Supplemental Online Content

Lamprea-Montealegre JA, Madden E, Tummalapalli SL, et al. Association of race and ethnicity with prescription of SGLT2 inhibitors and GLP1 receptor agonists among patients with type 2 diabetes in the Veterans Health Administration system. *JAMA*. doi:10.1001/jama.2022.13885

This supplemental material has been provided by the authors to give readers additional information about their work.

eTable 1. Demographic and clinical characteristics of patients with type 2 diabetes in the Veterans Health Administration system from 2019 to 2020 by ethnicity[a] categories

Characteristics	Hispanic or Latino (n=85,034)	Not Hispanic or Latino (n=1,072,958)	Unknown Ethnicity (n=39,922)
Socio-demographic			
Mean age (SD)	65 (12.4)	68 (10.7)	68 (11.2)
Female Male	2,857 (3%) 82,177 (97%)	43,956 (4%) 1,029,002 (96%)	1,602 (4%) 38,320 (96%)
Race American Indian or Alaska Native Asian, Native Hawaiian or Other Pacific Islander Black or African American White Multiracial Unknown Race	 1,349 (2%) 2,040 (2%) 3,584 (4%) 64,278 (76%) 939 (1%) 12,844 (15%)	 8,568 (1%) 22,069 (2%) 228,027 (21%) 774,338 (72%) 8,678 (1%) 31,278 (3%)	 210 (1%) 554 (1%) 3,321 (8%) 12,032 (30%) 178 (0%) 23,627 (59%)
Service-connected disability >50%[b]	42,981 (51%)	480,430 (45%)	17,432 (44%)
Diabetes service connection[b]	20,263 (24%)	271,427 (25%)	9,376 (23%)
Lowest ZIP Code median income quartile (income <$44,818)	32,310 (38%)	255,373 (24%)	8,785 (22%)
Highest social deprivation index quartile (score>73)	28,968 (34%)	249,298 (23%)	94,81 (24%)
Rural or highly rural ZIP Code	14,538 (17%)	417,902 (39%)	15,103 (38%)
Lifestyle			
Unhealthy alcohol use[c]	7,027 (8%)	86,126 (8%)	3,151 (8%)
Current smoking	10,534 (12%)	187,453 (17%)	6,499 (16%)
Diabetes management and control			
Hb A1C ≤7%	41,897 (49%)	557,682 (52%)	20,014 (50%)
Hb A1c >7-8%	18,003 (21%)	242,886 (23%)	8,627 (22%)
Hb A1c >8-9%	9,686 (11%)	111,119 (10%)	3,958 (10%)
HB A1c >9%	10,416 (12%)	100,082 (9%)	3,623 (9%)
Unknown	5,032 (6%)	61,189 (6%)	3,700 (9%)
Lifetime max. mean Hb A1c (SD) Lifetime max. median HbA1c (IQR)	9.1 (2.2) 8.7 (7.3-10.5)	8.7 (2.1) 8.20 (7.0-9.9)	8.7 (2.1) 8.1 (7.0-9.8)

Characteristics	Hispanic or Latino (n=85,034)	Not Hispanic or Latino (n=1,072,958)	Unknown Ethnicity (n=39,922)
Clinical Characteristics			
Hypertension	75,662 (89%)	96,9351 (90%)	34,157 (86%)
BMI ≥30 kg/m^2	44,837 (53%)	606,477 (57%)	22,061 (55%)
CKD	19,599 (23%)	30,0511 (28%)	1,0921 (27%)
Unknown CKD	20,298 (24%)	268,579 (25%)	10,819 (27%)
ASCVD	16,185 (19%)	281,653 (26%)	9,629 (24%)
Heart Failure	4,296 (5%)	73,276 (7%)	2,419 (6%)
VHA station parent facility complexity level[d]			
1a (highest)	54,631 (64%)	439,952 (41%)	20,403 (51%)
1b (high)	10,482 (12%)	180,027 (17%)	5,180 (13%)
1c (mid-high)	5,293 (6%)	176,986 (16%)	4,865 (12%)
2 (medium)	8,404 (10%)	14,3017 (13%)	5,152 (13%)
3 (low)	6,017 (7%)	128,164 (12%)	4,096 (10%)
Census region of VHA station			
South	33,978 (40%)	509,367 (47%)	17,043 (43%)
West	25,731 (30%)	181,537 (17%)	10,894 (27%)
Midwest	4,916 (6%)	247,860 (23%)	8,266 (21%)
Northeast	5,370 (6%)	131,226 (12%)	3,571 (9%)

Cells are n (%) unless otherwise specified
Abbreviations: SD, standard deviation; SGLT2i, sodium-glucose co-transporter 2 inhibitor; GLP1-RA, glucagon-like peptide-1 receptor-agonist; BMI, body mass index; ASCVD, atherosclerotic cardiovascular disease; CKD, chronic kidney disease; Hb A1c, hemoglobin A1c

[a] VHA collects race and ethnicity information based on a two-question self-identified method. The first question asks patients to classify their ethnicity: Hispanic or Latino (yes/no). The second question asks patients to classify their race (> 1 classification may be selected): American Indian or Alaska Native; Asian; Black or African American; Native Hawaiian or other Pacific Islander; White; unknown race by patient or declined to answer.

