



# HHS Public Access

Author manuscript

*Am J Obstet Gynecol.* Author manuscript; available in PMC 2015 April 27.

Published in final edited form as:

*Am J Obstet Gynecol.* 2012 October ; 207(4): 269.e1–269.e5. doi:10.1016/j.ajog.2012.07.010.

## Evaluation of bleeding disorders in women with menorrhagia: a survey of obstetrician-gynecologists

Vanessa R. Byams, MPH, Britta L. Anderson, PhD, Althea M. Grant, PhD, Hani Atrash, MD, and Jay Schulkin, PhD

Division of Blood Disorders, National Center on Birth Defects and Developmental Disabilities (NCBDDD), Centers for Disease Control and Prevention, Atlanta, GA (Ms Byams and Drs Grant and Atrash), and the American College of Obstetricians and Gynecologists (Drs Anderson and Schulkin), Washington, DC

### Abstract

**OBJECTIVE**—To better understand the current evaluation of unexplained menorrhagia by obstetrician-gynecologists and the extent to which a bleeding disorder diagnosis is being considered in this population.

**STUDY DESIGN**—A total of 1200 Fellows and Junior Fellows of the American College of Obstetricians and Gynecologists were invited to participate in a survey on blood disorders. Respondents completed a questionnaire regarding their patient population and their evaluation of patients with unexplained menorrhagia.

**RESULTS**—The overall response rate was 42.4%. Eighty-two percent of respondents reported having seen patients with menorrhagia caused by a bleeding disorder. Seventy-seven percent of physicians reported they would be likely or very likely to consider a bleeding disorder as causing menorrhagia in adolescent patients; however, only 38.8% would consider bleeding disorders in reproductive age women.

**CONCLUSION**—The current data demonstrate that obstetrician-gynecologists seem to have a relatively high awareness of bleeding disorders as a potential underlying cause of menorrhagia.

### Keywords

bleeding disorder; menorrhagia; physician survey; practice patterns; von Willebrand disease

---

Menorrhagia is a common clinical problem that affects approximately 30% of reproductive-age women.<sup>1</sup> Menorrhagia may result from various clinical conditions, including uterine fibroids, endometriosis, and cancer; however, a cause for menorrhagia is never identified in approximately 50% of cases.<sup>2</sup> Underlying bleeding disorders, including von Willebrand disease (VWD), other coagulation factor deficiencies, and platelet disorders, are prevalent among women with menorrhagia. VWD is caused by a quantitative or qualitative defect in

---

© 2012 Mosby, Inc. All rights reserved

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

The authors report no conflict of interest.

von Willebrand factor (VWF) that interferes with the localization of platelets to the site of bleeding. VWD is the most common bleeding disorder; the estimated prevalence is approximately 1% worldwide.<sup>3</sup> Recent studies indicate that between 5% and 24% of women with menorrhagia had previously undiagnosed VWD.<sup>4</sup> Conversely, menorrhagia is the most prevalent symptom among women with VWD; 32-100% of women with VWD reported menorrhagia.<sup>5</sup> VWD and other bleeding disorders have been associated with increased obstetric and gynecologic morbidity, including endometriosis, miscarriage, and postpartum hemorrhage.<sup>5</sup>

Obstetrician-gynecologists are usually the first health care providers to encounter women with menorrhagia. Studies in the US and UK indicate that obstetrician-gynecologists may be unlikely to consider an underlying bleeding disorder as the cause of unexplained menorrhagia.<sup>6,7</sup> Early identification is important to prevent adverse bleeding events and reduce potentially unnecessary surgical interventions. Studies have shown that women with VWD are more likely to undergo hysterectomy and are significantly more likely to experience surgical bleeding complications<sup>8,9</sup>; these complications could be avoided with accurate and timely diagnosis.

The current study was conducted to assess the current state of knowledge of bleeding disorders and practice patterns of obstetrician-gynecologists to better understand the current evaluation of unexplained menorrhagia by obstetrician-gynecologists, and the extent to which a bleeding disorder diagnosis is being considered in this population.

