

Assessment of Uterine Fibroid Knowledge and Educational Interests Among Health Care Professionals

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ABSTRACT

Background: Uterine fibroid diagnosis and management can be delayed by a lack of access to care. To combat this barrier, this study aimed to determine gaps in knowledge and investigate areas of education interest.

Methods: Obstetrics-gynecology, family medicine, and internal medicine resident and attending physicians received an electronic survey via RedCap. Descriptive statistics were performed in Mintab and Excel.

Results: Seventy of the 316 physicians (22%) who received the survey completed it. Most participants answered questions regarding diagnosis timing, instruments for validated reported outcomes, and risk factors incorrectly. Seventy-six percent of respondents desired more education about treatment options and guidelines.

Discussion: This study provides insight regarding current knowledge of uterine fibroids and areas of educational interest among different physicians.

BACKGROUND

Uterine fibroids are solid neoplasms of smooth muscle and fibroblast that can negatively impact an individual's health and well-being.^{1,2} The prevalence of uterine fibroids among women documented in the literature ranges from 4.5% to 80% depending on study population and diagnostic methods utilized.^{2,3} A single study also demonstrated that the cumulative incidence of uterine fibroids by age 50 years in the United States was nearly 70% in White women and 80% in Black women.⁴

Affected individuals can experience disruptive uterine bleeding, severe anemia, abdominal discomfort, pain, bowel and blad-

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der dysfunction, and fertility issues due to uterine fibroids.^{1,2} In addition to negative physical health outcomes, those individuals can experience significant emotional distress, fear, anxiety, anger, depression, and lower quality of life.^{5,6}

Furthermore, in a study surveying 968 women aged 29 to 59, 28% reported missing work due to uterine fibroid symptoms.⁷ A combination of this lost work, the direct health care costs of uterine fibroids, and attributable obstetrics health care outcomes results in an estimated cost in the United States of \$5.9 billion to \$34.3 billion annually.⁸

Although uterine fibroids result in significant negative health outcomes for individuals and high health care costs, many patients report a delay in diagnosis and establishing care.^{9,10} Qualitative studies report that barriers to care include normalization of symptoms, low health literacy/knowledge, avoidance-based coping, dissociation from their uterine fibroids, and lack of an accessible and trusted health care professional.^{9,10}

To combat the barrier of lack of access to a trusted health care professional, this study aimed to determine gaps in health care professionals' knowledge regarding uterine fibroids and then increase study participants' knowledge and awareness through targeted education programs. The study also aimed to expand on current literature as there are no studies to our knowledge investigating health care professionals' knowledge or education programs regarding uterine fibroids.

METHODS

Study Design and Setting

The project is a knowledge assessment conducted at a single academic medical center in Milwaukee, Wisconsin.

Study Population

Obstetrician-gynecologist (OB-GYN), internal medicine, and family medicine physicians and residents working at Froedtert and the Medical College of Wisconsin in 2022 were included in the study. Internal medicine physicians surveyed were limited to the General Internal Medicine-Primary Care Department. The survey was provided to OB-GYN attending and resident physicians via current listservs. The research team worked with the internal medicine and family medicine department chairs and coordinators and residency program leadership to accurately provide the survey to current physicians. The survey was distributed to 316 physicians (89 OB-GYN, 144 internal medicine, and 83 family medicine).

Survey Development

The survey investigating health care professionals' knowledge was developed from information gained from research articles reporting on the epidemiology and symptoms of uterine fibroids, impact of obesity on gynecology and uterine fibroids, and new symptom and health-related quality-of-life questionnaires. Questions regarding peak time to diagnosis and questionnaires were included as these topics can be related to uterine fibroid diagnosis (Appendix). The team also utilized the American College of Obstetrics and Gynecology (ACOG) Practice Bulletin, which provides evidence-based recommendations for medical, procedural, and surgical management of symptomatic uterine fibroids.¹

Data Acquisition and Analysis

The knowledge survey link was provided to participants via email from August to October 2022. Data was stored in RedCap. Descriptive statistics were performed in Minitab and Excel.