[b] VHA assigns a given disability (e.g. diabetes), a rating to indicate the severity of their service-connected condition. Patients with a disability rating >50% and those in whom diabetes is a service-connected condition do not have co-payments for their medications.

[c] Alcohol Use Disorder Identification Test (AUDIT) score ≥ 3 for women and ≥4 for men

[d] VHA complexity rating is assigned to each VHA station based on the classification of the parent facility within the station encompassing facility volume, intensive care availability, number of sub-specialists per patient, and teaching/research capacity.

eTable 2. VHA Facility Complexity Level

Complexity Level	Facility description
1a-Highest complexity	Facilities with high-volume, high-risk patients, most complex clinical programs and large research and teaching-programs
1b-High complexity	Facilities with medium-high volume, high-risk patients, many complex clinical problems, and medium sized research and teaching programs.
1c-Mid-high complexity	Facilities with medium-high volume, medium-risk patients, some complex clinical programs, and medium sized research and teaching programs.
2-Medium complexity	Facilities with medium-volume, low-risk patients, few complex clinical programs, and small or no research teaching programs.
3-Low complexity	Facilities with low-volume, low-risk patients, few or no complex clinical programs, and small or no research teaching programs.

This rating is assigned to each station based on the classification of the parent facility within the station

eTable 3. Covariate definition and method of ascertainment

Covariate	Definition and ascertainment
Income	Median per capita income of residential ZIP Code[1]
Socio-economic status	ZIP Code social deprivation index score[2]
Rurality of residence	Categories (rural, highly rural, or urban) assigned based on Rural-Urban Community Area (RUCA) codes which consider population density as well as how closely a community is linked socioeconomically to a large urban center[3]
VHA disability ratings	VHA assigned disability (e.g., diabetes) rating to indicate the severity of their service-connected condition. These disability ratings determine how much disability compensation a Veteran receives each month as well as their eligibility for VHA benefits. The disability rating is expressed as a percentage, representing how much the disability decreases the patients' overall health and ability to function[4].
VHA station geographic location	United States Census Bureau classification of U.S. Divisions which are nested in the four Census U.S. Regions: New England and Middle Atlantic Divisions in the Northeast region; East North Central and West North Central Divisions in the Midwest Region; South Atlantic, East South Central, and West South-Central Divisions in the South Region, and the Mountain and Pacific Division in the West Region
Smoking status	VHA Corporate Data Warehouse indicator: current smoker, former smoker, never smoker
Alcohol use	Alcohol Use Disorder Identification Test (AUDIT) identification of alcohol use disorder with unhealthy alcohol use defined as an AUDIT-C score ≥ 3 for women and ≥4 for men[5]
Mental health diagnosis	A mental health diagnosis comprised the presence of an ICD-10 code encompassing post-traumatic health disorder or other severe mental illness[6]
Chronic kidney disease	e-Phenotype algorithm for CKD ascertainment in electronic health records which combines estimated glomerular filtration (eGFR) rate and urinary albumin to creatinine (ACR) ratio values for CKD ascertainment. CKD is defined as at least two measures of eGFR <60 ml/min/1,73 m2 and /or an ACR >30 mg/g obtained more than 90 days apart. Only outpatient values were used[7]
Kidney disease improving global outcomes (KDIGO) CKD staging	For patients with CKD: eGFR stages G1 to G5 and ACR stages A1 to A3[8]. CKD status and CKD stage was assessed at baseline. We excluded patients with CKD if an outpatient eGFR was less than 15 at any point from January 1st, 2019, to December 31st, 2020 (eFigure 2).
Atherosclerotic cardiovascular disease	(ICD-10) codes for ischemic heart disease or ischemic stroke being present on at least two inpatient and/or outpatient encounters[9]
Heart Failure	(ICD-10) codes for heart failure being present on at least two inpatient or outpatient occasions[10]
COVID diagnosis	VHA Corporate Data Warehouse indicator for COVID diagnosis from 2019 to 2020
Hypertension	eMERGE algorithm for hypertension ascertainment in electronic health records which combine blood pressure measurements, ICD codes, and utilization of medications for hypertension[11]
Frailty	VHA frailty index encompasses variables related to mobility, functional status, cognition and mood, sensory impairment (e.g., hearing, or visual impairment), and other geriatric syndromes (e.g., incontinence)[12]

eTable 4. System characteristics and SGLT2i and GLP1-RA prescription

	SGLT2i	GLP1-RA
	Multivariable Model OR (95% CI)	**Multivariable model OR (95% CI)**
VHA facility complexity level		
1A-Highest complexity	**Reference**	**Reference**
1B-High complexity	0.64 (0.57, 0.71)	0.56 (0.49, 0.63)
1C-Mid-high complexity	0.51 (0.46, 0.57)	0.39 (0.35, 0.44)
2-Medium complexity	0.60 (0.54, 0.66)	0.68 (0.61, 0.71)
3-Low complexity	1.02 (0.92, 1.12)	1.38 (1.24, 1.54)
Division		
East North Central	**Reference**	**Reference**
East South Central	1.40 (0.90, 2.17)	1.78 (1.03, 3.08)
Middle Atlantic	0.92 (0.62, 1.37)	1.06 (0.65, 1.73)
Mountain	0.72 (0.48, 1.09)	0.99 (0.60, 1.64)
New England	1.45 (0.90, 2.33)	1.34 (0.74, 2.41)
Pacific	1.02 (0.70, 1.51)	1.12 (0.70, 1.81)
South Atlantic	1.28 (0.90, 1.80)	1.08 (0.70, 1.66)
West North Central	1.44 (0.90, 2.32)	1.15 (0.64, 2.07)
West South Central	0.95 (0.64, 1.40)	0.78 (0.48, 1.26)