## MATERIALS AND METHODS

In December 2009, the American College of Obstetricians and Gynecologists (ACOG) sent survey questionnaires to 1200 Fellows and Junior Fellows in practice. Six hundred of the recipients were members of the Collaborative Ambulatory Research Network (CARN), a group of practicing obstetrician-gynecologists who volunteer to participate in survey research. The remaining 600 recipients were not CARN members and were randomly selected from College Fellows and Junior Fellows in practice. Three additional mailings of the survey were administered before a Fellow was considered a nonresponder. The study was approved by the ACOG institutional review board.

The survey included questions about physician characteristics, current practice characteristics, and patient population. Respondents were asked to estimate the number of patients who complained about heavy menstrual bleeding each year. Questions were then asked about practice patterns regarding evaluation,<sup>10</sup> testing, and referral of patients with unexplained menorrhagia. Knowledge of VWD among women with menorrhagia was assessed. Respondents also rated their medical training in screening, assessment, and treatment of menorrhagia.

Statistical analyses were performed using SPSS version 16 (SPSS Inc., Chicago, IL). Descriptive data were computed for primary analysis. *t* tests and  $\chi^2$  analyses were used for inferential statistics; statistical significance was defined at  $\alpha = .05$ . Because age and sex were

associated, we controlled for sex when assessing for differences by age and we controlled for age when assessing for differences by sex.

## RESULTS

A total of 503 questionnaires were returned for an overall response rate of 42.4% (503/1185); 15 questionnaires were excluded because those physicians could not be reached. The response rate was 56.7% (338/596) for CARN members and 27.8% (165/589) for non-CARN members. Differences between CARN and non-CARN were assessed for all demographic variables including: age, sex, number of patients seen each week, number of patients seen each year, number of deliveries in 2008, number of surgeries in 2008, percent of patient races, primary medical specialty, and residency of patients. Because no differences were found, the samples were combined for analyses. Of this sample, 451 indicated that they provide gynecologic services so all analyses were limited to this sample.

Participant and practice characteristics are shown in Table 1. Fifty-one percent of the respondents were male. The mean year of birth was 1958; males were significantly older than females (1954 vs 1963;  $P < .001$ ). Forty-eight percent of participants described their current practice as an obstetrician-gynecologist partnership or group and 78% reported their primary practice as general obstetrician-gynecologist. Seventy-seven percent also perform obstetric services. A plurality of respondents reported that 35% of patients resided in a suburban area. As shown in Table 1, the average percent of non-Hispanic white patients in each respondents' practice was 61% (standard deviation [SD] = 27%) and the average percent of African American patients in each respondents' practice was 15% (SD = 15%).

The majority of physicians described their training related to screening of menorrhagia as either comprehensive (33%) or adequate (58%); physicians responded similarly regarding the assessment of menorrhagia (38% and 56%, respectively). Older physicians rated their training significantly less adequate than younger physicians (all  $P < .001$  when controlling for sex). Training was not rated differently by practice location.

The mean number of patients seen per year was 4156 (SD = 2031). The respondents reported that, on average, 198 (4.8%) of their patients complained about menorrhagia each year (SD = 321). Physicians indicated the questions they routinely asked patients when evaluating unexplained menorrhagia. The length of patients' periods, limitations of periods on daily life, and history of anemia treatment were most commonly asked (100%, 95.3%, and 84.9%, respectively). Approximately 74.7% of respondents asked about bleeding problems, following delivery or miscarriage, 68.3% asked about family history of bleeding disorders, 68.5% asked about bleeding problems after surgery, and 66.7% asked if patients experienced sensation of "flooding" or "gushing." Only 49.0% of physicians routinely asked about problems with bleeding after tooth extraction or dental surgery. When controlling for sex in a partial correlation, age was significantly correlated with how commonly physicians asked about problems with bleeding after tooth extraction or dental surgery ( $r = 0.159$ ;  $P = .001$ ), problems after surgery ( $r = 0.121$ ;  $P = .011$ ), and asking about "flooding" or "gushing" during periods ( $r = 0.245$ ;  $P < .001$ ), with younger obstetrician-gynecologists being less likely to ask these questions. Differences were also found based on sex in  $\chi^2$  analyses when

controlling for age. Among the oldest physician group (year of birth 1927-1952), female obstetrician-gynecologists were more likely to ask about family history ( $\chi^2 = 4.4$ ;  $P = .027$ ), bleeding problems after surgery ( $\chi^2 = 6.9$ ;  $P = .005$ ), and having bleeding problems after delivery or miscarriage ( $\chi^2 = 6.9$ ;  $P = .005$ ).