RESULTS

Thirty-one OB-GYN (44%), 20 internal medicine (29%), and 19 family medicine (27%) physicians answered at least 1 question. Regarding years in practice, 37 (53%) reported 0 to 5 years, 15 (21%) reported 5 to 10 years, and 17 (24%) reported greater than 10 years. Less than 50% of participants correctly answered ques-

Table 1. Number (n) and Percentage of Total Participants (N) Who Answered Each Question Correctly

Question	All		OB-GYN		FM		IM	
	n	% (N)	n	% (N)	n	% (N)	n	% (N)
What is the most common symptom of UF?	53	82 (65)	23	92 (28)	15	79 (19)	15	83 (18)
Which are risk factors for UF?	16	25 (65)	4	14 (28)	6	32 (19)	6	33 (18)
At what age does the prevalence of UF diagnosis peak?	16	25 (65)	8	29 (28)	5	26 (19)	3	16 (19)
What race is most affected by UF?	59	91 (65)	26	93 (28)	15	79 (19)	13	72 (19)
According to the 2021 ACOG Practice Bulletin on the Management of Symptomatic Uterine Leiomyomas, which of the following are potential treatment options for patients with uterine fibroids?	50	79 (63)	25	93 (27)	13	68 (19)	12	71 (17)
The 2021 ACOG Practice Bulletin on the Management of Symptomatic Uterine Leiomyomas provides which of the following statements/recommendations?	25	40 (63)	8	30 (27)	10	53 (19)	7	41 (17)
Which of the following instruments are validated PRO tools specifically for UF?	14	22 (63)	7	26 (27)	4	21 (19)	3	18 (17)

Abbreviations: ACOG, American College of Obstetrics and Gynecology; FM, family medicine; IM, internal medicine; OB-GYN, obstetrics-gynecology; PRO, patient-reported outcomes; UF, uterine fibroids.

Table 2. Number of Participants (n) Who Reported Different Educational Interests Regarding Uterine Fibroids Among All Participants Who Answered the Question (N)

Education Topic	All (N=62)		OB-GYN (N=26)		IM (N=17)		FM (N=19)	
	n	%	n	%	n	%	n	%
Treatment options and guidelines	47	76	14	54	14	82	19	100
Patient-reported outcomes	28	45	13	50	7	41	10	53
Diagnostic options	23	37	4	15	9	53	10	53
General disease state education	20	32	3	12	7	41	10	53
Risk factors	19	31	4	15	6	35	8	42
Signs and symptoms	19	31	1	4	7	41	11	58
None	7	11	6	23	1	6	0	0

Abbreviations: FM, family medicine; IM, internal medicine; OB-GYN, obstetrics-gynecology.

tions regarding peak time of uterine fibroid diagnosis, validated patient reported outcomes tools, risk factors, and ACOG's statement about uterine fibroid treatment data. Over 50% of participants correctly answered questions regarding treatment options, symptoms, and prevalence rates by race (Table 1). When comparing obstetrics-gynecology versus internal medicine versus family medicine, the specialty with the highest percentage of participants answering correctly varied by question (Table 1).

When asked what uterine fibroid education topics would be beneficial, 76% (n=47) of physicians desired more education about treatment options and guidelines (Table 2). When comparing different specialties, greater than 50% of family medicine

Table 3. Number of Participants (n) Who Preferred Each Method of Additional Education Among All Participants Who Answered the Question (N)

Method	n	% (N=63)
Live in-person	19	30
Live virtual	25	40
Virtual on-demand	35	56
None	5	8
Other	1	1

physicians desired more education on treatment options and guidelines, diagnostic options, patient-reported outcomes, general disease state education, and signs and symptoms of uterine fibroids, while internal medicine physicians desired more education on treatment options and guidelines and diagnostic options. A majority of OB-GYN physicians desired more education on treatment options and guidelines (Table 2).

Lastly, when asked what method of educational training is preferred, 56% (n=35) of respondents reported a preference for a virtual, on-demand session versus 40% (n=25) who reported a preference for a live, virtual session.

DISCUSSION

This study provides insight regarding current knowledge of uterine fibroids and areas of educational interest amongst OB-GYN, internal medicine, and family medicine physicians. These insights will inform the development of a targeted education session for physicians based on incorrectly answered questions. The session should include information about the diagnostic timing, risk factors, validated patient-reported outcome tools, and ACOG statements regarding uterine fibroids. In addition, the session should focus on treatment options guidelines and patient-reported outcomes, and it would most likely be best received via virtual live and on-demand platforms.

Our study was limited by a small sample size, which can be explained by the study being performed at a single location. Possible reasons for a small response rate could be survey fatigue, lack of interest, and lack of time. The sample size could be increased by expanding the study population to additional institutions, increasing the number of years of data, and providing incentives to complete the survey.

In addition to the low response rate, there is a risk of sampling bias. The individuals who responded may have a baseline interest in uterine fibroids. In addition, the data may be affected by response bias, such that physicians who have interest, experience, or knowledge may be more likely to respond to the survey. In this case, the results may have overestimated physician knowledge. Furthermore, the survey questions may have limited the evaluation of the physicians' knowledge. The survey contained 7 questions, which may not have been enough to adequately measure an individual's knowledge on this specific subject.

Although the data interpretation has limitations, the results

provide educational targets with the goal of improving physicians' knowledge and confidence when caring for individuals with uterine fibroids.

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Appendix: Available at wmjonline.org.

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