Clinical Characteristics, Patterns of Care and Healthcare Resource Utilization (HCRU) in US Patients with Claims for Uterine Fibroids (UF) and Heavy Menstrual Bleeding (HMB), Stratified by Race

Laura McKain,[1] Shelby Corman,[2] Nicole Ansani,[3] Jersen Telfort,[3] Ruth Kim,[3] Cassandra Lickert[4]

[1]McKain Consulting, LLC; [2]ZS Associates, Bethesda, MD, USA; [3]Pfizer, Inc., New York, NY, USA; [4]Myovant Sciences, Inc., Brisbane, CA, USA

Contact: Cassandra Lickert, MD
E-mail: cassandra.lickert@myovant.com
Phone: (708) 214-1007

Introduction

- Uterine fibroids (UF) are benign neoplasms affecting women of reproductive age.[1]
  - The most frequently reported symptoms of UF are heavy menstrual bleeding (HMB) and bulk symptoms.[2]
  - These symptoms can reduce patient quality of life.[3]
- Current American College of Obstetricians and Gynecologists 2021 clinical management guidelines highlight marked racial disparities in disease presentation, severity, treatment patterns, and outcomes between Black and White women with UF.[4]
  - Black women have a nearly 3-fold increased risk of UF compared to White women,[1] are more likely to be anemic,[5] and have higher rates of surgical therapies (ie, hysterectomy and myomectomy).[4]
- Black women are typically underrepresented in research related to UF.[4]

Objective

- Describe clinical characteristics, treatment patterns, healthcare resource utilization (HCRU), and healthcare costs in patients with UF-HMB, stratifying results by race (White and Black), using a commercial claims database

Methods

- Using the Optum® Socio-Economic Status claims database, this retrospective analysis identified 2 cohorts: Women diagnosed first with UF followed by HMB (UF-HMB); and women diagnosed first with HMB followed by UF (HMB-UF), both between January 1, 2011 and June 30, 2020.
- To be included, women were required to be 18-55 years of age and to have ≥12 months of continuous enrollment pre- and post-index; Table 1 shows selection criteria and patient attrition for patients with UF-HMB.
- For the UF-HMB cohort, the date of UF diagnosis was designated as the index date; for the HMB-UF group, the date of HMB diagnosis was the index date.
- Outcomes of interest were pharmacologic and non-pharmacologic treatment patterns, all-cause HCRU (emergency department [ED] visits, hospitalizations, outpatient visits, and obstetrician/gynecologist visits), and all-cause healthcare costs (inpatient, outpatient, and pharmacy).
- Descriptive statistics were used to describe clinical characteristics and outcomes, which were stratified by race and compared using Chi-squares and t-tests.

Table 1. UF-HMB Patient Attrition

≥2 outpatient claims ≥30 days apart or 1 inpatient claim for UF during the index period (January 1, 2011 to June 30, 2020) N=364,558

Criteria	Attrition, n
≥12 months of continuous pre-index enrollment	220,782
≥12 months of continuous post-index enrollment or continuous enrollment until date of hysterectomy	193,394
No pre-index HMB diagnosis	137,657
≥1 HMB diagnosis on or after the index date	42,992
Age 18-55 years at index	41,257
No pre-index hysterectomy, myomectomy, ablation, MRI ultrasound surgery, or UAE	38,770
No cancer (except dermatologic skin cancer) during the study period	35,421

Final study sample N=35,421

HMB = heavy menstrual bleeding; MRI = magnetic resonance imaging; UAE = uterine artery embolization; UF = uterine fibroid

Results

- Baseline characteristics for both cohorts (UF-HMB, HMB-UF) were similar; due to space limitations, data shown are only for the UF-HMB cohort.
- A total of 35,421 women were included; of these, 26,803 were identified as either White (18,518 [69.1%]) or Black (8,285 [30.9%]).
- All patients had 12 months of follow-up.
- Table 2 shows baseline demographic and clinical characteristics.
- Black women were younger than White women (mean [SD]: 41.9 [6.2] vs 43.8 [6.1] years; *P*<0.0001] and a higher proportion of Black women were age 30-44 years at index (60.3% vs 47.8%; *P*<0.0001).
- Differences in baseline comorbidities by race were observed:
  - More Black than White women had obesity (14.7% vs 9.8%; *P*<0.0001) and hypertension (27.2% vs 16.5%; *P*<0.0001).
  - Fewer Black than White women had reported diagnoses of anxiety (7.7% vs 13.2%; *P*<0.0001), depression (7.1% vs 10.9%; *P*<0.0001), and comorbidities related to women's health (eg, endometriosis, uterine polyps, and other abnormal menstrual bleeding).
- The prevalence of bulk symptoms was similar between Black and White women (41.8% vs 42.7%).