Multivariable models adjusted for demographic factors, Zip Code median income, Zip Code social deprivation index, VHA diabetes and service connection, rurality, smoking status, unhealthy alcohol use, hemoglobin A1C, other anti-diabetic agents, hypertension, body mass index, mental health diagnosis, ASCVD, heart failure, no CKD, CKD: estimated GFR and albuminuria categories, number of primary care, cardiology, endocrinology, and nephrology visits, VHA frailty index, COVID-19 diagnosis, VHA station parent facility-complexity level, United States Census Division.

eTable 5. Type of VHA facility and driving distance to tertiary VHA facility by race group

Characteristics	American Indian or Alaska Native (N=10,127)	Asian, Native Hawaiian or Other Pacific Islander (N=24,663)	Black (N=234,932)	White (N=850,648)	Multiracial (N=9,795)	Unknown race (N=67,749)
Type of VHA facility						
VHA medical center	3,342 (33%)	7,555 (31%)	109,936 (47%)	283,381 (33%)	3,664 (37%)	20,026 (30%)
Community based outpatient clinic	5,664 (56%)	12,461 (51%)	101,619 (43%)	479,110 (56%)	4,836 (49%)	39, 099 (58%)
Other	1,121 (11%)	4,647 (19%)	23,377 (10%)	88,157 (10%)	1,295 (13%)	8,624 (13%)
Driving time to tertiary care VHA facility						
Mean time in minutes (SD)	131 (107)	80 (70)	72 (55)	103 (75)	99 (74)	103 (81)

Type of VHA facility is the site of the first primary care clinic visit between January 1st 2019 to December 31st 2020 (community-based outpatient center, VHA medical center, or other) and the driving time in minutes to the nearest VHA tertiary center from the patient's address.

eTable 6. Association of race and ethnicity categories with SGLT2i and GLP1-RA prescription with further adjustment for VHA facility type and driving time to tertiary care VHA center

	SGLT2i	GLP1-RA
	Multivariable Model OR (95% CI)	**Multivariable model OR (95% CI)**
Race		
White	**Reference**	**Reference**
American Indian or Alaska Native	0.85 (0.79, 0.91)	0.89 (0.82,0.97)
Asian, Native Hawaiian or Other Pacific Islander	0.95 (0.91, 1.0)	0.80 (0.75,0.85)
Black	0.72 (0.70, 0.73)	0.63 (0.62,0.65)
Multiracial	0.87 (0.82, 0.94)	0.90 (0.83,0.97)
Unknown	0.92 (0.90, 0.95)	0.87 (0.84,0.91)
Ethnicity		
Not Hispanic or Latino	**Reference**	**Reference**
Hispanic or Latino	0.90 (0.88, 0.93)	0.88 (0.85,0.91)
Unknown ethnicity	0.98 (9.95, 1.02)	1.03 (0.98,1.08)
Type of VHA facility		
VHA medical center	**Reference**	**Reference**
Community based outpatient clinic	0.98 (0.96, 0.99)	0.95 (0.93, 0.96)
Other	0.97 (0.94, 1.00)	1.07 (1.03, 1.10)
Driving time to tertiary VHA facility		
Q1 (0-34 minutes)	**Reference**	**Reference**
Q2 (35-81 minutes)	0.94 (0.92, 0.96)	0.94 (0.92, 0.97)
Q3 (82-133 minutes)	0.94 (0.91, 0.96)	0.89 (0.86, 0.92)
Q4 (>133 minutes)	1.03 (1.00, 1.06)	0.87 (0.84, 0.91)

Type of VHA facility is the site of the first primary care clinic visit between January 1st 2019 to December 31st 2020 (community-based outpatient center, VHA medical center, or other) and the driving time in minutes to the nearest VHA tertiary center from the patient's address.

Multivariable models adjusted for demographic factors, Zip Code median income, Zip Code social deprivation index, VHA diabetes and service connection, rurality, smoking status, unhealthy alcohol use, hemoglobin A1C, other anti-diabetic agents, hypertension, body mass index, mental health diagnosis, ASCVD, heart failure, no CKD, CKD: estimated GFR and albuminuria categories, number of primary care, cardiology, endocrinology, and nephrology visits, VHA frailty index, COVID-19 diagnosis, VHA station parent facility-complexity level, United States Census Division, Type of VHA facility, and Driving Time to tertiary VHA facility.

eTable 7. Association of race and ethnicity with SGLT2i and GLP1-RA prescription restricting study sample to patients with at least two prescription fills during in one year

