Primary care providers practice patterns regarding female pelvic floor disorders

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ABSTRACT

Introduction Pelvic floor disorders (PFDs) pose substantial physical and psychological burdens for a growing number of women. Given the ubiquity of these conditions and known patient reluctance to seek care, primary care providers (PCPs) have a unique opportunity to increase treatment and provide appropriate referrals for these patients.

Methods An online survey was administered to PCPs to assess provider practices, knowledge, comfort managing and ease of referral for PFDs. Logistic regression was used to assess the association between demographic/practice characteristics of PCPs and two primary outcomes of interest: discomfort with management and difficulty with referral of PFDs.

Results Of the 153 respondents to the survey, more felt comfortable managing stress urinary incontinence (SUI) and overactive bladder (OAB), compared with pelvic organ prolapse (POP) and faecal incontinence (FI) and were less likely to refer patients with urinary symptoms. Few providers elicited symptoms for POP and FI as compared with SUI and OAB. Provider variables that were significantly associated with discomfort with management varied by PFD, but tended to correlate with less exposure to PFDs (eg, those with fewer years of practice, and internal medicine and family physicians as compared with geriatricians); whereas the factors that were significantly associated with difficulty in referral, again varied by PFD, but were related to practice characteristics (eg, specialist network, type of practice, practice setting and quantity of patients).

Conclusion These findings highlight the need to increase PCPs awareness of PFDs and develop effective standardised screening protocols, as well as collaboration with pelvic floor specialists to improve screening, treatment and referral for patients with PFDs.

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ Pelvic floor disorders (PFDs) are common and have physical and psychological impacts on many women's lives but are under-reported and underdiagnosed. Primary care providers have been identified as a key component of efforts to establish timely and appropriate care for women with PFDs.

WHAT THIS STUDY ADDS

⇒ This study highlights primary care providers' practice patterns related to PFDs and elucidates how to practice characteristics, practitioner demographics and training impact provider comfort in managing PFDs and referral patterns for patients with PFDs.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ Our findings underscore the need to increase primary provider awareness of PFDs, particularly faecal incontinence and to develop effective and efficient standardised screening protocols.

INTRODUCTION

Pelvic floor disorders (PFDs), including pelvic organ prolapse (POP), stress urinary incontinence (SUI), overactive bladder (OAB) and faecal incontinence (FI), represent a growing public health problem in the USA. Symptomatic PFDs are common in the USA, as one in nine women will undergo surgery for POP or urinary incontinence (UI) in their lifetime.[1] PFDs impact women beginning in early adulthood with increasing prevalence of up to 50% for women above the age of 80.[2] Furthermore, the overall prevalence of PFDs is expected to increase as the US population continues to age. By 2050, it is projected that 43.8 million women in the USA will have at least one PFD, a 55% increase as compared with 2010.[3] PFD also poses a significant economic burden to the healthcare system, with national direct costs for UI alone increasing from an estimated US$12.4 billion per year in 1995 to US$65.9 billion in 2007.[4–6] The impact of PFDs on women's lives also outstretches their direct physical impacts as women with PFDs are more likely to have diminished quality of life scores, decreased body image, decreased sexual function and higher rates of depression.[7–11]

Despite PFD's physical and psychological consequences, many women who develop symptoms of PFDs delay or avoid seeking care due to embarrassment, lack of knowledge about treatment options or thoughts of the inevitability of these disorders.[12–14] Lewicky-Gaupp *et al* reported a 4-month median delay in care-seeking for women who discovered their own POP.[15] A survey of women experiencing UI found even longer delays with 74% of women delaying seeking care for at least