Physicians were asked about the likelihood of ordering specific tests and procedures for women who were experiencing heavy or prolonged menstrual bleeding and were (a) adolescent patients around the age of menarche (1-2 years after menarche) and (b) patients of reproductive age (approximately 15-44 years old) (Table 2). Seventy-seven percent of physicians reported that they would be likely or very likely to consider VWD or another bleeding disorder as causing menorrhagia in adolescent patients; however, only 36.4% of physicians would consider bleeding disorders in reproductive age women with menorrhagia.

Eighty-one percent of respondents reported having seen patients with menorrhagia caused by a bleeding disorder. When asked what proportion of patients with menorrhagia are referred to other health care providers, 63% of physicians reported referring up to 25% of menorrhagia patients for further diagnosis or treatment; 33% of physicians did not refer menorrhagia patients to other specialists. Respondents most commonly refer patients to hematology (44%) (Table 3).

When asked to estimate the prevalence of VWD among women in the United States with menorrhagia, 9.3% indicated "less than 1%," 52.8% indicated "1-5%," 25.5% indicated "5-10%," 7.8% indicated "10-15%," and 2% indicated "15-20%" (2.6% did not answer). The US prevalence of VWD among women with menorrhagia as reported by Dilley et al is 6.6%.<sup>11</sup> When asked whether African American women were more likely to have VWD (true/false), 88.9% correctly indicated false (7.1% indicate true and 4.0% did not answer).

## COMMENT

This survey provides updated insight regarding obstetrician-gynecologist practices on the evaluation of unexplained menorrhagia. The current data demonstrate that obstetrician-gynecologists seem to have a relatively high awareness of VWD and other bleeding disorders as potential underlying causes of menorrhagia. The Centers for Disease Control and Prevention conducted a similar survey over 10 years ago which demonstrated low provider recognition of VWD as a differential diagnosis for menorrhagia.<sup>6</sup> At that time, respondents perceived the prevalence of VWD among women with menorrhagia to be <1%. In fact, 2 European studies had reported prevalence as 13% and 25%, respectively,<sup>12,13</sup> and a US study reported a similarly high prevalence among non-Hispanic whites.<sup>11</sup> Only 9.3% of current respondents estimated the prevalence of VWD among women with menorrhagia to be less than 1%; however, more than 50% still underestimated the true prevalence. Four percent of previous respondents considered VWD in their differential diagnosis of reproductive age women with menorrhagia; 16.5% considered VWD for girls near menarche.<sup>6</sup> In the current survey, nearly 39% and 77% of obstetrician-gynecologists were likely to consider VWD or another bleeding disorder among reproductive-age women and adolescents, respectively. In the earlier survey, 45% percent of respondents had never seen a patient with menorrhagia caused by a bleeding disorder<sup>6</sup>; our results showed that over 80%

of current respondents have seen menorrhagia attributed to a bleeding disorder. The majority of respondents from the current survey refer patients with menorrhagia to other health care providers for further diagnosis and treatment, with nearly 45% of respondents likely to refer to hematology. Previously, only 3% of respondents referred menorrhagia patients to specialists.<sup>6</sup>

Interestingly, a low proportion of current survey respondents regularly asked patients about family history of bleeding disorders or bleeding episodes associated with surgery, dental procedures, delivery, or miscarriage. A comprehensive bleeding history can determine whether a subset of women with menorrhagia is at an increased risk for a bleeding disorder. Philipp et al<sup>10</sup> assessed the usefulness of a screening questionnaire for obstetrician-gynecologists to identify at-risk women; 2 of the criteria for a positive screen were family history and a history of excessive bleeding with tooth extraction, delivery or miscarriage, or surgery. An expert panel recently recommended that women with family history of a bleeding disorder and/or personal history of bleeding symptoms should be evaluated for a bleeding disorder.<sup>14</sup> A study assessing obstetrician-gynecologist residency training in the evaluation of menorrhagia demonstrated that chief residents were less likely to ask questions about common bleeding risk factors; for example, 66.1% of respondents would ask about excessive postsurgical bleeding either less than half of the time or never.<sup>15</sup> Additional medical education may be needed to increase awareness of risk factors suggestive of bleeding disorders.