	SGLT2i	GLP1-RA
	Multivariable Model OR (95% CI)	**Multivariable model OR (95% CI)**
Race		
White	**Reference**	**Reference**
American Indian or Alaska Native	0.81 (0.75,0.88)	0.90 (0.82,0.98)
Asian, Native Hawaiian or Other Pacific Islander	0.94 (0.89,0.99)	0.81 (0.76,0.86)
Black	0.67 (0.66,0.69)	0.63 (0.62,0.65)
Multiracial	0.85 (0.79, 0.92)	0.87 (0.8,0.95)
Unknown	0.9 (0.87,0.93)	0.84 (0.81,0.88)
Ethnicity		
Not Hispanic or Latino	**Reference**	**Reference**
Hispanic or Latino	0.87 (0.84, 0.90)	0.88 (0.85,0.92)
Unknown ethnicity	0.98 (0.94,1.03)	1.04 (0.98,1.09)

Multivariable models adjusted for demographic factors, Zip Code median income, Zip Code social deprivation index, VHA diabetes and service connection, rurality, smoking status, unhealthy alcohol use, hemoglobin A1C, other anti-diabetic agents, hypertension, body mass index, mental health diagnosis, ASCVD, heart failure, no CKD, CKD: estimated GFR and albuminuria categories, number of primary care, cardiology, endocrinology, and nephrology visits, VHA frailty index, COVID-19 diagnosis, VHA station parent facility-complexity level, United States Census Division, Type of VHA facility, and Driving Time to tertiary VHA facility.

eTable 8. Incident prescription rates for SGLT2i from 2017 to 2021

	April-October 2017		April-October 2019		April-October 2021	
Race Category	**SLGLT2i incident rate (95% CI)**	**Incident rate difference (95% CI)**	**SGLT2i incident rate (95% CI)**	**Incident rate difference (95% CI)**	**SGLT2i incident rate (95% CI)**	**Incident rate difference (95% CI)**
White	0.42 (0.41,0.44)	**Reference**	1.60 (1.55,1.64)	**Reference**	3.53 (3.44,3.61)	**Reference**
American Indian or Alaska Native	0.32 (0.21,0.48)	-0.29 (-0.71,0.13)	1.39 (1.15,1.67)	-0.14 (-0.33,0.04)	3 (2.63,3.42)	-0.16 (-0.29,-0.03)
Asian, Native Hawaiian or Other Pacific Islander	0.61 (0.5,0.75)	0.37 (0.16,0.57)	1.67 (1.49,1.87)	0.04 (-0.07,0.15)	3.33 (3.07,3.61)	-0.06 (-0.14,0.02)
Black or African American	0.29 (0.27,0.32)	-0.38 (-0.47,-0.28)	1.11 (1.06,1.16)	-0.37 (-0.41,-0.32)	2.65 (2.56,2.74)	-0.29 (-0.32,-0.26)
Multiracial	0.47 (0.33,0.66)	0.1 (-0.25,0.44)	1.53 (1.28,1.84)	-0.04 (-0.22,0.14)	3.19 (2.8,3.63)	-0.1 (-0.23,0.03)
Unknown	0.36 (0.3,0.42)	-0.18 (-0.34,-0.01)	1.47 (1.36,1.58)	-0.09 (-0.16,-0.01)	3.25 (3.08,3.42)	-0.08 (-0.14,-0.03)
Ethnicity						
Not Hispanic or Latino	0.40 (0.38,0.41)	**Reference**	1.45 (1.41,1.49)	**Reference**	3.26 (3.18,3.34)	**Reference**
Hispanic or Latino	0.3 (0.26,0.34)	-0.29 (-0.44,-0.14)	1.6 (1.51,1.7)	0.10 (0.04,0.16)	3.12 (2.97,3.27)	-0.05 (-0.09,0)
Unknown ethnicity	0.33 (0.27,0.41)	-0.17 (-0.39,0.04)	1.42 (1.28,1.57)	-0.02 (-0.12,0.08)	3.18 (2.97,3.41)	-0.03 (-0.09,0.04)

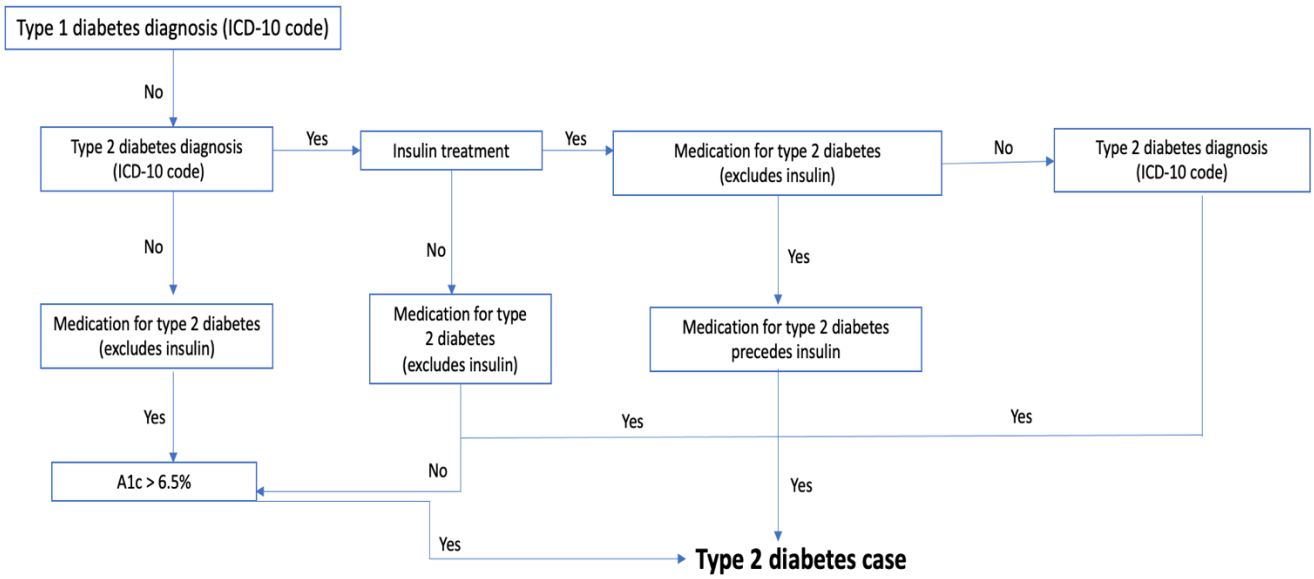
Rates are per 100 patients with type 2 diabetes not previously prescribed an SLGT2i in the previous interval with marginal estimates averaged over age, sex, and race and ethnicity
Rate differences are adjusted for time-period, age, sex, and race and ethnicity