1 year, and 46% for 3 years.[16] Thus, there is an unmet healthcare need when women develop symptoms and do not seek care. Primary care providers (PCPs) have an opportunity to fill this gap by identifying women who are symptomatic and have not yet sought specialist care.[17] However, studies have shown that PCPs offer limited screening, particularly for POP and FI,[18–20] and may not know diagnostic, treatment or referral options for PFDs, potentially contributing to delays in receiving specialised care.[21 22] For instance, one national survey found that over 60% of PCPs 'hardly ever' or 'never' screened female patients for POP.[18] Similarly, even where professional guidelines exist for the management of PFDs, such as in the Netherlands, many symptomatic patients will not have a gynaecological examination.[23] Diagnosis and management appear to be even more limited for FI, as a questionnaire study of general practitioners in the UK showed that only one-third were aware of an investigation for FI, 40% were aware of where to refer and one-quarter referred to surgical specialties.[19]

PCPs are well situated to impact care for women with PFDs. However, less is known about how practice characteristics and practitioner demographics and training impact provider comfort in managing PFDs or referring patients for PFDs, particularly for FI. Furthermore, given that women may be reluctant to seek care and PCPs may not screen frequently, there is a need to better understand how patients with PFDs are evaluated in the primary care setting. In this study, we sought to describe PCPs' comfort with the management of and referral practices for PFDs, as well as how practice characteristics and provider demographics impact these factors.

METHODS

A cross-sectional survey (online supplemental figure 1) was an expansion of previously used surveys of PCPs perceptions and management of PFDs[18 24 25] which included similar questions around the presumed prevalence of disorders, management strategies and referral patterns, but went on to include faecal incontinence as a PFD as well as further questions aimed at understanding reasons for lack of referral and mode of presentation of PFDs in clinical settings. The survey was administered via a secure survey collection programme (SurveyMonkey.com; Palo Alto, California, USA). Participants included English-speaking postgraduate trainees and physician providers practicing internal medicine, family medicine and geriatrics at academic centres and private practices. All other fields of medical or surgical specialisation were excluded (eg, paediatrics, general surgery, gynaecology). Participants were passively recruited through posting the survey on national medical societies websites (eg, American Geriatric Society). Enrolment was voluntary, without monetary reimbursement. Informed consent was obtained at survey participation and no unique identifiers were collected.

The questionnaire consisted of questions on demographics, medical training, practice characteristics and knowledge, comfort level and referral patterns as related to the management of PFDs. Most questions allowed for only one response; however, participants were able to select multiple options for how providers identify and diagnose PFDs in the clinic and the reason for which they chose not to refer for PFDs. Comfort level with management and ease of referral were qualified with a 5-item anchored Likert scale.

All statistical analysis was performed using Stata V.16 (StataCorp, College Station, Texas, USA 2019). Descriptive statistics are presented as quartiles for continuous data that was not normally distributed (eg, number of patients per week and the number of pelvic examinations per week), as means for normally distributed data, and as counts for categorical data. X^2, Fisher exact and two-proportion t-tests were used to determine differences in item responses by PFD. Bivariate logistic regression was used to assess any association between demographic/practice characteristics and the two primary outcomes of interest: discomfort with management and difficulty with referral of PFDs. For bivariate and multivariate analyses, provider discomfort with management was defined as a dichotomous variable whereby self-rated anchored Likert scale items 'Very Uncomfortable', 'Somewhat Uncomfortable' and 'Indifferent' were categorised as experiencing discomfort. Those responding with anchored Likert scale items 'Very Comfortable' and 'Somewhat Comfortable' were categorised as not experiencing discomfort. The same categorisation scheme was used for ease of referral, with those responding that referral was 'Very easy' or 'Somewhat easy' being classified as 'Easy to refer' and the remainder of the anchored Likert scale items being categorised as 'Difficult to refer'. In order to maximise sample size within predictor variables, subgroups of various variables were combined when appropriate and used as a single group in analysis (eg, combining all years of residency training, combining all private practice providers (single-group and multi-group practice), combining all those with dual-specialty (internal medicine-geriatrics and family medicine-geriatrics)). Adjusted OR with 95% CI was calculated using multivariate logistic regression including all variables that were significantly associated (p value<0.05) with discomfort or difficulty of referral in bivariate analysis. If one of the subgroups of a variable (ie, family medicine of the variable specialty) perfectly predicted discomfort or comfort management, or difficulty or ease of referral, respectively, it was excluded from the multivariate analysis to maximise sample size. The multicollinearity of variables was examined using Spearman correlation coefficient analysis.

