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Patient attitudes and preferences for the management of pregnancy of unknown location

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Objective: To understand patient attitudes and preferences when faced with the uncertainty of pregnancy of unknown location (PUL).

Design: Qualitative, interview-based study.

Setting: University Hospital.

Patient(s): Patients aged >18 years sampled from the emergency department and a subspecialty fertility practice of a university hospital system.

Intervention(s): Six to 8 weeks after resolution of a PUL, with an ultimate clinical outcome of either an intrauterine pregnancy, spontaneous abortion, or ectopic pregnancy. Participants underwent either surgical, medical, or expectant management.

Main Outcome Measure(s): Thematic analysis of the virtual, semistructured interviews (45–60 minutes in length) conducted with participants to identify commonly expressed priorities was performed.

Result(s): Interviews were completed from October 2020 to March 2021 until thematic saturation was achieved ($n = 15$). Resolution diagnoses included intrauterine pregnancy (26.7%, $n = 4$), ectopic pregnancy (40.0%, ($n = 6$), and spontaneous abortion (33.3%, $n = 5$). Moreover, 66.7% ($n = 10$) of the patients presented to the emergency department, whereas 33.3% ($n = 5$) presented to a subspecialty fertility clinic. All had desired pregnancies. Thematic analyses revealed 4 related priorities around PUL management: *health of pregnancy*; *health of self*; *future fertility*; and *diagnostic prediction and diagnostic certainty*. The relative balance of these priorities was dynamic and evolved throughout the course of management with different outcomes. A second set of themes related to logistical preferences included *mental health support*, *clarity of treatment and next steps*, and *continuity of care*. Interrater reliability was validated with a pooled κ of >0.8. Limitations include that all participants had desired pregnancies, and the experiences of those who experienced different pregnancy outcomes may have been affected by recall bias.

Conclusion(s): These data demonstrate novel themes around related priorities in patients with desired pregnancies diagnosed with a PUL previously underappreciated by clinicians. The balance of these priorities evolved throughout management with increasing information and clarity. Continually reevaluating relevant patient priorities and preferences is essential to the comprehensive management of PUL. (*Fertil Steril Rep*® 2022;3:246–52. ©2022 by American Society for Reproductive Medicine.)

Key Words: Pregnancy unknown location, ectopic, abortion

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Pregnancy of unknown location (PUL) is a transient state experienced by 8%–31% of patients who receive ultrasound assessment

during early pregnancy, defined as the absence of definitive ultrasonographic confirmation of intrauterine pregnancy (IUP) after a positive pregnancy test (1).

A PUL can signify a gestation too early to identify, nonviable or slow-growing gestation, or gestation located outside the uterus. A PUL will ultimately progress to either a viable IUP or pregnancy loss, the latter of which may be diagnosed as a spontaneous abortion (SAB), ectopic pregnancy (EP), or spontaneously resolved PUL (1, 2). If found to be nonviable, therapeutic strategies include expectant, medical, or surgical management (3). A PUL, therefore, represents a clinical scenario with multiple possible diagnostic and therapeutic

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steps, each with associated decision points that can dictate different patient experiences.

Uncertainty associated with early pregnancy diagnoses has been shown to be a significant contributor to patient anxiety (4, 5). Researchers have studied patient experiences with miscarriage and used their priorities to guide patient-centered clinical practice (6–10); however, the same investigation and analysis have been lacking for those with PUL. A dedicated study is needed to identify and incorporate patient values into the management of PUL.

This qualitative interview study aimed to better understand patient attitudes and preferences when faced with the uncertainty introduced by PUL diagnosis to guide future improvements in PUL care.