Nearly 80% of respondents reported that they would likely consider VWD or another bleeding disorder as a differential diagnosis in adolescent patients compared with 16.5% in the Dilley et al survey.<sup>6</sup> Early identification of bleeding symptoms among adolescents is important for timely diagnosis and treatment. In a Centers for Disease Control and Prevention survey of 75 women with VWD, most women experienced their first bleeding symptoms during adolescence but were not diagnosed until 16 years later; the average age at diagnosis was 23 years old.<sup>16</sup> However, recent surveillance of girls and women with bleeding disorders receiving care at US hemophilia treatment centers shows that the average age at diagnosis was 15.4 years old and over half of participants were diagnosed by age 12.<sup>17</sup> The current data suggest there may be greater recognition of underlying bleeding disorders in a younger population. However, it should be noted that bleeding disorders are prevalent among reproductive-age women with menorrhagia<sup>18</sup> and less than 40% of current respondents were likely to consider bleeding disorders in this population.

This study has inherent limitations. This survey relies on self-reported data from obstetrician-gynecologists and responses may represent an estimate rather than objectively confirmed data from the respondent's practice. Although respondents were contacted multiple times, the overall response rate was relatively low at 42.4%. These survey data are subject to nonresponse bias and obstetrician-gynecologists who chose to respond could be intrinsically different from nonresponders. Though the participants represent a small proportion of all practicing obstetrician-gynecologists, the sample was quasirandomly selected from a sample that includes over 90% of all US obstetrician-gynecologists. Also, the majority of respondents are CARN members, a subset of ACOG physicians who frequently participate in survey research. However, CARN membership is actively managed

to maintain demographic similarity with ACOG Fellows as a whole. Several surveys per year include both CARN and non-CARN ACOG Fellows as participants<sup>19,20</sup> and differences in responses between CARN and non-CARN Fellows have been rare and are usually of little consequence. Another potential limitation is that specialty coagulation tests such as VWF ristocetin cofactor activity, VWF antigen, and factor VIII activity were not included in assessing which tests obstetrician-gynecologists would be likely to order to evaluate menorrhagia. However, the inclusion of those tests would not be appropriate for the initial evaluation of abnormal or dysfunctional uterine bleeding. Diagnosis of VWD is very complex because of a number of factors, including the necessity of multiple and repeat laboratory tests and variable interpretation based on a combination of clinical features and laboratory evaluation.<sup>14</sup> If a bleeding disorder is suspected, close collaboration with or referral to a hematologist for further hemostatic evaluation is encouraged.

An overall heightened awareness of bleeding disorders among obstetrician-gynecologists may be due to a number of factors. The impact of bleeding disorders on the reproductive health of women has been an emerging issue over the last several years. Recent studies have highlighted that women with VWD and other bleeding disorders may experience increased gynecologic and obstetric morbidity including menorrhagia and postpartum hemorrhage.<sup>5,21,22</sup> There have been multiple efforts by the research community, hematology providers, community-based organizations, and government agencies to raise awareness and increase early identification of bleeding disorders in women with menorrhagia. In 2008, the National Heart, Lung, and Blood Institute of the National Institutes of Health published comprehensive guidelines on the diagnosis, evaluation, and management of VWD, which included guidance on issues specific to women.<sup>23,24</sup> ACOG subsequently issued a committee opinion encouraging obstetrician-gynecologists to consider VWD and other bleeding disorders when evaluating patients with menorrhagia.<sup>25</sup> Although these data suggest a positive change in obstetrician-gynecologist practice, it is important to remain vigilant in identifying girls and women at-risk for underlying bleeding disorders. Failure to suspect bleeding disorders in patients with menorrhagia may delay diagnosis and treatment and subject women to increased morbidity. Consultation and collaboration with a hematologist is essential for accurate diagnosis and appropriate management.

## Acknowledgments

This study was funded by the Centers for Disease Control and Prevention and by grant, UA6MC19010, through the U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Research Programs.

