

Use of Pharmacotherapy or Surgery for Women Diagnosed with Uterine Fibroids and Heavy Menstrual Bleeding in a Predominantly African American Population in the US Between 2010-2019

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Introduction

- Uterine fibroids (UF) are common, benign tumors of the uterus.¹
- In the United States (US), approximately 70% of White and >80% of African American women have been diagnosed with UF by age 50.¹
- African American women are nearly 3 times more likely than White women to have UF (cumulative incidence),¹ with marked differences in disease presentation, severity, treatment, and outcomes.²
- Regardless of race, heavy menstrual bleeding (HMB, with or without anemia) and pelvic pain/pressure are the most commonly reported symptoms of UF.³
- Hormone-based therapies (eg, contraceptives, steroids) and surgical procedures (eg, hysterectomy) are common treatment options for UF.^{1,4}
- Additional real-world evidence is needed to understand UF treatment patterns among African American and White women.

Objective

- To describe treatment patterns over the last decade for US African American and White women with incident UF and HMB.

Methods

- Retrospective US claims analysis evaluating data from the IBM® MarketScan® Multi-State Medicaid Insurance database between January 1, 2010, and December 31, 2019.
- Women aged 18-55 years with a diagnosis of UF and HMB were included (Table 1); the index date was the date of first UF diagnosis.
- Follow-up continued from the index date to the earliest of death, disenrollment, hysterectomy, or end of study.
- Outcomes of interest were demographic characteristics, pre-index comorbidities, and treatment patterns.
 - Hormone-based therapies of interest included hormonal contraceptives, steroid hormones, and gonadotrophin-releasing hormone agonists/antagonists.
 - The surgical procedure of interest was hysterectomy.
- Statistical analyses were conducted to evaluate only African American and White women.
 - Descriptive analyses of post-index treatment patterns and Cox regression models of time-to-treatment post-UF diagnosis were performed using race as covariates.

Table 1. Sample Selection for UF-HMB Cohort

Cohort Selection Criteria	N remaining	% (n) excluded
Between January 1, 2011 and December 31, 2018: ≥2 outpatient claims ≥30 days apart or 1 inpatient claim with UF diagnosis*	113,669	0
1 inpatient or outpatient claim with HMB diagnosis–** at any time during the study period	73,088	35.7% (40,581)
Females ≥18 years and <56 years as of index date	69,980	2.7% (3,108)
Continuous enrollment for ≥12 months pre-and post-index date or until date of hysterectomy	28,085	36.9% (41,985)
No hysterectomy during pre-index period	27,122	0.8% (963)
Total patients in UF-HMB cohort	27,122	

*ICD-9 218.x or ICD-10 D25.x

**ICD-9 626.2, 626.4, 626.5, 626.6, 626.8, 626.9, 627.0 or ICD-10 N92.0, N92.1, N92.3, N92.4, N92.5, N92.6, N89.7, N93.1, N93.8, N93.9.

Results

- The cohort included 27,122 women with UF and HMB, with a median follow-up of 40.5 months.
- African American women comprised 69.5% (n=16,776) of the sample and White women comprised 30.5% (n=7,353) (Table 2).
- Mean patient age was similar between the 2 groups (African American, 39.6 years; White, 40.2 years).

Table 2. Patient Baseline Characteristics

Characteristics	African American (n=16,776)	White (n=7,353)
Age, mean (SD)	39.6 (7.1)	40.2 (7.2)
Age group, n (%)		
18-29 yrs.	1,454 (8.7)	618 (8.4)
30-44 yrs.	10,917 (65.1)	4,500 (61.2)
45-55 yrs.	4,405 (26.3)	2,235 (30.4)
P-value		<0.0001
Charlson Comorbidity Index, n (%)		
0	9,810 (58.5)	4,026 (54.8)
1	4,052 (24.2)	1,962 (26.7)
2+	2,914 (17.4)	1,365 (18.6)
Pre-Index Comorbidities		
Bulk symptoms (≥1)	11,477 (68.4)	5,665 (77.0)
Diabetes	3,383 (20.2)	1,371 (18.6)
Hyperlipidemia	3,196 (19.1)	1,794 (24.4)
Hypertension	7,389 (44.0)	2,398 (32.6)
Obesity	4,841 (28.9)	1,886 (25.6)
HMB Diagnosis Relative to Index (UF Diagnosis), n (%)		
>12 months prior	4,619 (27.5)	2,194 (29.8)
0-12 months prior	6,628 (39.5)	3,219 (43.8)
Within 6 months post (inclusive)	3,162 (18.8)	1,263 (17.2)
>6 months post	2,367 (14.1)	677 (9.2)

HMB, heavy menstrual bleeding; SD, standard deviation; UF, uterine fibroids; yrs, years.

Clinical Characteristics

- Among African American women, 4,619 (27.5%) were diagnosed with UF in the 12 months after receiving a HMB diagnosis, while 6,628 (39.5%) were diagnosed with UF within 12 months prior to receiving a HMB diagnosis (Table 2).
- Among White women, 2,194 (29.8%) were diagnosed with UF in the 12 months after receiving a HMB diagnosis, while 3,219 (43.8%) were diagnosed with UF within 12 months prior to receiving a HMB diagnosis.

- Over two-thirds of women had pre-index bulk symptom (African American, 68.4%; White, 77.0%) (Table 2).
- Common pre-index comorbidities among African American women were hypertension (44.0%), obesity (28.9%), and diabetes (20.2%) (Table 2).
- Among White women, common pre-index comorbidities were hypertension (32.6%), obesity (25.6%), and hyperlipidemia (24.4%).
- Anemia was present in 7.0% of African American women and 4.5% of White women (data not shown).