Patients and the public were not involved in design, conduction, reporting or dissemination of this research.

Table 1 Demographic and clinical practice description of survey participants

	% (n=153)
Gender	
Male	28.1 (43)
Female	71.9 (110)
Age	
20–35	38.6 (59)
36–45	30.1 (46)
46–55	13.1 (20)
56–65	15.7 (24)
>65	2.6 (4)
Specialty	
Family medicine	54.9 (84)
Geriatrics	29.4 (45)
Internal medicine	7.8 (12)
Multispecialty	7.8 (12)
Level of training/years of practice	
PGY 1–7	29.4 (45)
1–10 years	30.1 (46)
11–20 years	18.3 (28)
>20 years	22.2 (34)
Practice setting	
Urban	66.7 (102)
Suburban	23.5 (36)
Rural or tribal	9.8 (15)
Type of practice	
Academic	63.4 (97)
Private practice	22.4 (34)
Other	13.8 (21)
Region of practice	
Mid-Atlantic	37.9 (58)
Northeast	15.7 (24)
South	12.4 (19)
Midwest	11.8 (18)
Southwest	3.9 (6)
West	15.7 (24)
Outside the USA	2.6 (4)
Percentage of patients above the age of 40	
<50%	40.5 (62)
≥50%	59.5 (91)
Percentage of patients that are female	
None	0.0 (0)
≤25%	1.3 (2)
26–49%	5.3 (8)
50%	13.1 (20)
51–75%	54.9 (84)

Continued

Table 1 Continued

	% (n=153)	
>75%	25.5 (39)	
Percentage of patients referred to another physician for any reason		
≤10%	47.7 (73)	
11–24%	41.8 (64)	
25–49%	9.8 (15)	
50–74%	0.7 (1)	
>74%	0.0 (0)	
	Median	**Mean (SD)**
Average number of patients per week	30	43.2 (34.6)
Average number of pelvic examinations per week	2.5	6.8 (11.3)

RESULTS

153 providers responded to our survey. The majority of respondents were women (71.9%), younger than 45 years of age (68.7%), family medicine practitioners (54.9%) and were practicing in an urban (66.7%), academic centre (63.4%) (table 1). All participants saw female patients, with 93.5% of providers seeing 50% or more female patients. Providers performed 0–80 pelvic examinations per week (median 2.5; IQR 0.5–10) and saw a median of 30 patients per week (IQR 20–55). Providers tended to underestimate the prevalence of POP and FI, with only 13.7% and 17.0% correctly estimating the prevalence, respectively. Conversely, more providers overestimate the prevalence of SUI and OAB, with 34% and 39.2% correctly estimated prevalence, respectively.

Although the vast majority of respondents have evaluated patients with POP, SUI and OAB (93.4–99.3%), significantly fewer PCPs have evaluated patients with FI (78.4%). PFDs were identified clinically in multiple ways (figure 1). The most common way by which patients presented with PFDs was by chief issue (80% POP, 78% SUI, 82% OAB and 72% FI). Greater proportions of providers elicited the diagnosis of SUI and OAB by review of systems, whereas POP was more likely to be diagnosed by physical examination.

