

Assessing Abnormal Uterine Bleeding: Are Physicians Taking a Meaningful Clinical History?

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Abstract

Introduction: Women with abnormal uterine bleeding (AUB) report significant reductions in quality of life (QOL), which can be attributed in many cases to the fear of embarrassing episodes of bleeding. We performed this study to determine whether or not during clinical encounters physicians addressed the impact of AUB on patient-reported QOL.

Materials and Methods: Between October 2008 and May 2009, we conducted a cross-sectional study of members of the American College of Obstetricians and Gynecologists. Surveys were distributed using a mixed method (web- and mail-based) and included questions about physician characteristics and types of questions used when obtaining a clinical history from a patient with AUB. We calculated the proportion of physicians who endorsed asking each type of clinical question with 95% confidence intervals (CIs).

Results: Four hundred seventeen questionnaires were returned (52%). Ninety-nine percent (95% CI 98.4%–99.9%) reported always asking a bleeding heaviness question, 87.2% (95% CI 83.2%–90.5%) reported always asking a QOL question, and 17.5% (95% CI 13.6%–21.9%) reported always asking a mood associated with bleeding question. Seventy-eight percent specifically asked patients about bleeding through their clothes, and 55% asked about changing social plans because of bleeding. Only 18% endorsed that asking about QOL was most essential for the evaluation of women with AUB. No physician characteristics such as years since completing residency, geography, or gender were associated with how commonly providers reported asking questions regarding impact of bleeding on QOL.

Conclusions: Physicians may not be optimizing patient–provider interactions during menstrual history taking with patients with AUB by failing to assess impact of AUB on QOL in a way that is meaningful to patients.

Keywords: abnormal uterine bleeding, physician survey, clinical history, quality of life

Introduction

ABNORMAL UTERINE BLEEDING (AUB) is a common, debilitating symptom affecting nearly one-third of reproductive-aged women.^{1–3} AUB is defined as any alteration in volume or pattern of menstrual blood flow, categorized into heavy menstrual bleeding, intermenstrual bleeding, and irregular menstrual bleeding.⁴ Often, patients experience a combination of these symptoms.⁵ The causes of AUB can be single or multiple and include structural causes (polyp, adenomyosis, leiomyoma, malignancy/hyperplasia) and nonstructural causes (coagulopathy, ovulatory dysfunction, endometrial, iatrogenic, and not otherwise classified).^{6,7}

While mortality from AUB is extremely uncommon, the significance of this condition lies in its effect on the physical, social, and emotional quality of life (QOL) of the woman suffering, in addition to its economic impact, including cost of healthcare and productivity loss.^{8,9} Women with menstrual-related problems are more likely to report anxiety, depression, insomnia, excessive sleepiness, and pain than women without menstrual-related problems.¹⁰ Studies in both the United Kingdom and United States have shown that women implicate the inability to contain menstrual blood flow, anxiety regarding potential embarrassment, and the unpredictability of changing plans (social, family, work) to avoid an embarrassing bleeding episode as major drivers for reduction in QOL.¹¹

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Asking the right questions for women with heavy menstrual bleeding is particularly important, given that the extent of a woman's bleeding cannot be evaluated within a single standard clinical visit. However, women have expressed that questions asked during their clinical encounters lacked sufficient detail regarding how bleeding was affecting their QOL.¹⁰ This could be a missed opportunity to optimize patient care for women with AUB. We conducted this study to determine what types of questions physicians reported asking women with AUB. Our primary objective was to determine whether or not physicians report routinely addressing the impact of AUB on patient-reported QOL. In addition, we planned to explore if physician characteristics influenced the prevalence of routine assessment of QOL for patients with AUB.