MATERIALS AND METHODS

Study Design

Patients aged >18 years with a recent PUL diagnosis were identified through chart review from a large university hospital-based general obstetrics and gynecology practice and from a subspecialty fertility practice. The target population was women 6–8 weeks after resolution of a PUL. Pregnancy of unknown location diagnosis was confirmed via chart review and defined as a human chorionic gonadotropin (hCG) level of >5 mIU/mL without signs of definite intrauterine or extrauterine pregnancy on transvaginal or transabdominal ultrasound (1). Before study recruitment, patients were defined as having an IUP (visualized on ultrasound), EP (either visualized or nonvisualized), or SAB (including spontaneously resolved or resolved persistent PUL) on PUL resolution. Interventions (i.e., methotrexate therapy, dilation and curettage, and laparoscopy) were abstracted from patient charts. All sampled patients had been counseled and managed according to their primary physician's recommendations; no standardized protocol of PUL management was used to determine study eligibility. Pregnancy of unknown location resolution was defined as a recorded hCG level of <5 mIU/mL, surgical pathology report with confirmed products of conception, or visualized IUP on ultrasound. Participants were purposefully sampled from a full list of patients with PUL diagnoses to capture a diverse sample in relation to outcome, presentation location, and management. A target sample size of 10–20 participants was identified to adequately capture relevant themes on the basis of similar qualitative literature in this field.

Interviews were conducted using an interview guide built from themes abstracted from a literature search on patient priorities in miscarriage, with input and clinical guidance from all investigators (Appendix A, available online). Guiding questions were divided into 4 sections: clinical and personal background; current pregnancy; PUL clinical experience; and PUL management and resolution. Interviews and prompts were adapted to the participant's clinical scenario as needed. Interviews were audio recorded with participant consent. Two investigators (E.S., and J.W.) without any provider relationship to the participants completed all interviews. One investigator (M.A.K.) guided qualitative data collection, including development of the interview guide, interview preparation

TABLE 1

Sample characteristics.	
Patient characteristic	N (%) or M ± SD
Age, y	29.5 ± 4.3
Race	
Black/African American	6 (40.0)
White	8 (53.3)
Other	1 (6.7)
Ethnicity	
Hispanic or Latino	1 (6.7)
Non-Hispanic or Latino	14 (93.3)
Insurance status	
Private	7 (46.7)
Public	8 (53.3)
Relationship status	
Married	9 (60.0)
Domestic partner	2 (13.3)
Single	4 (2.7)
Presentation location	
Emergency department	10 (66.7)
Subspecialty fertility clinic	5 (33.3)
PUL outcome	
IUP	4 (26.7)
Ectopic	6 (40.0)
SAB/resolved	5 (33.3)
Intervention	
D&C	3 (20.0)
Laparoscopy	2 (13.3)
Methotrexate	4 (26.7)
Days to resolution	26.0 ± 22.7
Planned pregnancy	
Yes	9 (60.0)
No	6 (40.0)
Desired pregnancy	
Yes	15 (100)
No	0

Note: D&C = dilation and curettage; IUP = intrauterine pregnancy; M = mean; N = number; PUL = pregnancy of unknown location; SAB = spontaneous abortion; SD = standard deviation.

Wu. Patient preferences for pregnancy of unknown location. Fertil Steril Rep 2022.

and training, and qualitative analysis. Investigator Sadecki identifies as a White, cisgender female. Investigator Wu identifies as an Asian, cisgender female. Investigator Kyweluk identifies as a White, cisgender female. The interviews were 45–60 minutes in length and conducted on a secure audiovisual platform (BlueJeans Version 2.26.0; San Jose, CA) between October 2020 and March 2021.

Coding and thematic analysis of completed interviews occurred alongside continued recruitment and ongoing interviews. Interviews were transcribed verbatim and uploaded to Dedoose Version 8.3.43 (Los Angeles, CA), a qualitative analysis software. Interviews were initially coded by a team member (E.S.) who did not conduct the interview. Thematic analysis was used to identify themes related to patient preferences and priorities in PUL management (11). Coders reviewed transcripts to identify patterns in the data and developed a coding tree (Appendix B, available online) defining major and minor themes. Each coded transcript was then reviewed by the other coder. Codes and associated excerpts were reviewed on a biweekly basis with the entire study team to refine the coding tree. Any discrepancies during the coding process were adjudicated by the study team

TABLE 2

Individual participant characteristics.