By anchored Likert response, providers were more likely to be very comfortable with the management of SUI or OAB as compared with both POP and FI, although there was no difference among the rates of those being somewhat comfortable with POP as compared with SUI or OAB (figure 2). Providers were more likely to be very uncomfortable with the management of FI as compared with all other PFDs. More providers referred a smaller percentage (ie, 1–24%) of patients with SUI or OAB (43% and 48%, respectively), while 49% and 43% of providers referred 75–100% of their patients with POP and FI, respectively. A significantly lower percentage of
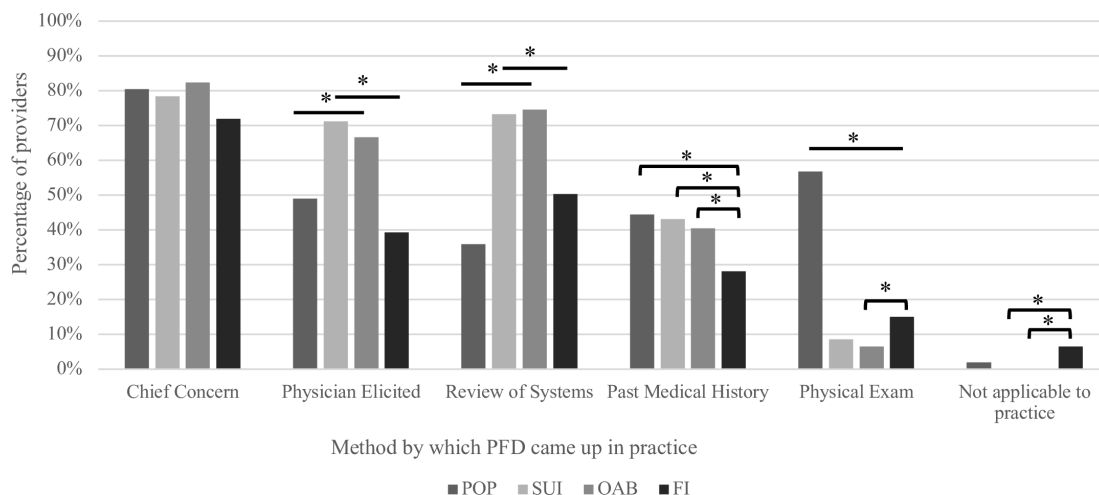
Figure 1 Ways by which providers identified or diagnosed PFDs in clinical practice caption: participants were able to select more than one way by which a PFDs were identified clinically. *Two sample t-test p value of ≤0.05. FI, faecal incontinence; OAB, overactive bladder; PFD, pelvic floor disorder; POP, pelvic organ prolapse; SUI, stress urinary incontinence.

providers also responded that it was very easy to refer a patient with FI as compared with all other PFDs.

Younger practitioners, those with fewer years of practice, and internal medicine and family physicians, tended to have a greater likelihood of discomfort with managing all PFDs (online supplemental table 1). Because of collinearity with age and level of training/years of practice, regression models were modified to include the level of training/years of practice alone.

Specifically for discomfort in managing POP, after adjusting for factors significant on bivariate analysis (level of training/years in practice and % of patients referred for any reason), the only factor significant on multivariate analysis was level of training/years in practice. Compared with those with >20 years of practice, those with 1–10 years and those still in training had a 4.41 (95% CI 1.58 to 12.34) and 4.54 (95% CI 1.60 to 12.85) adjusted odds of discomfort managing POP, respectively.

For discomfort managing SUI, after adjusting for factors significant on bivariate analysis (level of training/years in practice, % of patients referred for any reason and specialty), the only factor significant on multivariate analysis was specialty. General internal medicine providers were significantly more uncomfortable with managing SUI compared with geriatricians (adjusted OR (AOR) 7.55; 95% CI 1.2 to 47.5).