eTable 9. Incident prescription rates for GLP1-RA from 2017 to 2021

	April-October 2017		April-October 2019		April-October 2021	
Race Category	**SLGLT2i incident rate (95% CI)**	**Incident rate difference (95% CI)**	**SGLT2i incident rate (95% CI)**	**Incident rate difference (95% CI)**	**SGLT2i incident rate (95% CI)**	**Incident rate difference (95% CI)**
White	0.69 (0.66,0.72)	**Reference**	1.42 (1.38,1.46)	**Reference**	2.17 (2.11,2.23)	**Reference**
American Indian or Alaska Native	0.49 (0.34,0.69)	-0.35 (-0.7,0)	1.14 (0.93,1.4)	-0.22 (-0.42,-0.01)	1.59 (1.34,1.89)	-0.31 (-0.48,-0.14)
Asian, Native Hawaiian or Other Pacific Islander	0.71 (0.58,0.86)	0.03 (-0.17,0.22)	1.24 (1.09,1.41)	-0.13 (-0.26,-0.01)	1.58 (1.42,1.76)	-0.32 (-0.42,-0.21)
Black or African American	0.45 (0.42,0.49)	-0.42 (-0.5,-0.34)	0.93 (0.88,0.97)	-0.43 (-0.48,-0.38)	1.42 (1.36,1.48)	-0.43 (-0.47,-0.39)
Multiracial	0.69 (0.51,0.92)	0 (-0.29,0.29)	1.45 (1.2,1.74)	0.02 (-0.17,0.21)	2.09 (1.8,2.44)	-0.04 (-0.19,0.12)
Unknown	0.59 (0.52,0.67)	-0.16 (-0.29,-0.03)	1.18 (1.09,1.29)	-0.18 (-0.27,-0.09)	1.8 (1.68,1.92)	-0.19 (-0.26,-0.12)
Ethnicity						
Not Hispanic or Latino	0.40 (0.38,0.41)	**Reference**	1.45 (1.41,1.49)	**Reference**	3.26 (3.18,3.34)	**Reference**
Hispanic or Latino	0.3 (0.26,0.34)	-0.29 (-0.44,-0.14)	1.6 (1.51,1.7)	0.10 (0.04,0.16)	3.12 (2.97,3.27)	-0.05 (-0.09,0)
Unknown ethnicity	0.33 (0.27,0.41)	-0.17 (-0.39,0.04)	1.42 (1.28,1.57)	-0.02 (-0.12,0.08)	3.18 (2.97,3.41)	-0.03 (-0.09,0.04)

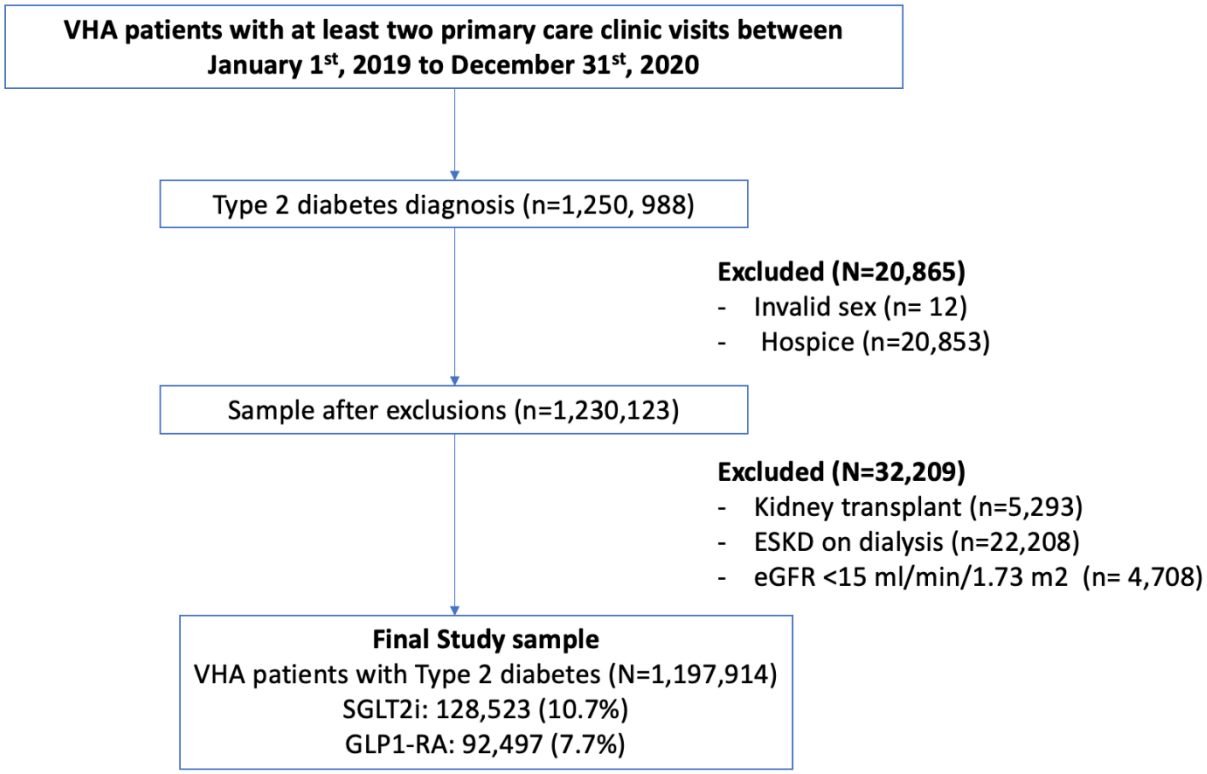
Rates are per 100 patients with type 2 diabetes not previously prescribed a GLP1-RA in the previous interval with marginal estimates averaged over age, sex, race and ethnicity
Rate differences are adjusted for time-period, age, sex, race, and ethnicity group

