



Introduction

- Metabolic dysfunction-associated steatohepatitis (MASH), formerly known as NASH/NAFLD, is a progressive liver disease with limited treatment options.
- In March 2024, the FDA approved resmetirom as the first medication for treatment of MASH and fibrosis stages F2 and F3.¹
- Resmetirom is a thyroid hormone receptor beta agonist indicated for adults with MASH and moderate to advanced liver fibrosis.²
- Clinical trials have shown that resmetirom improves hepatic fibrosis, resolves steatohepatitis, reduces hepatic fat and liver enzymes.^{2,3}
- Understanding the characteristics of MASH patients initiating resmetirom is essential for optimizing clinical utility and informing management strategies.
- This study examines patient characteristics and prescribing patterns using a large prescription fill database.

Methods

- This retrospective cohort study used large specialty and retail pharmacies data.
- The index date was defined as the first resmetirom prescription filled for MASH from March 14, 2024 (resmetirom FDA approval date).
- Inclusion criteria: aged ≥18 years old, with at least 2 fills for resmetirom.
- Patient characteristics included age, gender, region, rural-urban residency, Social Vulnerability Index (SVI identifies communities most at risk from disasters using socioeconomic factors such as poverty, disability, age, and housing conditions), and payer type.
- Clinical characteristics included prescribing physician specialty, practice setting, geography, and academic hospital affiliation. Other clinical variables included proportion days covered (PDC) and patient Rx-Risk Comorbidity Index,⁴ a burden of disease score based on patient prescription history.
- High PDC (good adherence) for resmetirom was defined as PDC ≥ 80%. Multivariable logistic regression was used to assess associations between sociodemographic and clinical characteristics and high PDC.

Results

Patient Sociodemographic Characteristics (Table 1)

- 5,389 patients were evaluated after 6 months of follow up.
- The mean age was 56.4 years, 56.8% were female.
- 75.8% of patients had a commercial health insurance.
- Patients were geographically dispersed within the South (39.5%), West (22.7%), Northeast (20.4%), and Midwest (16.8%). Patients lived in rural (43.4%), urban (33.4%), and suburban (23.0%) areas.
- The median household income was \$60,918, and the mean SVI was 0.48.

Prescriber Characteristics

- Resmetirom was mainly prescribed by hepatologists and gastroenterologists (56.4%), with other specialties accounting for 40.4% of new fills.
- Physician practice places were urban (50.6%), suburban (29.1%), and rural (20.2%), and 70.5% were affiliated with an academic hospital.
- Physicians were also geographically dispersed within the South (39.3%), West (21.3%), Northeast (20.8%), and Midwest (17.9%).

Clinical Characteristics

- The proportion of patients with high PDC was 85.3%.
- Age, sex, urban-rural area, SVI, and RX-risk score were associated with high PDC (**Figure 1**).
- The average Rx-Risk Index score was 2.4 (SD 4.0).⁴

Conclusions

- Patients with MASH initiating resmetirom were geographically diverse, whereas early prescribers were predominantly located in urban areas associated with academic medical centers.
- Adherence levels were high in the first six months of resmetirom use, suggesting early adoption among engaged patients and provider groups.
- Patients who were older, male, living in rural areas, with lower SVI, or lower RX-risk scores were associated with high resmetirom adherence.
- Future research aimed at understanding long-term resmetirom utilization and patient clinical characteristics may support individualized and effective approaches to MASH management.

Table 1. Patient Sociodemographic Characteristics

Characteristics	Total	High PDC	Low PDC	P value
	N = 5,389	N = 4,063	N = 1,326	
Age (years), mean (SD)	56.42(12.67)	57.08(12.41)	54.38(13.25)	<0.0001
Age group N (%)				<0.0001
≤44 years	930(17.26)	650(16.00)	280(21.12)	
45-64 years	2,912(54.04)	2,175(53.53)	737(55.58)	
≥65 years	1,547(28.71)	1,238(30.47)	309(23.30)	
Gender N (%)				0.0549
Female	3,060(56.78)	2,277(56.04)	783(59.05)	
Male	2,329(43.22)	1,786(43.96)	543(40.95)	
Geographic regions N (%)				0.0499
Northeast	1,098(20.37)	825(20.31)	273(20.59)	
Midwest	903(16.76)	703(17.30)	200(15.08)	
South	2,127(39.47)	1,615(39.75)	512(38.61)	
West	1,225(22.73)	890(21.90)	335(25.26)	
Missing	36(0.67)	30(0.74)	6(0.45)	
Urban-rural area N (%)				0.0006
Urban	1,801(33.42)	1,302(32.05)	499(37.63)	
Suburban	1,238(22.97)	963(23.70)	275(20.74)	
Rural	2,338(43.38)	1,789(44.03)	549(41.40)	
Missing	12(0.22)	9(0.22)	3(0.23)	
Median household income (\$)				
Mean (SD)	60,918(22,191)	61,166(22,212)	60,156(22,119)	0.0678
Median (IQR)	57,226(28,619)	57,463(28,336)	56,044(29,551)	0.128
SVI				
SVI overall mean (SD)	0.48(0.23)	0.47(0.23)	0.51(0.24)	<.0001
Racial and Ethnic Minority status mean (SD)	0.52(0.26)	0.51(0.26)	0.55(0.27)	<.0001
Housing type and transportation mean (SD)	0.47(0.17)	0.47(0.17)	0.49(0.18)	<.0001
Payer type N (%)				0.0002
Commercial insurance	4,086(75.82)	3,131(77.06)	955(72.02)	
Medicare	573(10.63)	424(10.44)	149(11.24)	
Other	730(13.55)	508(12.50)	222(16.74)	