For OAB, significant variables vary from other PFDs. After adjusting for factors significant in bivariate analysis (specialty, number of pelvic examinations per week and incorrectly estimating the prevalence of OAB), incorrectly estimating the prevalence of OAB maintained significance in multivariate analysis (AOR 4.77; 95% CI 1.20 to 18.93) as did provider specialty with internal medicine providers being significantly more uncomfortable with managing OAB compared with geriatricians (AOR 16.93; 95% CI 2.27 to 126.02).
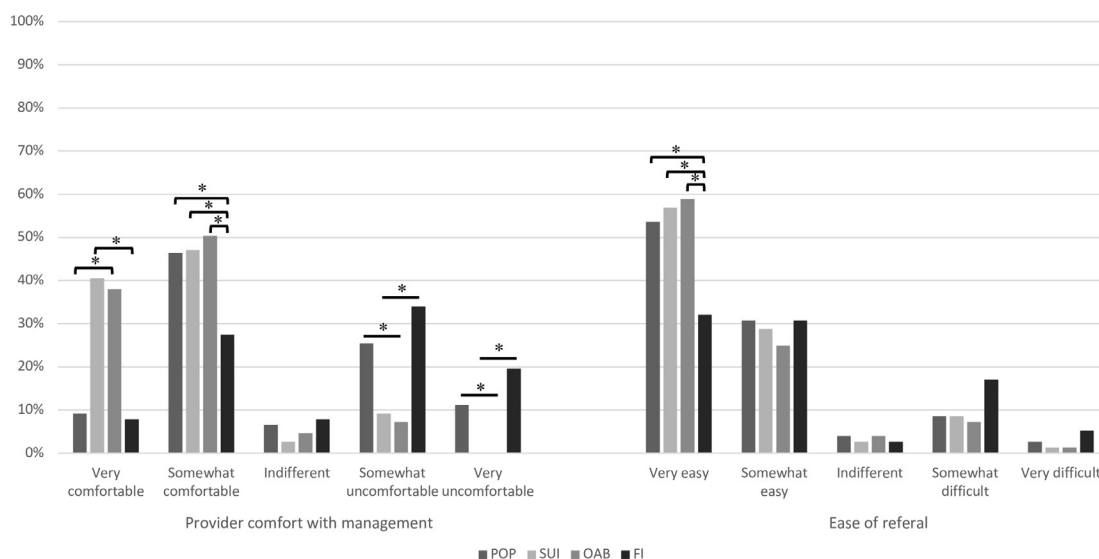

Figure 2 Care providers' comfort managing and ease of referral for pelvic floor disorders caption: *two-sample t-test p value≤0.05. FI, faecal incontinence; OAB, overactive bladder; POP, pelvic organ prolapse; SUI, stress urinary incontinence.

Table 2 Reasons care providers cited for not referring certain patients for each PFD

	% (n) of care providers who cited reason for lack of referral offered (n=153)				X^2† or Fisher exact‡ p value
	POP	SUI	OAB	FI	
No patients with disorder*	5.9 (9)	0.7 (1)	0.0 (0)	16.3 (25)	<0.001‡
My patients are not bothered by disorder*	36.6 (56)	25.5 (39)	19.6 (30)	4.6 (7)	<0.001†
I feel comfortable managing the disorder*	32.7 (50)	74.5 (114)	78.4 (120)	22.9 (35)	<0.001†
I do not know where to refer*	2.0 (3)	2.0 (3)	2.0 (3)	6.5 (10)	0.084‡
Patient already seeing a specialist	28.1 (43)	22.9 (35)	22.2 (34)	16.3 (25)	0.106†
My patients do not discuss these issues	4.6 (7)	3.3 (5)	4.6 (7)	5.9 (9)	0.777‡
I do not elicit these problems	3.3 (5)	3.3 (5)	2.6 (4)	3.9 (6)	0.989‡
Other problems take priority during office visits	19.0 (29)	25.5 (39)	22.2 (34)	13.7 (21)	0.066†
Patient transportation or financial constraints	18.3 (28)	20.3 (31)	19.0 (29)	13.1 (20)	0.369†
Refer all my patients with disorder*	32.7 (50)	8.5 (13)	7.2 (11)	37.9 (58)	<0.001†

Participants were able to select more than one reason for not referring.
Denotes when Fisher's exact test is used for comparison.
*X^2 or Fisher's exact p value≤0.05.
†Denotes when Fisher's exact test is used for comparison.
‡Denotes when χ^2 test is used for comparison.
FI, faecal incontinence; OAB, overactive bladder; PFD, pelvic floor disorder; POP, pelvic organ prolapse; SUI, stress urinary incontinence.

FI was similar. After adjusting for factors significant on bivariate analysis (specialty and level of training/years in practice), the only factor significant on multivariate analysis was specialty was level of training/years in practice. Those with 1–10 years of practice and PGY 1–7 had a 4.82 (95% CI 1.72 to 13.56) and 2.98 (95% CI 1.11 to 8.03) adjusted odds of having discomfort managing FI, respectively, compared with those with >20 years of practice.