eFigure 1. Algorithm for ascertainment of type 2 diabetes in electronic health records

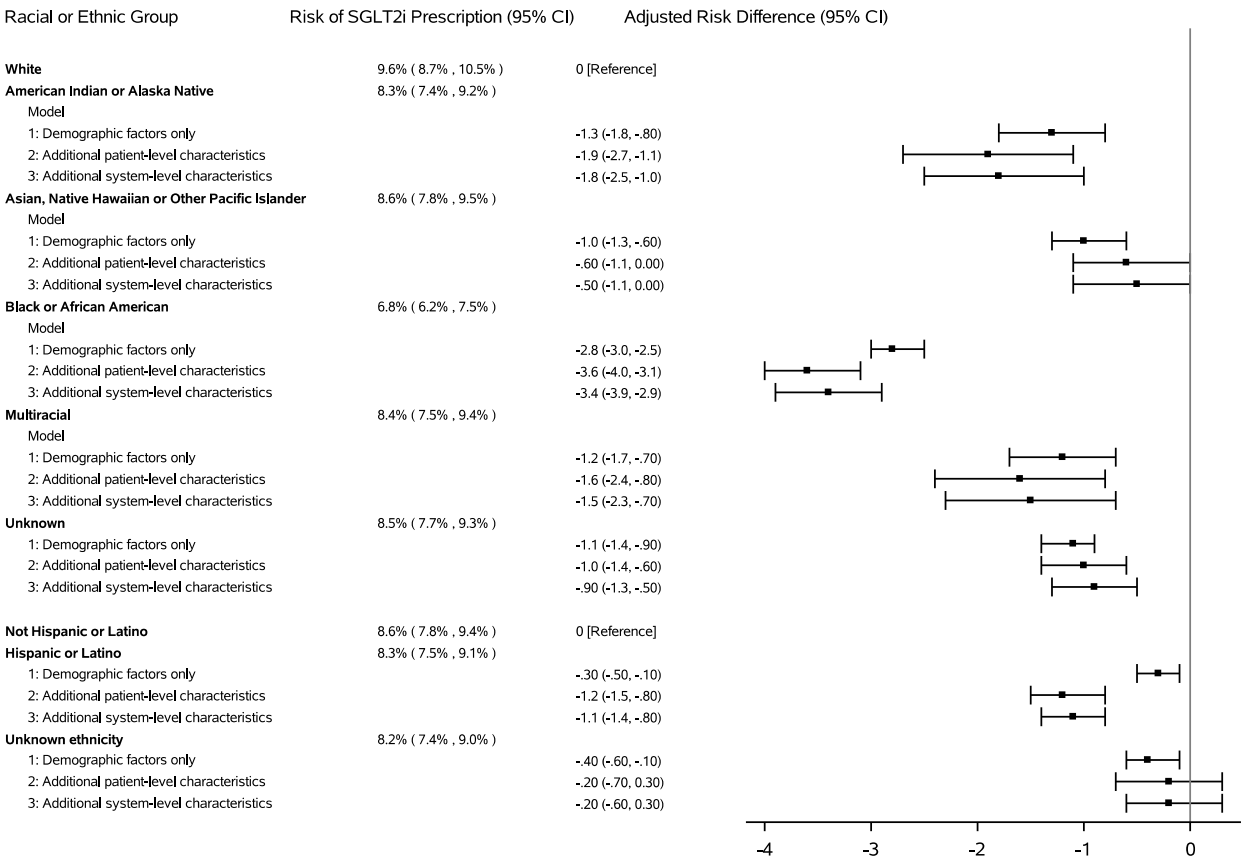


A type 2 diabetes case requires ICD-10 codes for type 2 diabetes on at least two separate outpatient clinical encounters.
Based on eMERGE algorithm for ascertainment of type 2 diabetes cases and controls in electronic health records[11,13]. Original eMERGE used ICD-9 codes and use glucose levels in addition to A1C concentrations.

