Impact of COVID-19 on Initiation of Statin Therapy in Persons with Diabetes and Implications for Star Rating Measures

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BACKGROUND

- Moderate-to-high intensity statin use is recommended by the American College of Cardiology/American Heart Association for individuals aged 40-75 with diabetes to reduce the risk of atherosclerotic cardiovascular disease (ASCVD).[1]
- In an effort to improve adherence to statin use guidelines in this population, the Centers for Medicare & Medicaid Services (CMS) implemented the Statin Use in Persons with Diabetes (SUPD) Star Rating measure for Medicare beneficiaries.[2]
  - CMS defines the SUPD measure as the percentage of Medicare Part D beneficiaries with diabetes aged 40-75 who receive at least one paid claim for a statin medication in the measurement year.
- COVID-19 has introduced delays in access to health care for patients. General stay-at-home orders coupled with a fear of COVID-19 exposure deterred patients from scheduling regular check-ups where new diagnoses are made and chronic care management follow-up visits occur. Shorter hours and more urgent disease state appointments at a physician's office have not only made it difficult for preventive measures such as statin initiation to be identified, but have also placed it as a lower priority.[3]
- Consequently, there is a need to evaluate statin initiation trends prior to and during COVID-19 to inform health plans and prescribers and influence intervention strategies.

OBJECTIVE

To determine whether statin initiation for individuals with diabetes was significantly decreased in 2020 during COVID-19 compared to 2019.
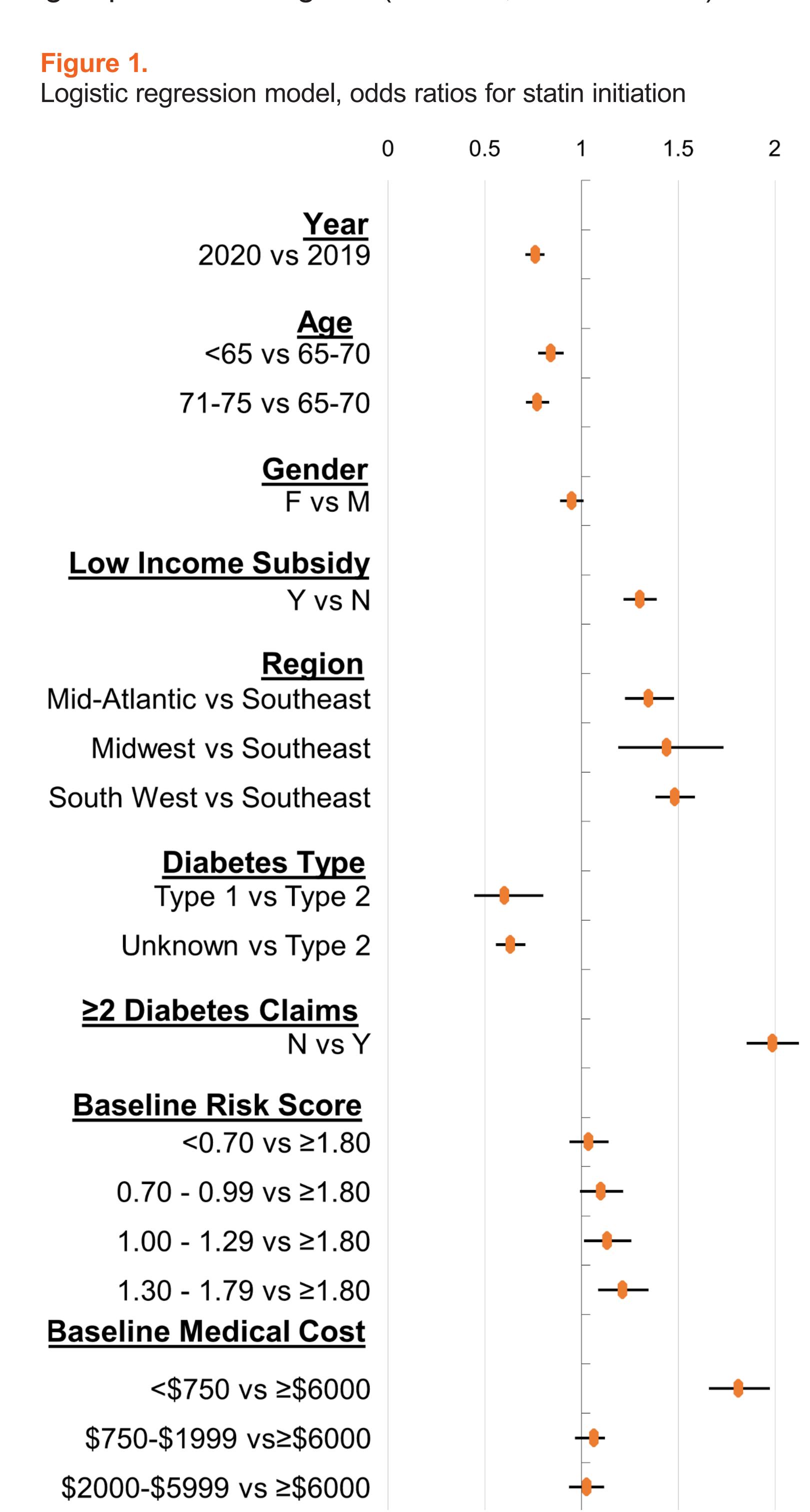
METHODS

- Cigna Medicare Advantage members who were fully enrolled from January 1, 2018 to December 31, 2019 and/or January 1, 2019 to December 31, 2020 were selected for retrospective cohort comparison and defined as follows:
  - **2019 cohort:** 2018 baseline year; 2019 evaluation year
  - **2020 cohort:** 2019 baseline year; 2020 evaluation year
- Study inclusion criteria were as follows:[2]
  - Age 40-75 years old
  - At least 2 paid claims for diabetes medications during the evaluation year
  - No paid claims for any statin within the past 12 months
- Exclusion criteria were as follows:[2]
  - End-stage renal disease (ESRD) or in hospice care
- Member demographic information, as well as pharmacy and medical claims data, were included for assessment in the analysis. Pharmacy data were evaluated to determine if there were one or more paid claims for statin medications from January 1 to December 31 of each study year to determine SUPD compliance. Additional variables assessed to adjust for independent effects were:
  - Low income subsidy (LIS) status
  - 2 or more paid claims for diabetes medications in the baseline year
  - Diabetes type
  - Geographical region
  - Hierarchical Condition Category (HCC) Risk Score
  - Total medical cost in the baseline year
- Chi-Square tests were run on categorical variables to discern whether baseline characteristics differed between 2019 and 2020 groups.
- The rates of statin initiation in the two cohorts were compared using multivariate logistic regression, adjusting for the independent variables described above. Statistical significance was set at p < 0.05.

RESULTS

- 11,322 members were identified for the 2019 group, and 9,807 members were identified for the 2020 group (Table 1).
- Characteristics were generally similar between the two groups, with the exception of small but significant differences for LIS status, region, diabetes type, and 2 or more paid claims for diabetes medications in the baseline year.
- In the 2019 cohort, the unadjusted rate of statin initiation was 46.8% compared to 40.0% in the 2020 cohort (p < 0.0001).
- The likelihood of statin initiation in 2020 was 24.2% lower than 2019 (OR 0.758, CI 0.716-0.802).
- The Southeast region had the lowest likelihood of statin initiation compared to all other regions (p < 0.0001).
- The 65-70 age group was more likely to start a statin than the <65 or the 71-75 age group (OR 0.779, CI 0.803-0.926).
- The group receiving LIS was more likely to start a statin than the group not receiving LIS (OR 1.27, CI 1.35-1.194).