Providers were able to select multiple reasons for the lack of providing referrals, and identified a variety of reasons for not referring certain patients for PFD management, which varied significantly by PFDs (table 2). Overall, a very small percentage of providers answered that they did not know where to refer patients for PFDs (≤6.5%). Reasons for not referring reflected the previous findings with a greater percentage of providers not referring for SUI or OAB because they were comfortable managing these PFDs (74.5% and 78.4%), as compared with POP and FI (32.7% and 22.9%, respectively). The most commonly cited reason for not referring to POP was that patients were not bothered by this disorder (36.6% of providers), whereas only 4.6% of providers did not refer secondary to patients not being bothered by FI. As compared with other PFDs, a greater percentage of providers did not have patients with FI (16.3%), referred all patients for FI (58%) or did not know where to refer patients for FI (6.5%).

For all PFDs, the practitioner characteristics that were associated with the difficulty of referral were generally more related to the practice characteristics, including available providers, type of practice, practice setting and quantity of patients, rather than provider-specific characteristics (ie, level of training/years in practice) (online supplemental table 2). For POP, the variables associated with difficulty with referral in bivariate analysis included

practice type with those in private practice and other practice types (eg, federally qualified health centre, community health clinic, hospital-based clinic) having higher odds of difficulty of referral as compared with academic practice; having the highest quartile of number of patients per week; and not having a urogynaecologist, urologist, female urologist or gynaecologist at their practice. None of these variables maintained significance in multivariate analysis.

Analysis for SUI yielded similar results. After adjusting for factors significant on bivariate analysis (practice type, number of patients per week, presence of a female urologist at the practice and practice setting), practice setting, practice type and not having a female urologist all maintained significance in multivariate analysis. Practicing in a suburban setting was associated with an AOR 3.29 (95% CI 1.03 to 10.52) compared with urban setting, non-academic and non-private practice models with an AOR 4.77 (95% CI 1.34 to 17.03) compared with academic settings and those with no female urologist at their practice with an AOR 5.51 (95% CI 1.15 to 26.33) compared with those with access to a female urologist of increased difficulty with referral, respectively.

For difficulty with referral for OAB, after adjusting for factors significant on bivariate analysis (practice type and presence of a female urologist at the practice), only practice type was associated with increased difficulty with referral. Practicing in a non-academic and non-private practice type had an AOR of 5.51 (95% CI 1.69 to 17.96) of difficulty as compared with those in academic practices.

For difficulty with referral for FI, after adjusting for factors significant on bivariate analysis (practice type, number of patients per week and presence of a female urologist at the practice), only the number of patients per week maintained significance on multivariate analysis.

Having the highest quartile number of patients per week (56–200 patients) was associated with an AOR 5.04 AOR (95% CI 1.50 to 16.92) as compared with those with the lowest quartile number of patients per week (2–20 patients).

DISCUSSION

Our survey demonstrated that the majority of PCPs were more comfortable with the management of OAB and SUI, with the majority of providers referring less than 25% of their patients with these disorders, as compared with the majority referring over 50% of those with POP or FI. Discomfort with managing PFDs tended to be impacted by provider experience with those with fewer years in practice and with decreased opportunity to interface with patients with each PFD (ie, being an internal medicine physician as compared with geriatricians) being less comfortable. Alternatively, those factors that impacted the difficulty of referral varied by PFDs but included practice type with increased difficulty for non-academic and private practice setting as compared with academic practice for SUI and OAB; practice settings with increased difficulty in suburban as compared with urban settings for SUI; specialist network with increased difficulty in settings without a female urologist for SUI; and patient load with high patient load increasing difficulty for FI.