## REFERENCES

1. Rees MC. Role of menstrual blood loss measurements in management of complaints of excessive menstrual bleeding. *Br J Obstet Gynaecol.* 1991; 98:327–8. [PubMed: 2021577]
2. Rees M. Menorrhagia. *BMJ.* 1987; 294:759–62. [PubMed: 3105728]
3. Rodeghiero F, Castaman G, Dini E. Epidemiological investigation of the prevalence of von Willebrand's disease. *Blood.* 1987; 69:454–9. [PubMed: 3492222]
4. Shankar M, Lee CA, Sabin CA, et al. Von Willebrand disease in women with menorrhagia: a systematic review. *Br J Obstet Gynaecol.* 2004; 111:734–40.



5. James AH. More than HMB: a review of the obstetric and gynaecological manifestations of bleeding disorders. *Haemophilia*. 2005; 11:295–307. [PubMed: 16011580]
6. Dilley A, Drews C, Lally C, Austin H, Barnhart E, Evatt B. A survey of gynecologists concerning menorrhagia: perceptions of bleeding disorders as a possible cause. *J Women's Health Gender Based Med*. 2002; 11:39–44.
7. Chi C, Shiltagh N, Kingman CEC, Economides DL, Lee CA, Kadir RA. Identification and management of women with inherited bleeding disorders: a survey of obstetricians and gynaecologists in the United Kingdom. *Haemophilia*. 2006; 12:405–12. [PubMed: 16834742]
8. Kirtava A, Drews C, Lally C, Dilley A, Evatt B. Medical, reproductive and psychosocial experiences of women diagnosed with von Willebrand's disease receiving care in haemophilia treatment centres: a case-control study. *Haemophilia*. 2003; 9:292–7. [PubMed: 12694520]
9. James AH, Myers ER, Cook C, Piertrobon R. Complications of hysterectomy in women with von Willebrand disease. *Haemophilia*. 2009; 15:926–31. [PubMed: 19473420]
10. Philipp CS, Faiz A, Dowling NF, et al. Development of a screening tool for identifying women with menorrhagia for hemostatic evaluation. *Am J Obstet Gynecol*. 2008; 198:163–e18. [PubMed: 18226613]
11. Dilley A, Drews C, Miller C, et al. Von Willebrand Disease and other inherited bleeding disorders in women with diagnosed menorrhagia. *Obstet Gynecol*. 2001; 97:630–6. [PubMed: 11275041]
12. Kadir RA, Economides DL, Sabin CA, et al. Frequency of inherited bleeding disorders in women with menorrhagia. *Lancet*. 1998; 351:485–9. [PubMed: 9482440]
13. Edlund M, Blomback M, von Schoultz B, et al. On the value of menorrhagia as a predictor for coagulation disorders. *Am J Hematol*. 1996; 53:234–8. [PubMed: 8948660]
14. James AH, Kouides PA, Abdul-Kadir R, et al. Von Willebrand disease and other bleeding disorders in women: consensus on diagnosis and management from an international expert panel. *Am J Obstet Gynecol*. 2009; 201:12–e18. [PubMed: 19481722]
15. Dietrich JE, Tran XG, Giardino AP. Bleeding disorder education in obstetrics and gynecology residency training: a national survey. *J Pediatr Adolesc Gynecol*. 2011; 24:94–7. [PubMed: 21190875]
16. Kirtava A, Crudder S, Dilley A, Lally C, Evatt B. Trends in clinical management of women with von Willebrand disease: a survey of 75 women enrolled in haemophilia treatment centres in the United States. *Haemophilia*. 2004; 10:158–61. [PubMed: 14962204]
17. Byams VR, Kouides PA, Kulkarni R, et al. Surveillance of female patients with inherited bleeding disorders in United States Haemophilia Treatment Centres. *Haemophilia*. 2011; 17(Suppl 1):6–13. [PubMed: 21692922]
18. Philipp CS, Faiz A, Dowling N, et al. Age and the prevalence of bleeding disorders in women with menorrhagia. *Obstet Gynecol*. 2005; 105:61–6. [PubMed: 15625143]
19. Hill LD, Erickson K, Holzman GB, Power ML, Schulkin J. Practice trends in outpatient obstetrics and gynecology: findings of the Collaborative Ambulatory Research Network, 1995-2000. *Obstet Gynecol Surv*. 2001; 56:505–16. [PubMed: 11496162]
20. Coleman VH, Power ML, Zinberg S, Schulkin J. Contemporary clinical issues in outpatient obstetrics and gynecology: findings of the Collaborative Ambulatory Research Network, 2001-2004: part I. *Obstet Gynecol Surv*. 2004; 59:780–6. [PubMed: 15502630]
21. Kirtava A, Drews C, Lally C, Dilley A, Evatt B. Medical, reproductive and psychosocial experiences of women diagnosed with von Willebrand's disease receiving care in haemophilia treatment centres: a case-control study. *Haemophilia*. 2003; 9:292–7. [PubMed: 12694520]
22. Kouides PA, Burkhart P, Phatak P, et al. Gynecological and obstetrical morbidity in women with type I von Willebrand disease: results of a patient survey. *Haemophilia*. 2000; 6:643–8. [PubMed: 11122390]
23. Nichols WL, Hultin MB, James AH, et al. von Willebrand disease (VWD): evidence-based diagnosis and management guidelines, the National Heart, Lung, and Blood Institute (NHLBI) Expert Panel report (USA). *Haemophilia*. 2008; 14:171–232. [PubMed: 18315614]
24. James AH, Manco-Johnson MJ, Yawn BP, et al. Von Willebrand disease: key points from the 2008 National Heart, Lung, and Blood Institute guidelines. *Obstet Gynecol*. 2009; 114:674–8. [PubMed: 19701049]