eFigure 2. Identification of the study sample

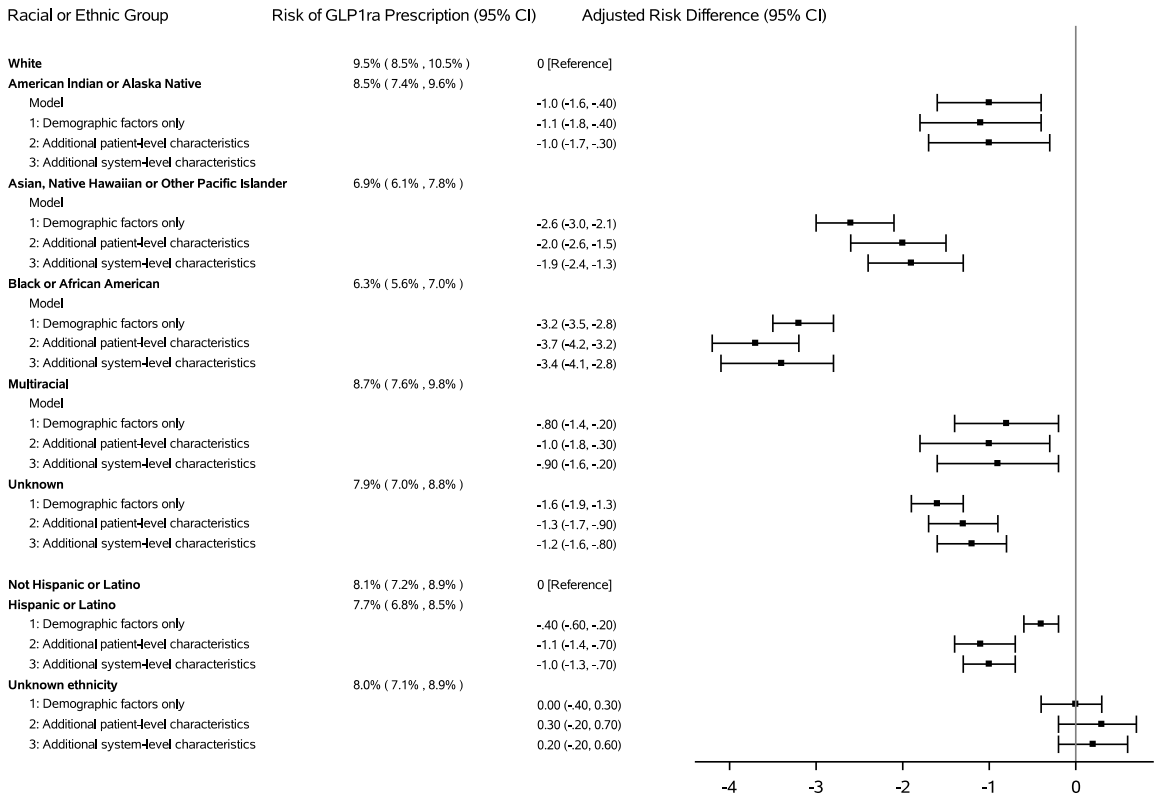


eFigure 3. Association between race and ethnicity groups and SGLT2i prescription with sequential adjustment for patient and system-level characteristics



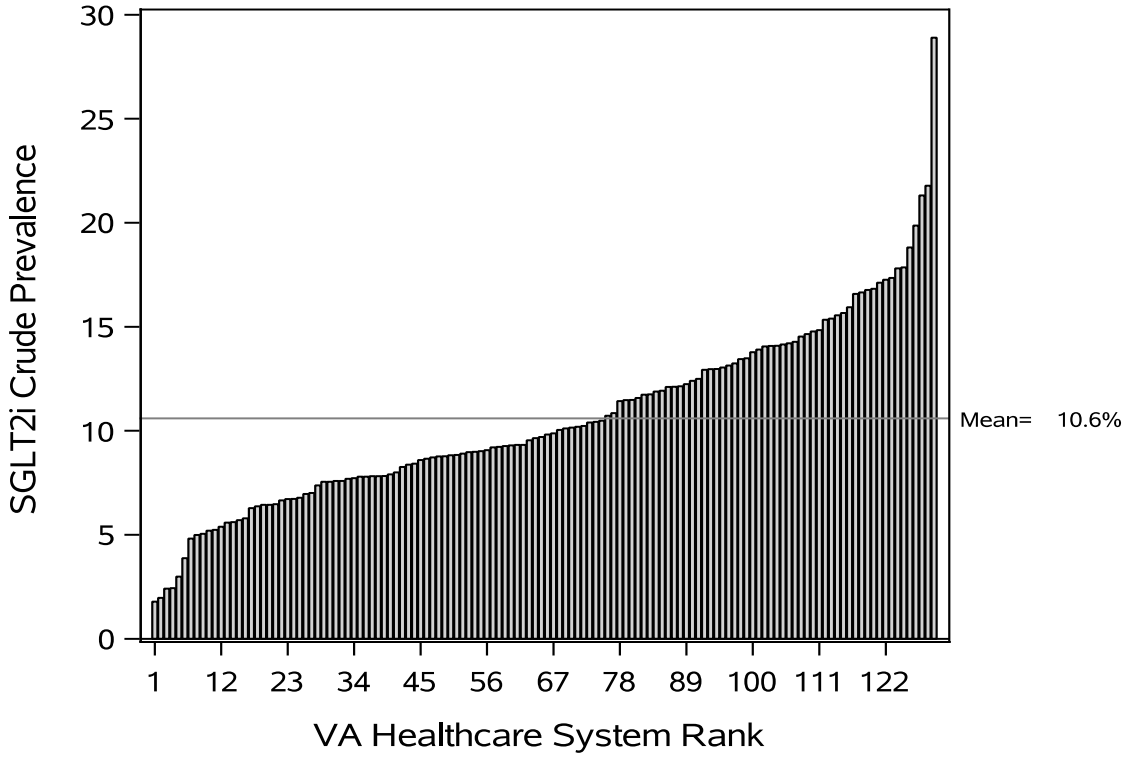
Demographic factors only: age, sex, self-identified race and ethnicity
Additional patient-level characteristics: include demographic factors and Zip Code median income, Zip Code social deprivation index, VHA diabetes and service connection, rurality, smoking status, unhealthy alcohol use, hemoglobin A1C, other anti-diabetic agents, hypertension, body mass index, mental health diagnosis, ASCVD, heart failure, no CKD, CKD: estimated GFR and albuminuria categories, number of primary care, cardiology, endocrinology, and nephrology visits, VHA frailty index, COVID-19 diagnosis.
Additional system-level characteristics: VHA station parent facility-complexity level, United States Census Division.