Treatment Patterns

- More African American than White women received hormone-based therapy as initial treatment (42.4% vs 38.5%) (Table 3).
- Fewer African American than White women received hysterectomy during the follow-up period (32.0% vs 46.8%) (Table 3).

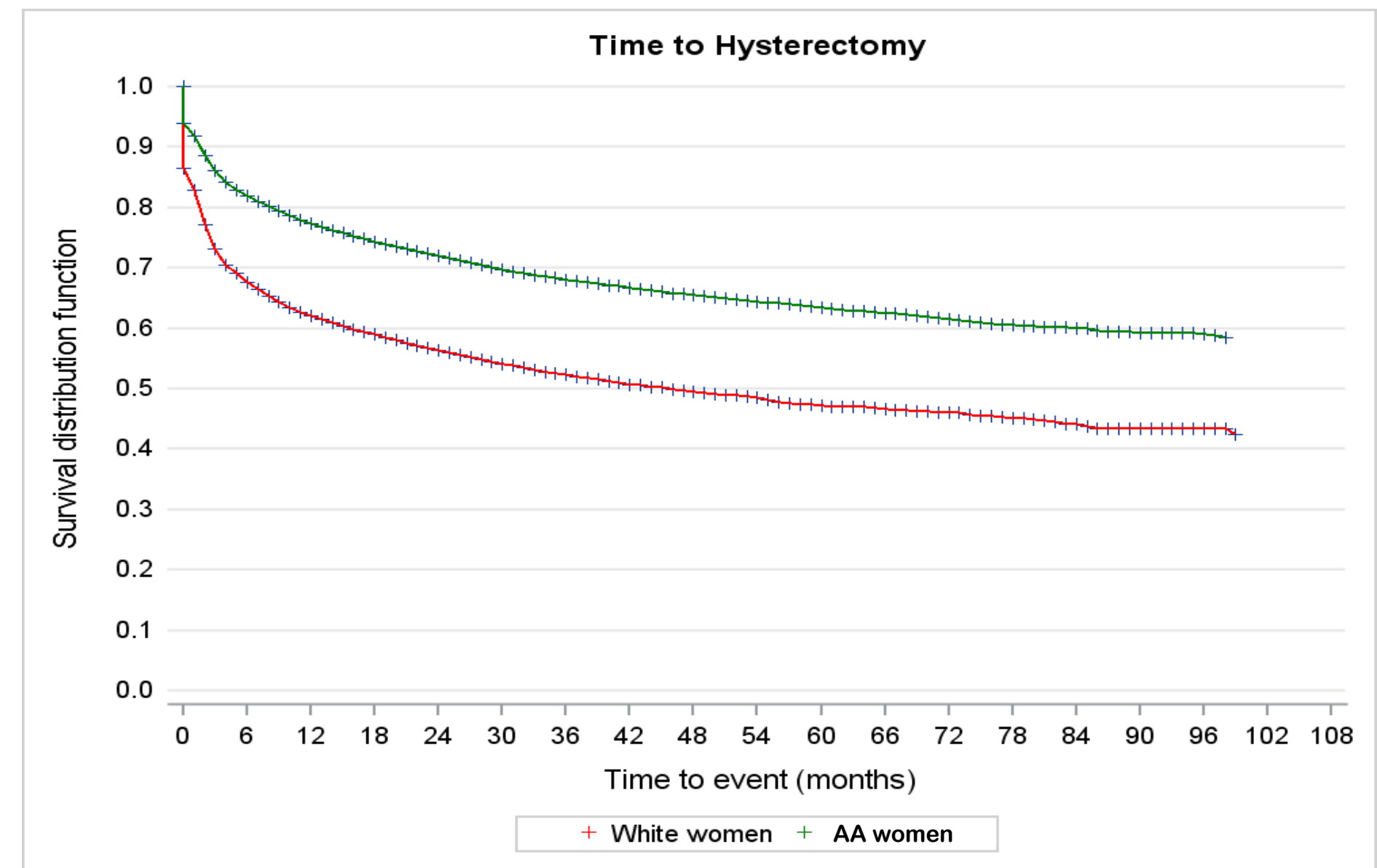
Table 3. Treatment Patterns

Characteristics	African American (n=16,776)	White (n=7,353)	Cox HR (95% CI); p-value
Hormone-based therapy received as initial treatment, n (%)	7,118 (42.4)	2,828 (38.5)	1.2 (1.1-1.3); P<0.0001
Hysterectomy received during follow-up, n (%)	5,364 (32.0)	3,444 (46.8)	0.6 (0.58-0.63); P<0.0001

CI, confidence interval; HR, hazard ratio.

- A Kaplan-Meier analysis of time to hysterectomy showed that, following UF diagnosis, African American women were less likely than White women to have a hysterectomy (Figure 1).

Figure 1: Kaplan-Meier Curve, Time to Hysterectomy by Race



Limitations

- These data are specific to the US Medicaid population and may not be generalizable.
- This study was observational in nature, which limits the ability to make conclusions regarding causality.
- Claims data may be subject to coding errors.
- National Drug Code claims are not associated with a diagnosis; therefore, drugs may have been administered for reasons other than UF and HMB, which may have resulted in an overestimation of the drug treatment rate.

Conclusion

- In this Medicaid population of similarly aged African American and White women with UF and HMB, bulk symptoms demonstrated the burden of this disease.
- Treatment selection differed significantly by race, with African American women having a higher likelihood of hormone-based therapy and a lower likelihood of hysterectomy.
- These findings differ from previous studies, which have shown that African American women are 2-3 times more likely to undergo hysterectomy for UF.²
- Further analyses are needed to determine the social and public health implications of these results.

References

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Disclosure

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