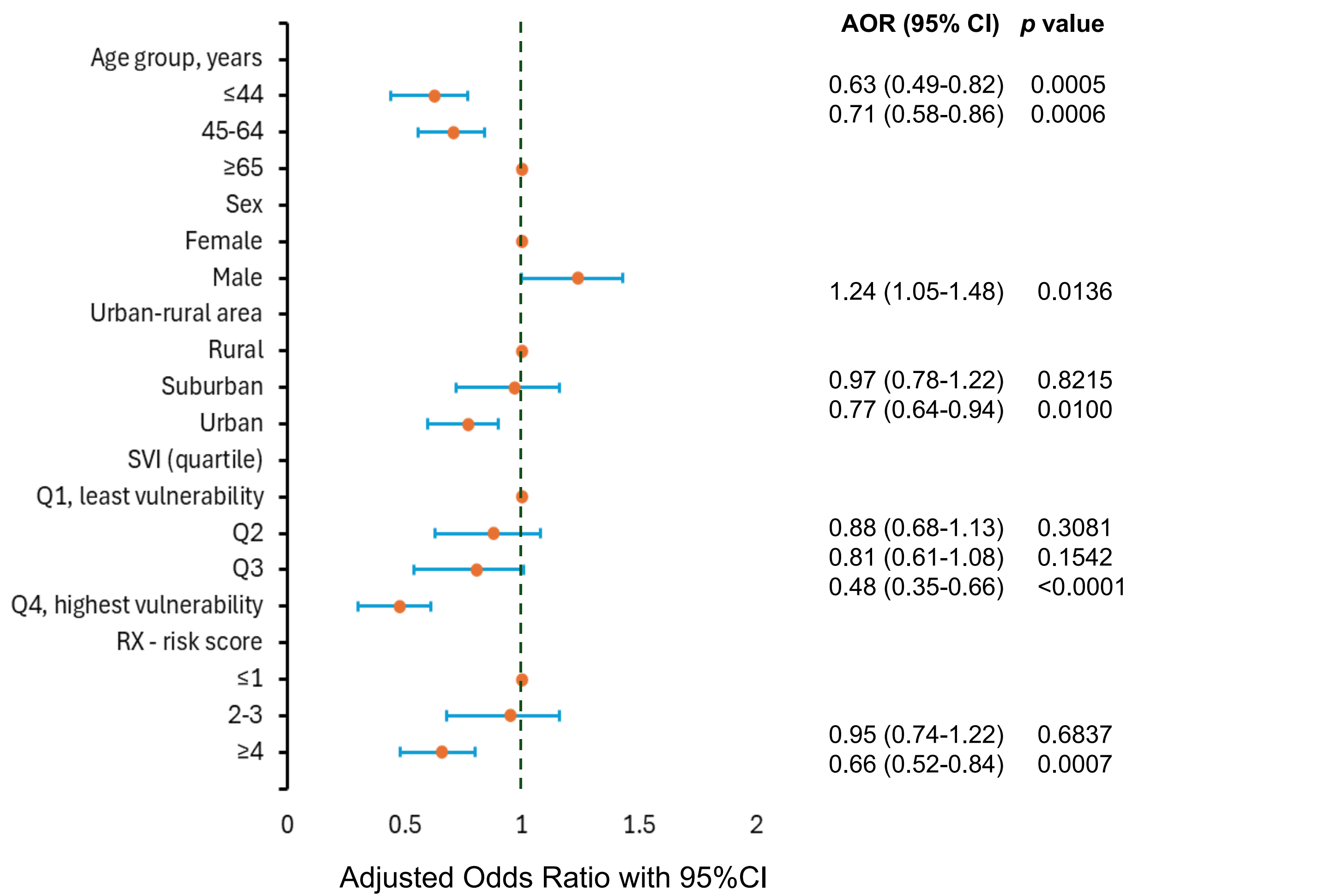


Figure 1. Forest plot of adjusted odds ratios (AOR) of sociodemographic and clinical characteristics for good resmetirom adherence

References

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