25. American College of Obstetricians and Gynecologists. Von Willebrand disease in women. ACOG committee opinion no. 451. *Obstet Gynecol.* 2009; 114:1439–43.

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript



TABLE 1

Respondent characteristics (n = 451)

Characteristic	Response	No. (%) or Mean (SD)
Mean year of birth	1958 (SD = 10.3)	—
Sex	Male	230 (51)
	Female	221 (49)
Current practice	Obstetric-gynecology partnership/group	218 (48)
	Solo practice	85 (19)
	Multispecialty group	61 (13)
	University full-time faculty and practice	45 (10)
	HMO (staff model)	10 (2)
	Other	32 (7)
	Primary medical specialty	General obstetric-gynecology
Gynecology only		76 (17)
Maternal-fetal medicine		4 (1)
Reproductive endocrinology		7 (1)
Obstetrics only		1 (<1)
Other		13 (3)
Residency of patients	Suburban	158 (35)
	Urban, noninner city	113 (25)
	Urban, inner city	65 (14)
	Mid-sized town (10,000-50,000) residents	70 (16)
	Rural	35 (8)
	Military	8 (2)
	Other	2 (<1)
Race/ethnicity of patients	Non-Hispanic white	60.5% (SD = 27)
	Hispanic	15.7% (SD = 20)
	African-American	14.7% (SD = 15)
	Asian/Pacific Islander	4.7% (SD = 7.6)

Characteristic	Response	No. (%) or Mean (SD)
	Native American	1.4% (SD = 7.2)
	Other	2.0% (SD = 8.7)

*HMO*, health maintenance organization; *SD*, standard deviation.

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

**TABLE 2**

Tests and procedures likely or very likely to be ordered for patients experiencing heavy or prolonged menstrual bleeding (n = 451)

<b>Test</b>	<b>Adolescent patients</b>	<b>Reproductive age patients</b>
Complete blood count	412 (91.4%)	434 (96.2%)
Diagnostic D & C	3 (0.7%)	78 (17.3%)
Endometrial biopsy	7 (1.6%)	337 (74.7%)
Ferritin	187 (41.5%)	237 (52.5%)
Hysteroscopy	10 (2.2%)	234 (51.9%)
Thyroid chemistry	364 (80.7%)	407 (90.2%)
Papanicolaou smear	126 (27.9%)	405 (89.8%)
Ultrasound	294 (65.2%)	420 (93.1%)

*D & C*, dilation and curettage.

**TABLE 3**

Referral patterns to other medical specialties (n = 451)

<b>Medical specialty</b>	<b>Likely to refer</b>	<b>Unlikely to refer</b>
Hematology	199 (44.1%)	245 (54.3%)
Endocrinology	79 (17.5%)	359 (79.6%)
Internal medicine	43 (9.5%)	393 (87.1%)
Oncology	35 (7.8%)	401 (88.9%)
Primary care	27 (6.0%)	409 (90.7%)
Family practice	19 (4.2%)	416 (92.2%)

Responses do not equal 100% because some individuals did not respond.

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript