelvic organ prolapse symptoms</td>
<td>3 (4.8)</td>
<td>6 (9.0)</td>
<td>50 (83.3)</td>
<td>36 (100.0)</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Pain</td>
<td>22 (34.9)</td>
<td>9 (13.4)</td>
<td>7 (11.7)</td>
<td>6 (16.7)</td>
<td>.003</td>
</tr>
<tr>
<td>Recurrent UTI</td>
<td>8 (12.7)</td>
<td>8 (11.9)</td>
<td>0 (0.0)</td>
<td>1 (2.8)</td>
<td>.006</td>
</tr>
<tr>
<td>OAB</td>
<td>45 (71.4)</td>
<td>49 (73.1)</td>
<td>38 (63.3)</td>
<td>25 (69.4)</td>
<td>.66</td>
</tr>
<tr>
<td>Fecal incontinence</td>
<td>3 (4.8)</td>
<td>11 (16.4)</td>
<td>10 (16.7)</td>
<td>5 (13.9)</td>
<td>.15</td>
</tr>
</tbody>
</table>

OAB, overactive bladder; POPQ, pelvic organ prolapse quantitative; UTI, urinary tract infection.

patients about their goals, and administering our questionnaire before contact with a practitioner. This eliminated the potential influence of a discussion with the practitioner on goal selection and expectations for treatment. The literature suggests that women are more likely to report symptom goals and information seeking goals before consultation, and treatment goals after consultation.

Weaknesses of our study include the smaller number of patients with stage 3 prolapse and the absence of patients with stage 4 prolapse. We hypothesize that this is due to patients seeking treatment at earlier stages of pelvic floor dysfunction, and we acknowledge that this may be a regional difference of our referral area. Another weakness of our study is that only about 50% of the subjects completed the quality of life questionnaires. Although we aim to have initial patients complete the PFQDI and PISQ, we acknowledge that the sheer volume of paperwork to complete at that visit may be overwhelming. In addition, time in a busy clinical practice is always a factor, both for the staff who administer the surveys and for patients who are completing them. Patients may not have had sufficient time to complete their quality of life questionnaires before seeing a provider, and we elected not to have them complete the surveys after having been counseled.

Another source of bias is that some patients may prefer not to list certain goals or will leave out certain goals for various reasons, including embarrassment. In addition, our study design was based on categorization of goals by a physician investigator. This may have introduced some bias into the process as the written patient goal was interpreted by the physician investigator. For example, the goal of “to not have a bulge in my vagina” would have been categorized as “prolapse symptoms.” Some of the goals categories were broader than others (eg, general health/lifestyle vs pelvic organ prolapse specific symptoms), which may have arbitrarily changed the proportion of patients in each of the categories. However, this bias is inherent to this type of subjective research. Categorization was necessary to have any meaningful analysis and interpret patterns of patient written goals.

Understanding the priorities and goals of prolapse patients is essential to providing good care. In a field where procedures are elective, physicians must take care to undertake surgical prolapse correction only in patients who are symptomatic and desire intervention. We must not assume that anatomic correction of prolapse will automatically lead to patient satisfaction. Otherwise, the surgical intervention may create another problem without solving the first, leading to an unhappy, unsatisfied patient.

Further studies are necessary to elucidate how goals in prolapse patients affect decision-making and treatment choices. Our future work will involve analyzing types of patient goals, examining which treatment options they chose, and determining whether patient satisfaction can be predicted from goals.

REFERENCES