ID	Age	Gravidity/parity	PUL outcome	Presentation location	Gestational week at diagnosis	Days to diagnosis of outcome	Days to PUL resolution	Intervention(s)
01	33	G4P0	Ectopic	Subspecialty fertility clinic	8	3	38	D&C Methotrexate
02	31	G1P0	Ectopic	Subspecialty fertility clinic	6	12	43	Methotrexate
03	24	G1P0	IUP	Emergency department	4	6	6	None
04	27	G2P0	IUP	Emergency department	4	10	10	None
05	37	G2P0	SAB	Emergency department	8	14	23	None
06	30	G6P3	SAB	Emergency department	6	10	10	None
07	20	G4P1	SAB	Emergency department	6	7	7	None
08	34	G2P1	SAB	Subspecialty fertility clinic	6	3	16	None
09	26	G3P2	IUP	Emergency department	5	11	11	None
10	28	G3P1	Ectopic	Emergency department	4	10	11	Laparoscopy
11	30	G1P0	IUP	Emergency department	5	6	6	None
12	27	G1P0	SAB	Subspecialty fertility clinic	5	7	14	D&C
13	33	G5P3	Ectopic	Emergency department	4	11	53	Methotrexate
14	30	G1P0	Ectopic	Subspecialty fertility clinic	6	13	88	D&C Methotrexate Laparoscopy
15	33	G1P0	Ectopic	Emergency department	Unknown	1	1	

Note: D&C = dilation and curettage; IUP = intrauterine pregnancy; SAB = spontaneous abortion.

Wu. Patient preferences for pregnancy of unknown location. *Fertil Steril Rep* 2022.

through group discussion and consensus. This process of recruitment, interview, coding, analysis, and dynamic revision was repeated until thematic saturation was achieved (i.e., novel themes no longer emerged with subsequent interviews). Interrater reliability testing was validated with a kappa of >0.8. The consolidated criteria for reporting qualitative research standards for reporting qualitative research were followed (12). All procedures were approved by the institutional review board of the University of Pennsylvania of the study site. All participants provided e-consent before the interview.

RESULTS

A total of 15 participants were recruited. A summary of patient characteristics is shown in Table 1. Outcomes included IUP (26.7%, n = 4), EP (40.0%, n = 6), and SAB (33.3%, n = 5). Two thirds of participants initially presented to the emergency department (66.7%, n = 10), whereas one third presented to a subspecialty fertility practice (33.3%, n = 5). All had desired pregnancies. Individual patient characteristics are shown in Table 2. Gravidity of participants ranged from 1–6, with 60% (n = 9) of them having had a prior pregnancy (i.e., gravidity >1), 26.7% (n = 4) having experienced a prior pregnancy loss, and 20% (n = 3) who underwent a prior elective abortion. Gestational week at diagnosis ranged from 4–8 weeks, and days to PUL resolution ranged from 2–88 days.

Thematic analysis revealed 2 major types of themes: care priorities and logistical preferences. The care priorities included *health of pregnancy, health of self, future fertility, and diagnostic prediction and diagnostic certainty*. Table 3 shows the number of interviews where each care priority theme arose stratified by pregnancy outcome. Logistical preference themes included *mental health support, desire for clarity in treatment and next steps, and continuity of care*.

Definitions and example quotations for each theme are shown in Table 4. A sample case vignette is presented in Appendix C (available online). Examples of the themes uncovered are presented in the following.

Care Priorities

Patients referenced 4 main themes when discussing how they made decisions about management of their PUL.

Health of pregnancy Several patients prioritized the health of the pregnancy, particularly at the beginning of management when only limited information was available. This frequently guided management decisions, with many preferring expectant management until viability was confirmed or ruled out. Some participants commented that their immediate thought was of the baby at the time of diagnosis. Others looked for signs, both clinically and otherwise, that the pregnancy would be viable: “[My family] told me little anecdotes of things that had happened that made them think that it was a true pregnancy,” or “When the beta[-hCG] started to rise again, I thought that it’s a miracle, it’s going to be okay.”

Once viability was less certain, concerns regarding the pregnancy became less prominent. One participant said that after receiving an ectopic diagnosis, she “wasn’t really worried about the state of the pregnancy because you know it’s not viable.” Others, however, even when facing diagnostic certainty of a nonviable pregnancy, made attempts to advocate for the pregnancy: “She said this is an ectopic pregnancy. I asked if the baby would be okay? I still want it.”

Health of self Timing of personal health concerns varied among participants. Some actively hid concerns about their own health until after viability was established. Others had stronger convictions about personal health from the beginning of care. One participant said, “As long as you do the

TABLE 3

Number of priority mentions by outcome.

Priority	IUP (n = 4) (%)	SAB (n = 5) (%)	EP (n = 6) (%)
Health of pregnancy	1 (25)	3 (60)	4 (66.7)
Health of self	2 (50)	3 (60)	6 (100)
Future family planning	2 (50)	5 (100)	6 (100)
Diagnostic certainty and prediction	1 (25)	3 (60)	2 (33.3)

Note: EP = ectopic pregnancy; IUP = intrauterine pregnancy; SAB = spontaneous abortion.

Wu. Patient preferences for pregnancy of unknown location. Fertil Steril Rep 2022.

things you need to do to make sure that you're okay, what happens with the baby happens with the baby."

Other concerns arose related to specific therapies. One said of methotrexate, *"It's a chemo drug, putting that in your body is a concern."* Another participant expressed anxiety around undergoing surgery: *"Forget pregnancy; no pregnancy, viable, nonviable—I hope I come out of this okay."*

Future fertility Future fertility was a frequently cited area of concern. Several participants who experienced pregnancy losses explicitly expressed an immediate desire to start trying again. One participant summarized her reaction by saying, *"Because I think when you find out it's not viable, it's like, okay, so when can we get a viable one?"*

In participants who had an EP, waiting 3 months after medical management with methotrexate was a common source of frustration, especially among fertility patients. For 1 participant, this waiting period prompted her to choose surgical management: *"If I did the shot, I wasn't going to be able to start again until 3, 4 months... So I went into the surgery."* Some participants specifically identified the potential impact of an EP on future fertility, with 1 patient expressing, *"I was more concerned about an ectopic pregnancy because I know that we want to have kids... [they have to] remove things if things go wrong."* Participants also worried about whether management would have long-term effects on their future reproductive potential.

Many described feelings of uncertainty about how to approach future fertility and emphasized the need to understand the expected timeline and next steps for being able to get pregnant again: *"I felt like there [was] so much information in this process and so much testing and so much monitoring and then all of the sudden there was nothing."* One participant highlighted that the timing of the future fertility conversation was too early and would have benefited from a follow-up discussion: *"[The doctor] did a really good job of making sure I understood some options for the future, but that was so early in the process that I wish someone would have followed up later."* Some participants described having to self-advocate and initiate conversations about future family planning with their providers.

Diagnostic prediction and diagnostic certainty The level of information and diagnostic clarity that patients desired during the PUL management process varied widely. Some participants wanted more information or a diagnostic prediction

earlier. One participant with health care knowledge expressed frustration that she was being provided false belief, saying, *"I was a little bit upset about [being told it could be viable] because... the hormone level was definitely too low to be a viable pregnancy."* Others wanted providers to exercise caution before making predictions to avoid presenting conflicting information. After receiving multiple premature diagnoses, 1 participant said, *"I would have preferred if initially [they] couldn't tell me what's going on to say we're not sure of the results... but we will give you a call."*

Logistical Preferences

This group of themes includes patient's logistical needs that were important for their care.

Mental health support Regardless of the ultimate outcome, several participants felt that they would have benefited from formal mental health support to aid in coping with the emotional challenges and uncertainty of the overall process. One participant described wanting *"some moral support or talking to a group to grieve... maybe with other women that went through the same thing."* Others related how they struggled to process their experience and wished for guidance with their mental and emotional health: *"A lot of months I focused... on being so angry, so angry for wasting the time, so angry because things didn't work out, and I just wish somebody would have helped me with that anger because I did a lot of stupid things."* Several participants described a lack of access to appropriate resources and guidance on receiving support. Some also commented on the lack of support resources specifically for PUL that may be more available for other forms of pregnancy loss, with 1 participant saying, *"In this type of situation, that is something that is not really put on the forefront, in terms of any counseling or support groups... There are so many types of fetal loss."*

Desire for clarity in treatment and next steps In a process defined by inherent uncertainty, increased clarity and understanding about the next steps and expectations from the patient's perspective were another important priority. Some participants who had pregnancy losses felt unprepared for the physical experience of losing the pregnancy: *"No one ever talked to me about what to do with the miscarriage... They explained to me what might happen but they didn't tell me what to do about it."* Another participant commented on

TABLE 4

PUL preference themes, description, and example quotes.		
Theme	Description	Example quotes
Health of pregnancy	Related to health or viability of the fetus during management	"I think I was most worried about if the pregnancy would be normal... I didn't really think too much into [my own health] because I've never had any health issues."
Health of self	Related to participants' concerns or lack of concern for their own health or well-being during management	"But when the doctor came and said there's no saving it, it's dangerous... that's when I [realized] it's either my life or me trying to save a baby so just do what you have to do."
Future family planning	Related to future fertility during management	"Because at least you are still here, you are still alive... It's not the end of the world, because you can go have a million babies if you like after this one." "Once I saw myself starting to spot I knew that I was probably going to miscarry and I was like okay, I'd like to know now what my new timeframe is in terms of having another pregnancy." "I think main priorities were just mainly understanding the schedule and what the options were, how long some of that would take and just having a good general understanding of when can we try again." "I got angry because I thought I wasted my time... every cycle is an opportunity and here I was wasting 3 months." "It was after I found out what methotrexate was. I immediately went on my IVF support group and everybody was saying you have to wait 3 months, and to me 3 months is forever and I was just so impatient like what am I going to do for 3 months? This is just wasted time." "I have had friends that have had an early miscarriage, then they can try again the next month or maybe they wait a month. So, you definitely have those emotions of damn, I almost wish it [were] a normal miscarriage as opposed to being where it is [an ectopic]."
Diagnostic uncertainty	Related to the amount and certainty of information that patients desired	"I would have preferred initially, if you couldn't tell me what's going on to say we're not sure of the results as of this moment but we will give you a call and let you know what's going on. That way you're avoiding telling me one thing and telling me another thing, you know?" "I had really hoped to come to the office that day for them to be like yes, you're still pregnant or no you're not and I kind of got a you're probably not and I was like what? That felt unexpected to me."
Mental health support	Related to desire for more formal mental health support and resources	"I haven't had [mental health support] offered... I think the miscarriage and the move and the seasonal change with the pandemic, it has been a lot and the other day I was just like you know what? That would [have been] nice." "I think one thing that might have been nice is recommending a grief counselor if you did want to talk to somebody. Because I think throughout the process that was something that I had debated because it was so many ups and downs, like oh, it looks like it might be clearing on its own, oh it's actually not... It was a big emotional roller coaster."
Next steps	Related to desiring clarity in next steps	"The only thing that I wished [they] would have done is, whenever I [took] my methotrexate shot, schedule a time for when the 3-month period is over so you have something to look for... and not you trying to call the office and set up something, because I didn't know if it was too late to call or too early to call..." "But instead, there was this 3-week process where no one said anything... I was really happy to have that time to process and to grieve but I like to know what my next step is."
Continuity	Related to wanting continuity of care	"I don't know who I was talking to... they were just reading me results... I was asking questions about moving up and none of them really had the answer because it wasn't about my specific case." "It's been a lot of dates that I've had to keep track of and it felt a little frustrating to me because I would interact with many different people and it felt like they all had different information, so that was a little frustrating to me because it felt like I didn't have a point of contact."

Note: IVF = in vitro fertilization; PUL = pregnancy of unknown location.

Wu. Patient preferences for pregnancy of unknown location. *Fertil Steril Rep* 2022.

how more information about laboratory monitoring trends would have reduced the unpredictability of emotions during the process: "I didn't realize that [the hCG] would be an exponential decline... and drag on for 3 more weeks... Every single phone call I got, my hopes went up a little bit, like okay you're done, this is great you can move on to the next thing, but then

it's like, nope, still there, maybe just a little longer... it would be great for the patients to know that."

Continuity of care Communication frequently arose as an important determinant of patient experience, with several participants noting room for improvement. One described her experience of communication by saying: "It was like I

had to find somebody to talk to, I never knew who my doctor was because I was seeing so many different doctors at a time.” Some highlighted how having to interface with multiple different providers was something unique to their PUL experience that was different from standard pregnancy care, with one saying, “...[I had to give] one story on Friday, a new story on Monday, a follow-up on Tuesday by so many different people.” A lack of continuity also lent itself toward causing participants to receive conflicting information that they had to synthesize, adding further uncertainty to an already confusing process.

DISCUSSION

Principal Findings

This qualitative study of patient preferences during the management of PUL investigated a diverse sample of patients diagnosed with PUL, including various clinical outcomes, management trajectories, and practice settings, to identify themes and priorities for patients that can be incorporated into optimizing clinical care.

When considering care priorities, patients were constantly recalibrating their preferences in response to evolving clinical management—a key outcome from our study. The uncertain trajectory of PUL diagnosis and management required patients to balance potential conflicts between interconnected priorities. The balance between prioritizing the viability of the pregnancy vs. one’s own health was highly variable and patient-specific and evolved over time. In several cases, the initial concern was for the pregnancy; however, with increased information, the primary concern moved to the dangers of EP and effects of treatment options. Similarly, the tension between wanting timely prediction of outcome and diagnostic certainty was prominently featured. Some patients wanted a diagnostic prediction earlier in the process, whereas others preferred providers prioritizing certainty over timeliness when presenting information. Patients also wanted to understand how diagnosis and management would impact their future fertility. Logistically, participants wanted consistent communication, continuity, and mental and emotional support both before and after resolution. Increased clarity around expectations throughout the process was also critical toward minimizing the amount of additional uncertainty patients had to grapple with throughout an already highly uncertain process.

Although patient priorities for PUL have not been studied previously, prior research on patient priorities in miscarriage primarily focuses on logistic and interpersonal preferences. Themes included empathetic provider attitudes, recognition of magnitude of loss, thorough provision of information, and adequate follow-up care for medical and emotional needs (5–9). In our study, logistic preferences only represented 1 subset of themes; however, the importance of communication, information provision, and mental health support was similarly highlighted. A notable difference in the distribution of patient priorities identified in our study was the aforementioned priority conflicts that evolved throughout PUL management, which can be attributed to the inherent uncertainty of PUL diagnosis and subsequent

management that produces significant tension for patients. Another difference was the prominence of future fertility as a significant priority, likely secondary to the possibility of EP as a disproportionately feared outcome from PUL and its consequences on timeline for future conception. Mental health support, while identified in both miscarriage literature and our study as an important theme, was further highlighted in our data as something important for all types of pregnancy outcomes. For PUL specifically, patients would benefit from mental health resources even before or without experiencing a loss because the uncertainty of the experience can be difficult to navigate and cope with.