Table 1.
Member Characteristics

	Year		P-value
	2019	**2020**	
	N, (%)	N, (%)	
Age, Years			
<65	3455 (30.52)	2928 (29.86)	
65-70	4515 (39.88)	3896 (39.73)	0.3791
71-75	3352 (29.61)	2983 (30.42)	
Gender			
Female	6509 (57.49)	5665 (57.76)	0.686
Male	4813 (42.51)	4142 (42.24)	
Receiving LIS?			
Yes	6001 (53.00)	4815 (49.10)	<0.0001
No	5321 (47.00)	4992 (50.90)	
Diabetes Type			
Type 1	116 (1.02)	135 (1.38)	
Type 2	10385 (91.72)	8864 (90.38)	0.0014
Unknown	821 (7.25)	808 (8.24)	
Risk Score			
<0.70	3580 (31.62)	3309 (33.74)	
0.70 - 0.99	2249 (19.86)	1916 (19.54)	
1.00 - 1.29	1677 (14.81)	1428 (14.56)	0.0203
1.30 - 1.59	1620 (14.31)	1329 (13.55)	
≥1.60	2196 (19.40)	1825 (18.61)	
Risk Score, Baseline Year			
<0.70	3676 (32.47)	3344 (34.10)	
0.70 - 0.99	2380 (21.02)	2006 (20.45)	
1.00 - 1.29	1674 (14.79)	1478 (15.07)	0.0604
1.30 - 1.59	1608 (14.20)	1304 (13.30)	
≥1.60	1984 (17.52)	1675 (17.08)	
≥2 Paid Claims for Diabetes Medications, Baseline Year			
Yes	8249 (72.86)	6982 (71.19)	0.0072
No	3073 (27.14)	2825 (28.81)	
Geographic Region			
Mid-Atlantic	1775 (15.68)	1345 (13.71)	
Midwest	314 (2.77)	222 (2.26)	<0.0001
Southeast	3848 (33.99)	3422 (34.89)	
Southwest	5385 (47.56)	4818 (49.13)	
Medical Cost, Baseline Year			
<$750	3529 (31.17)	2904 (29.61)	
$750-$1999	2382 (21.04)	2127 (21.69)	0.0981
$2000-$5999	2732 (24.13)	2392 (24.39)	
≥$6000	2679 (23.66)	2384 (24.31)	

Figure 1.
Logistic regression model, odds ratios for statin initiation

CONCLUSION

- Patients were significantly less likely to initiate a statin in 2020 during COVID-19 compared to 2019.
- More complex patients (i.e., older age, higher risk score, higher medical spending) were significantly less likely to initiate a statin.
  - This implies that doctors may be focusing statin initiation on younger or less complex patients. There are opportunities here to consider interventions such as educating prescribers about the importance of prescribing statins to the older population.
- While there was a rate of decreasing LIS recipients in 2020 vs. 2019 in our study sample due to Cigna enrollment patterns, those receiving LIS were significantly more likely to initiate a statin, potentially due to lower cost barriers.
- The significantly lower likelihood of the Southeast region initiating a statin is consistent with other studies finding lower life expectancy, quality of care, and Medicare Star Ratings.[4,5]
  - These findings suggest that health plans may want to focus on initiatives that can improve the overall health of individuals in the Southeast region.
- Managed care organizations (MCO's) can play an integral role in identifying gaps in care. COVID-19 created a unique opportunity to study the impact of change in access to care in terms of statin initiation. The results of this study could help MCOs effectively strategize and prioritize ways to provide health care to those who need it, especially in the event another health pandemic occurs.

LIMITATIONS

- The results are based on administrative claims data, which may not always show the full clinical picture.
- CMS added new exclusions to the SUPD measure in 2021, such as history of myopathy. The data used in this study were based on measure specifications prior to these exclusions and may include beneficiaries who had contraindications to statin use.

References

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