Table 2. Patient Baseline Characteristics

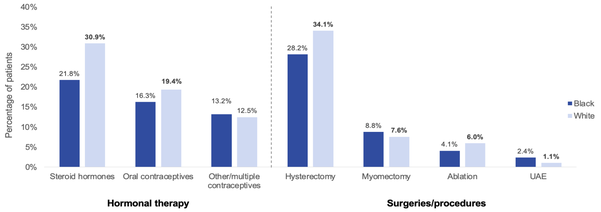
Characteristics	Black (n=8,285)	White (n=18,518)
Age		
Mean (SD)	41.9 (6.2)	**43.8 (6.1)**
Insurance type		
Commercial	8,001 (96.6)	**18171 (98.1)**
Medicare	283 (3.4)	**347 (1.9)**
Unknown	1 (0.0)	0 (0)
Pre-Index comorbidities, n (%)		
Hypertension	2,251 (27.2)	**3,062 (16.5)**
Hyperlipidemia	1,304 (15.7)	**3,025 (16.3)**
Obesity	1,217 (14.7)	**1,814 (9.8)**
Fatigue	1,066 (12.9)	**2,930 (15.8)**
Anxiety	640 (7.7)	**2,443 (13.2)**
Depression	589 (7.1)	**2,016 (10.9)**
Pre-index comorbidities related to women's health, n (%)		
Infertility	127 (1.5)	335 (1.8)
Pregnancy	289 (3.5)	639 (3.5)
Endometriosis	75 (0.9)	**236 (1.3)**
Uterine polyps	59 (0.7)	**265 (1.4)**
Other AUB	1,029 (12.4)	**2,895 (15.6)**
Pre-index bulk symptoms, n (%)		
Bulk symptoms	3,461 (41.8)	7,908 (42.7)
Abdominal distention	118 (1.4)	**352 (1.9)**
Backache	1,258 (15.2)	**3,060 (16.5)**
Constipation	335 (4.0)	**625 (3.4)**
Increased abdominal girth	240 (2.9)	561 (3.0)
Leg pain	755 (9.1)	1,606 (8.7)

AUB = abnormal uterine bleeding; SD = standard deviation.
Statistically significant differences vs Black women shown in bold.

Treatment Patterns

- Figure 1 shows post-index hormonal therapy use and surgeries/procedures.
  - While the prevalence of bulk symptoms was similar between groups, Black women were less frequently prescribed steroid hormone therapy (21.8% vs 30.9% in White women; *P*<0.0001) and oral contraceptives (16.3% vs 19.4%; *P*<0.0001).
  - Across cohorts, hysterectomy was the most common gynecological procedure; fewer Black than White women underwent this procedure (28.2% vs 34.1%; *P*<0.0001).

Figure 1. Post-Index Hormonal Therapy Use and Surgeries/Procedures



UAE = uterine artery embolization.
Statistically significant differences vs Black women shown in bold.

- Table 3 shows mean all-cause per-patient HCRU in the 12 months post-index
  - While Black women had more ED visits and hospitalizations, White women had more outpatient and OB/GYN visits (*P*<0.0001 for all).

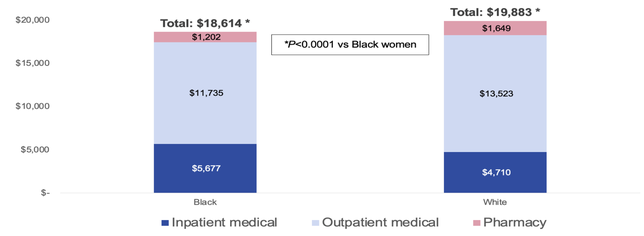
Table 3. Mean All-Cause HCRU per Patient in the 12 Months Post-Index

Resource, mean (SD)	Black (N=8,285)	White (N=18,518)
ED visit	0.6 (1.4)	**0.4 (1.1)**
Hospitalization	0.3 (0.6)	**0.2 (0.5)**
Outpatient visit	15.8 (13.4)	**18.2 (15.6)**
OB/GYN visit	2.3 (3.0)	**2.7 (3.3)**

ED = emergency department; OB/GYN = obstetrician/gynecologist; SD = standard deviation.
Statistically significant differences vs Black women shown in bold.

- Figure 2 shows all-cause healthcare costs in the 12 months post-index.
  - Black women had lower all-cause healthcare costs than White women ($18,614 vs $19,883; *P*<0.0001).
  - For both groups, most costs were attributable to outpatient visits ($11,735 vs $13,523; *P*<0.0001).

Figure 2. Mean All-Cause Healthcare Costs per Patient in the 12 Months Post-Index



Limitations

- These data are specific to women age ≤55 years in the Optum commercial database population and may not be generalizable to other populations.
- This study was observational in nature, which limits the ability to make conclusions regarding causality.
- Claims data may be subject to coding errors.
- Claims data do not document whether patients adhered to their prescribed treatment regimen.
- National Drug Code claims are not associated with a diagnosis; therefore, drugs may have been administered for reasons other than UF and HMB, which could result in an overestimation of the drug treatment rate.

Conclusion

- With respect to bulk symptoms, both cohorts had a similar burden of disease.
- Despite this, baseline comorbidities, HCRU, and treatment patterns differed by race.
  - Compared to White women:
    - Black women were more likely to be obese and have hypertension.
    - Black women received more acute care services, although fewer dollars were spent on their care.
    - Black women were less likely to be on or receive steroid hormone, oral contraceptives, or have a hysterectomy
- This suggests that fibroid-related issues in Black women are managed in an emergent fashion, and that patient care may be more focused on short-term, temporizing measures, rather than comprehensive, long-term chronic disease management.
  - It is possible that comorbidities may receive more attention and resources from both the healthcare system and the patient, leaving less time and resources for UF management.

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Disclosure

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