Materials and Methods

We conducted a cross-sectional survey of members of the American College of Obstetricians and Gynecologists (ACOG) from October 2008 to May 2009. We distributed the surveys to 803 ACOG members using a sequential mixed method approach; all potential participants with email addresses were sent an invitation to participate with a web link to the survey. All potential participants without an email address or who did not respond to the web-based version received an invitation to participate and a paper-based version via mail. For the web-based version of the survey, we used DatStat Illume (DatStat, Inc., Seattle, WA) and designed the web-based survey using standards suggested by Crawford et al.¹² DatStat Illume, a sophisticated computer software package with excellent data security, allows for complex skip patterns. The content of the survey was the same for the web- and paper-based surveys and included a total of 37 multiple-choice questions. With this questionnaire, we aimed to evaluate physicians' knowledge about abnormal bleeding, their practice patterns for treating this symptom, and the content and characteristics that physicians would require of an instrument for incorporation into routine screening and evaluation of women with AUB. Questions regarding bleeding symptoms and impact on QOL were based on themes generated in our previous focus group study with women with heavy menstrual bleeding and current literature on women's perception of symptoms, bleeding, and impact on QOL.^{8,10,11} Several drafts of the questionnaire were developed and subsequently revised, and the final questionnaire was reviewed by experts in heavy menstrual bleeding (M.G.) and survey methodology (M.A.C.).

Initially, we conducted a pilot survey with 25 physicians at Women & Infants Hospital (Providence, RI). Participants received an e-mail invitation, including a hyperlink to the online questionnaire. Three e-mail reminders, one reminder per week, were sent out following the e-mail invitation. A new and revised link to the survey was sent out within the third e-mail reminder. After receiving feedback and comments from pilot participants regarding questionnaire content, format, skip patterns, and comprehension of individual items, we revised the survey and distributed it to ACOG fellows.

We collected information regarding the respondents' demographics, including type of subspecialty, years since completing residency, type of practice, geographical districts, gender, and proportion of time providing direct patient care. We asked physicians how often (always, sometimes, or

never) they asked women with AUB questions about heaviness of bleeding (amount, frequency, bleeding through clothes, passage of blood clots, duration of bleeding), pattern of bleeding (No. of days between periods, whether or not periods are "predictable"), bleeding-related QOL (changing daily routine, impact on QOL, missed work, changed social plans), mood related to bleeding (anxiety, depression), and other miscellaneous questions (patient expectations for results of treatment, dysmenorrhea, weakness, questions about other problems with bleeding). Physicians were asked to identify and rank the top three items from the aforementioned list that, in their opinion, were "most essential" for the evaluation of patients with AUB. Physicians were also asked to similarly identify and rank the three items from the aforementioned list that they believed were "least essential" for evaluating patients in this clinical scenario.

Web-based responses were automatically entered into the DatStat Illume web database and surveys returned by mail were manually entered by a research assistant into the same software program that was used by study participants. Entered data were verified by the principal investigator and discrepancies were confirmed by a third reviewer. Analyses were conducted using SAS 9.1 (SAS Institute, Inc., Cary, NC). Categorical variables were compared using chi square and Fisher's exact tests, where appropriate, and two-sided *p* values were calculated, with *p* < 0.05 considered statistically significant. ACOG surveys typically achieve a 30%–50% response rate. Distributing the survey to 802 ACOG members, we assumed that we would achieve at least 350 eligible responses. With 350 study participants, we would have the ability to detect at least a 15% difference in physician characteristics with alpha 0.05 and power of 80%.

Results

Of the 802 ACOG members who received the survey, 52% responded (*n* = 417). Two hundred ninety-seven completed the web-based version (71.2%) and 120 physicians responded to the mail-based survey (28.8%). Subspecialist physicians who responded that they did not provide medical care for women with AUB and retired physicians were excluded from the study, as we were primarily interested in surveying physicians who currently treat women with AUB. After these exclusions, 364 surveys from ACOG fellows remained in our sample.

Representation was obtained from all geographic regions of the United States, and the sample had equal representation from both male and female physicians (Table 1). The majority of respondents identified themselves as generalist obstetricians and gynecologists (94%, *n* = 337). Forty-two percent (*n* = 143) responded that they had completed residency >20 years prior and 82% (*n* = 283) of the sample was in private practice. Fifty-three percent (*n* = 184) reported that they treated >11 patients per month with AUB. Sixty-nine percent (*n* = 235) of respondents reported that they utilized questionnaires to assess patients as part of their clinical practice.

We looked at the categories of questions physicians asked patients who they were evaluating for AUB (Table 2). Ninety-nine percent (*n* = 343) of physicians reported always asking about bleeding heaviness, 87.2% (*n* = 300) reported always asking about QOL, and 17.5% (*n* = 60) reported always asking about mood associated with bleeding (Table 3). With respect to specific questions, 78% (*n* = 268) reported

TABLE 1. RESPONDENT DEMOGRAPHICS (N=359)

	n (%)
Type of subspecialty ^a	
General Ob-Gyn	337 (94)
Reproductive endocrinology subspecialty	15 (4)
Urogynecology	9 (3)
Minimally invasive gynecology/laparoscopy	35 (10)
Clinical research	16 (4)
Membership status	
CARN	293 (82)
Non-CARN	66 (18)
Years since completing residency	
<5 years	25 (7)
5–10 years	82 (24)
11–20 years	94 (27)
>20 years	143 (42)
Type of practice	
Private practice	283 (82)
Community hospital faculty	16 (5)
University hospital faculty	37 (11)
Other type of practice	8 (2)
Geographical districts	
Midwest	76 (23)
Northeast	69 (21)
South	116 (36)
West	65 (20)
Gender	
Male	167 (49)
Female	173 (51)
Proportion of time providing direct patient care	
0%–50%	24 (7)
51%–75%	40 (12)
76%–100%	276 (81)
Average No. of patients evaluated/month w/heavy menstrual bleeding	
1–10	165 (47)
11 or more	184 (53)
Average No. of ablations/month	
None	65 (19)
1–5	254 (73)
6 or more	30 (9)
Average No. of hysterectomies performed/month	
None	51 (15)
1–5	272 (78)
6 or more	27 (8)
Has friends or family members with heavy menstrual bleeding	
Yes	182 (53)
No	104 (31)
Did not know	56 (16)
Use questionnaires in practice (n=343)	
Yes	235 (69)
No	108 (31)

^aCould add up to >100% because multiple choices could be selected.

always asking patients about bleeding through their clothes, and 55% (n=190) reported always asking about changing social plans because of bleeding (Table 4).

When asked to rate the importance of various elements of the medical history, only 18% (n=62) endorsed that asking

TABLE 2. DOMAINS OF QUESTIONS AND CONCEPTS MEASURED FOR ASSESSMENT OF CLINICAL HISTORY TAKING

Heaviness of the bleeding
Amount of bleeding
Frequency of menstrual product changes
Bleeding through clothes
Passage of blood clots
Duration of the bleeding
Pattern of the bleeding
No. of days between periods
Whether or not periods are “predictable”
Quality of life
Changed daily routine because of bleeding
Bleeding affects her quality of life
Missed work because of bleeding
Changed social plans because of bleeding
Mood related to bleeding
Anxiety related to bleeding
Depressed moods related to bleeding
Patient expectations
Patient expectation for results of treatment
Other questions/symptoms/bleeding disorders
Dysmenorrhea
Weakness
Whether the patient has had other problems with bleeding such as during pregnancy, with delivery, or when brushing teeth

specifically if bleeding affects QOL was most essential for the evaluation of women with AUB compared with 56.7% (n=195) of physicians who endorsed that asking about the duration of bleeding was most essential to assessing the problem. We found no differences between specific physicians of varying characteristics, including years since completing residency, geography, and gender, in terms of the proportion who endorsed routinely asking questions regarding impact of bleeding on QOL.

Discussion

This study explored the physician component of the patient-provider interaction in clinical encounters for the

TABLE 3. FREQUENCY OF ASKING QUESTIONS IN THE DIFFERENT DOMAINS OF CLINICAL HISTORY TAKING FOR ABNORMAL UTERINE BLEEDING (N=344)

	n (%)	95% CI
At least one of the Heaviness items always asked	343 (99.7)	(98.4–99.9)
At least one of the Pattern items always asked	339 (98.5)	(96.6–99.5)
At least one of the QoL items always asked	300 (87.2)	(83.2–90.5)
At least one of the Mood items always asked	60 (17.5)	(13.6–21.9)
At least one of the Bleeding disorders always asked	141 (41.1)	(35.8–46.5)
Always asked about Patient Expectations	201 (58.8)	(53.3–64.0)

TABLE 4. FREQUENCY OF ADDRESSING SPECIFIC CONCEPTS IN THE DIFFERENT DOMAINS OF CLINICAL HISTORY TAKING FOR ABNORMAL UTERINE BLEEDING (N=344)

	Always n (%)	Sometimes n (%)	Never n (%)
Heaviness of the bleeding			
Amount of bleeding	338 (98.3)	6 (1.7)	
Frequency of menstrual product changes	308 (89.5)	36 (10.5)	
Bleeding through clothes	268 (78.1)	74 (21.6)	1 (0.3)
Passage of blood clots	272 (79.3)	67 (19.5)	4 (1.2)
Duration of the bleeding	340 (98.8)	4 (1.2)	
Pattern of the bleeding			
No. of days between periods	335 (97.4)	9 (2.6)	
Whether of not periods are “predictable”	234 (68.2)	92 (26.8)	17 (5.0)
Quality of life			
Changed daily routine because of bleeding	236 (68.8)	104 (30.3)	3 (0.9)
Bleeding affects her quality of life	267 (77.8)	75 (21.9)	1 (0.3)
Missed work because of bleeding	251 (73.6)	89 (26.1)	1 (0.3)
Changed social plans because of bleeding	190 (55.4)	140 (40.8)	13 (3.8)
Mood related to bleeding			
Anxiety related to bleeding	45 (13.1)	230 (67.1)	68 (19.8)
Depressed moods related to bleeding	44 (12.9)	230 (67.2)	68 (19.9)
Other questions/symptoms			
Patient expectation for results of treatment	201 (58.8)	131 (38.3)	10 (2.9)
Dysmenorrhea	320 (93.0)	24 (7.0)	
Weakness	168 (48.8)	165 (48.0)	11 (3.2)
Whether the patient has had other problems with bleeding such as during pregnancy, with delivery, or when brushing teeth	141 (41.1)	187 (54.5)	15 (4.4)

evaluation of AUB. AUB is a prevalent symptom that results in significant reductions in QOL. Large cohort studies from national datasets have shown consistently that women with AUB report significantly poorer QOL compared with their unaffected counterparts of similar ages.^{8,13,14} Despite this, women with AUB continue to report that the impact of bleeding on QOL has not been meaningfully assessed during clinical encounters.¹¹ In our study, we found that only 18% of obstetrician–gynecologists who participated in our study indicated that they always asked about mood associated with bleeding and similarly only 18% of these physicians reported that asking about QOL was most essential for the evaluation of women with AUB. Failing to recognize and assess the impact of AUB on QOL may adversely affect a patient’s perception of the clinical encounter as well as her overall perception of her problem.

The findings of this study regarding patient–provider interactions with patients with AUB are similar to studies conducted on other chronic but generally not life-threatening problems such as rheumatoid arthritis and urinary incontinence. Results derived from the Rheumatoid Arthritis: Insights, Strategies, and Expectations (RAISE) patient needs survey demonstrated that most physician–patient communication was focused on symptoms and treatment rather than the impact of rheumatoid arthritis on the patient and his or her QOL. Although rheumatoid arthritis has a significant impact on QOL and emotional health, few patients discuss QOL impact with their physician.¹⁵ This failure to communicate is a problem because physicians cannot objectively assess how a symptom affects day-to-day life from the patient perspective. In addition, a study on urinary incontinence demonstrated that physicians underestimated the impact of symptoms on QOL when their perception was compared to the actual QOL rating given by the patients.¹⁶

Although the ACOG, the Society for Obstetricians and Gynecologists in Canada (SOGC), and The National Institute for Health and Care Excellence (NICE) of the National Health Service in the United Kingdom have published practice guidelines on the management of heavy menstrual bleeding, clinical guidance on how to assess QOL within the clinical encounter is lacking.^{17–19} Women participating in qualitative research have suggested that healthcare providers have been “dismissive” of their symptoms, and the questions that providers asked were too superficial to meaningfully characterize their AUB symptoms and experiences.¹¹ Clinicians are also dissatisfied with patient encounters for heavy menstrual bleeding; a previous study by Echlin et al. suggested clinicians have difficulties assessing women who report AUB because it is a “subjective experience.”²⁰ Given that women with AUB have reported the impact of bleeding on QOL is what is most important to them, this patient–provider disconnect may be the reason women with AUB have reported dissatisfaction with interactions with healthcare providers.²¹

Research on AUB is beginning to shift the focus from measuring objective outcomes, such as mean menstrual blood loss, to evaluating the “patient experience” by using patient-reported outcome measures. Similarly, “patient centered care” delivery for all patients, particularly for women with AUB, has been increasingly emphasized. In 2008, The NICE released guidelines for management of heavy menstrual bleeding aimed at standardizing care and improving patient outcomes. These guidelines redefined heavy menstrual bleeding, transitioning from objective blood loss and to the impact of bleeding on QOL. By appropriately assessing and addressing impact of symptoms on QOL, physicians may be able to provide enriched patient-centered care for women with heavy menstrual bleeding.¹⁹ With this

additional understanding of the issues that are most important to the patient, the conversation can help providers offer individualized management options to the patient who will best fit their needs. This may ultimately help to optimize care by earlier recognition of symptoms, balanced discussion of treatment options, and overall improvement of the clinical encounter.

How to best assess QOL issues with AUB is unknown and the review by the NICE cited a lack of available evidence relating to history taking for women who present with this symptom.¹⁹ Multiple patient-based outcome measures (PBOMs) and questionnaires have been recently developed to assess women with AUB within the context of clinical research.^{22,23} Further research is needed to determine whether or not these PBOMs developed for use in the research context could be used in a clinical setting to improve patient-provider communication during history-taking for AUB.

This study had several strengths. First, research on the patient-provider interaction during clinical encounters for AUB has been primarily focused on the patient experience. This current study is one of the few available studies that explored the provider role during these clinical encounters. Information from this study can be used to develop educational material for clinicians about clinical history-taking for AUB and hopefully improve patient-provider communication. An additional strength of this study is that it determined the practice patterns of a national sample of gynecologists with adequate representation from all geographic areas.

A recognized limitation of this study is that only obstetricians and gynecologists are represented in the survey. Many other providers, including midwives, nurse practitioners, internists, and family medicine practitioners are involved in the initial evaluation and management of AUB as well as coordinating specialty care when indicated. Repeating this study with other healthcare providers who evaluate and treat women with AUB could provide valuable data that could further inform educational materials for healthcare providers. In addition, although we achieved a relatively high response rate for a physician survey (52%), there is certainly a potential for response bias.

Conclusions

Physician surveys can provide useful information about the opinions and practice patterns of clinicians delivering care to patients. Our study suggests that obstetricians and gynecologists do not think that impact of bleeding on QOL is one of the most important elements that need to be assessed for patients presenting for care for abnormal menstrual bleeding. This represents a discrepancy between the expectations of patients with AUB and the opinions of their medical care givers. These findings reveal that physician education is required to better align the expectations of patients and the clinical history-taking of physicians in the context of AUB, with the ultimate goal of improving patient satisfaction with the clinical encounter.

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Author Disclosure Statement

No competing financial interests exist.

References

- Livingstone M, Fraser IS. Mechanisms of abnormal uterine bleeding. *Human Reprod Update* 2002;8:60–67.
- Rees MC. Role of menstrual blood loss measurements in management of complaints of excessive menstrual bleeding. *Br J Obstet Gynaecol* 1991;98:327–328.
- Vilos GA, Lefebvre G, Graves GR. SOGC clinical practice guidelines. Guidelines for the management of abnormal uterine bleeding. *J Obstet Gynaecol Can* 2001;106:1–6.
- Fraser IS, Critchley HO, Broder M, Munro MG. The FIGO recommendations on terminologies and definitions for normal and abnormal uterine bleeding. *Semin Reprod Med* 2011;29:383–390.
- Lobo RA. Abnormal uterine bleeding: Ovulatory and anovulatory dysfunctional uterine bleeding, management of acute and chronic excessive bleeding. In: Katz V, Lentz GM, Lobo RA, Gershenson DM (eds): *Comprehensive Gynecology*, 5th ed. Philadelphia, PA: Mosby Elsevier, 2007.
- Davidson BR, DiPiero CM, Govoni KD, Littleton SS, Neal JL. Abnormal uterine bleeding during the reproductive years. *J Midwifery Women Health* 2012;57:248–254.
- Munro MG, Critchley HO, Broder MS, Fraser IS; FIGO Working Group on Menstrual Disorders. FIGO classification system (PALM-COEIN) for causes of abnormal uterine bleeding in nongravid women of reproductive age. *Int J Gynecol Obstet* 2011;113:3–13.
- Liu Z, Doan QV, Blumenthal P, Dubois RW. A systematic review evaluating health-related quality of life, work impairment, and health-care costs and utilization in abnormal uterine bleeding. *Value Health* 2007;10:183–194.
- Côté I, Jacobs P, Cumming D. Work loss associated with increased menstrual loss in the United States. *Obstet Gynecol* 2002;100:683–687.
- Strine TW, Chapman DP, Ahluwalia IB. Menstrual-related problems and psychological distress among women in the United States. *J Womens Health (Larchmt)* 2005;14:316–323.
- Matteson KA, Clark MA. Questioning our questions: Do frequently asked questions adequately cover the aspects of women's lives most affected by abnormal uterine bleeding? Opinions of women with abnormal uterine bleeding participating in focus groups. *Women Health* 2010;50:195–211.
- Crawford S, McCabe SE, Pope D. Applying web-based survey design standards. *J Prev Interv Community* 2005;29:43–66.
- Matteson KA, Raker CA, Clark MA, Frick KD. Abnormal uterine bleeding, health status, and usual source of medical care: Analyses using the Medical Expenditures Panel Survey. *J Womens Health (Larchmt)* 2013;22:959–965.
- Barnard K, Frayne SM, Skinner KM, Sullivan LM. Health status among women with menstrual symptoms. *J Womens Health (Larchmt)* 2003;12:911–919.
- McInnes IB, Combe B, Burmester G. Understanding the patient perspective—results of the Rheumatoid Arthritis: Insights, Strategies & Expectations (RAISE) patient needs survey. *Clin Exp Rheumatol* 2012;3:350–357.
- Rodríguez LV, Blander DS, Dorey F, Raz S, Zimmern P. Discrepancy in patient and physician perception of

- patient's quality of life related to urinary symptoms. *Urology* 2003;62:49–53.
17. American College of Obstetricians and Gynecologists. ACOG committee opinion no. 557: Management of acute abnormal uterine bleeding in nonpregnant reproductive-aged women. *Obstet Gynecol* 2013;121:891.
 18. Singh S, Best C, Dunn S, et al. Abnormal uterine bleeding in pre-menopausal women. *J Obstet Gynaecol Can* 2013; 35:473–475.
 19. National Collaborating Centre for Women's and Children's Health. Heavy menstrual bleeding. Clinical guideline. National Institute for Health and Clinical Excellence. London: RCOG Press, 2007.
 20. Echlin D, Garden AS, Salmon P. Listening to patients with unexplained menstrual symptoms: What do they tell the gynaecologist? *BJOG* 2002;109:1335–1340.
 21. Garside R, Britten N, Stein K. The experience of heavy menstrual bleeding: A systematic review and meta-ethnography of qualitative studies. *J Adv Nurs* 2008;63: 550–562.
 22. Matteson KA, Boardman LA, Munro MG, Clark MA. Abnormal uterine bleeding: A review of patient-based outcome measures. *Fertil Steril* 2009;92:205–216.
 23. Ruta DA, Garratt AM, Chadha YC, Flett GM, Hall MH, Russell IT. Assessment of patients with menorrhagia: How valid is a structured clinical history as a measure of health status? *Qual Life Res* 1995;4:33–40.

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