Clinical Implications and Future Research

The findings that patient priorities evolve over time and may emerge as more information becomes available should encourage providers to revisit conversations about priorities frequently. Eliciting priorities is not only helpful to better understand the patient perspective and motivations but may also help providers assist patients in making management decisions. Providers may want to consult patients about how much information they want about prognosis and certainty of diagnosis before initiating an active management plan. Providers should prioritize transparency regarding implications of treatment options for patients and their pregnancies, including information on timeline and future family planning. Logistically, providers should connect patients with mental health providers or PUL-specific support groups and clearly communicate expectations about next steps.

In acting as the first study of patient preferences and priorities for PUL, we approached a sample of patients with diverse PUL experiences. Although limited by sample size, the prevalence of themes related to care priorities demonstrated notable trends when stratified by ultimate pregnancy outcome that warrants further study. Participants’ personal health was universally prioritized in those who had an EP but only mentioned by half of other participants. Future fertility and family planning were also universally considered by patients who experienced pregnancy losses, such that conversations about these topics should be increasingly prioritized during diagnosis and management as concern for an EP or SAB increases. Future research should include a retrospective study of these more targeted subpopulations, such as for specific clinical outcomes or management strategies, to identify how priorities differ.

Additionally, of 15 participants in our study, 4 had also experienced at least 1 prior pregnancy loss—either a PUL or SAB—and 2 had had recurrent losses. These prior experiences could have affected their perspectives and priorities during the studied PUL, for example, affording more background knowledge on or personal experience with specific management options. Although the inclusion of these perspectives improves generalizability to patients with prior pregnancy losses, a future companion study recruiting only participants without prior PUL or pregnancy loss could remove this potential bias and allow comparative analysis of the effect this history has on current priorities.

Further research is also underway to develop a quantitative survey on the basis of these initial qualitative data that can be distributed more widely and used to develop clinical tools to help providers navigate conversations around priorities when managing PUL.

Strengths and Limitations

The strengths of our study include the diversity of participants recruited, capturing a wide range of experiences in regard to PUL presentation location, patient gravidity, management type, patient relationship status, and time to resolution. In purposefully choosing to study a heterogeneous sample with interviews of substantial length, we aimed to achieve saturation of all identifiable themes from a wide spectrum of patient experiences, identify gaps in care and areas where patients may feel vulnerable, and set the stage for future study on the experiences of more targeted subpopulations.

There are several limitations to our study worth noting. First, all participants had desired pregnancies, limiting the generalizability of our results. Patients with PUL who are seeking abortion or are ambivalent about the pregnancy would likely have distinct preferences in regard to future fertility and pregnancy outcome (13). These patients could also have faster PUL resolution if they present for pregnancy termination. Additionally, participants were intentionally recruited from both the emergency department and a subspecialty fertility practice to capture diverse PUL experiences; however, the contributions of perspectives from these 2 different subsets on patient priorities must be adequately considered in the interpretation of our results. One third of participants were recruited from a subspecialty fertility practice and may have generated bias toward the prevalent prioritization of future fertility in our study. Other differences may also be observed between patients presenting to the emergency department and those presenting to the fertility practice, such as less care continuity after presenting to the emergency department, which should be factored into our results. Furthermore, although participants were sampled within a certain window of PUL resolution to limit recall bias, those who experienced SAB or EP may have a differing perspective in retrospect compared with those who had an IUP. Finally, interviews occurred during the coronavirus disease 2019 pandemic, which could impact study generalizability.

CONCLUSION

In conclusion, in patients experiencing PUL diagnosis and management, their priorities for care encompass themes that are both unique to PUL and dynamic throughout the care process. Recognizing these priorities and continually evaluating patient preferences can guide more comprehensive and patient-centered PUL management.

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