Consistent with other studies,[18 24 25] providers who responded to our study tended to be more comfortable with managing SUI and OAB, as evidenced by higher percentages estimating the correct prevalence rate, lower rates of referrals for these disorders and great percentages expression that being 'very comfortable' managing as compared with POP and FI. The factor most consistently associated with discomfort managing PFDs was years in practice and specialty. Contrary to our findings, years in practice have been shown in previous studies to impact the management of PFDs, with providers practicing >20 years being more likely to immediately refer patients with incontinence than those practicing 0–10 years, although the authors evaluated referral pattern, they did not specifically address provide comfort with management of PFDs.[25] This difference may be in part due to the different populations being sampled. Wong *et al*, included a larger percentage of family practice and internal medicine providers while our study had more geriatricians who may be more accustomed to managing patients with incontinence given the common prevalence of that condition that the geriatric population.

Previous studies documenting PCP's practice around PFDs, have failed to include an evaluation of FI.[18 24 25] This lack of inclusion is consistent with the under-representation of FI within the broader literature on PFDs, despite its prevalence and impact on patient quality of life.[12] We also found that the majority of providers refer over half of their patients for FI and POP, but unlike for POP and other PFDs, providers were more likely to find referral difficult for FI. Similarly, other studies have found that PCPs are less likely to screen for FI and are unaware of treatment therapies for FI, and are less informed of where to refer patients for FI.[19 20]

Our findings highlight the potential role that PCPs might play in identifying patients with PFDs. The most common way by which all patients with PFDs were identified was by patient chief issue; however, robust literature suggests that patients experience substantial difficulties disclosing their symptoms to providers,[3 7 11 13 26–28] suggesting that PCPs could play a more active role in screening for PFDs. This shortcoming has been identified in prior studies as well, where nearly one-fourth of women place blame on their PCPs for delaying the diagnosis of their PFD.[22] Given the suspected high prevalence of these disorders, these additional findings support the use of standardised screening procedures for PCPs as there exists multiple simple and validated screening questions for these disorders. Furthermore, as found in our study, discomfort with management appears to be impacted by variables denoting decreased exposure to these conditions, standardised screening may allow providers increased opportunity to knowingly interface with these patients to gain familiarity and potential comfort with managing and or referring patients with PFDs.

In our study, we also found that ease of referral for patients with urinary symptoms was independently associated with the presence of having female urologist in the same practice/institution although there is less published literature on ease of referral for PFDs, this is similar to what has been found in other studies of a high reliance on urological referrals for patients with urinary symptoms.[24 25] Interestingly, we did not find that having gynaecology or urogynaecology in the same practice/institution facilitated referrals for any PDFs this may speak to PCPs being less aware of urogynaecology as a specialty, as has been identified in other studies.[18 25]

The design of this study has inherent limitations. As this study uses convenience sampling and has a relatively small sample size when compared with the population of PCPs in the USA and includes a high proportion of trainees, its results are hard to extrapolate to the whole of PCPs and their practice and to make broader conclusions a truly representative sample would be warranted. Additionally, all trainees (PGY 1–7) were grouped together in the analysis, which could represent a diverse group including those just entering practice and those who may have returned to fellowship after independent practice, but this survey was not designed to assess this possibility. Online surveys, such as this, are subject to sampling bias whereby those who responded to the survey may be more likely to have an interest in PFDs or women's health, and therefore might not be generalisable, skewing the results toward a population with increased experience or comfort managing PFDs or sample those more engaged on national platforms websites which is not necessarily a generalisable sample. Response bias could also lead to an overestimation of comfort with or ease of referral for PFDs, as participants may feel pressured to respond

more positively so as to not appear incompetent or less knowledgeable. Furthermore, this study was not designed to assess the actual practice patterns of PCPs so conclusions should be drawn cautiously in regard to actual care provided. Additionally, although the survey questionnaire is similar to the ones used in other studies[18 24 25] it has not been formally validated.

In conclusion, our study further confirms that PCPs, especially those with fewer years in practice, are less comfortable with managing patients with any PFDs, especially POP and FI. Fewer providers are eliciting patients for POP or FI symptoms. Although most providers reported ease with referring patients with these disorders, it was more difficult to refer patients with POP or FI. These findings, taken together with the patients' reluctance to disclose these symptoms as well as the delays in care seeking, underscore the need to increase primary provider awareness of these conditions and develop effective and efficient standardised screening protocols.

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