eFigure 4. Association between race and ethnicity groups and GLP1-RA prescription with sequential adjustment for patient and system-level characteristics

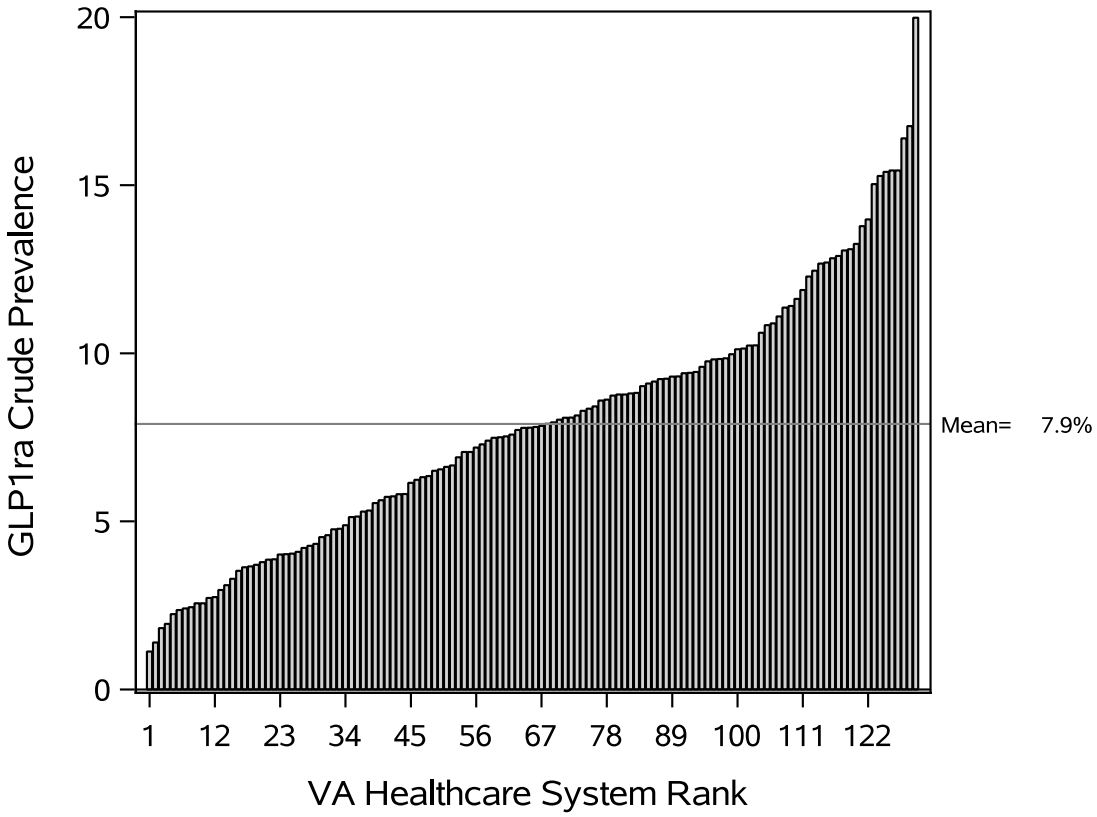


Demographic factors only: age, sex, self-identified race and ethnicity
Additional patient-level characteristics: include demographic factors and Zip Code median income, Zip Code social deprivation index, VHA diabetes and service connection, rurality, smoking status, unhealthy alcohol use, hemoglobin A1C, other anti-diabetic agents, hypertension, body mass index, mental health diagnosis, ASCVD, heart failure, no CKD, CKD: estimated GFR and albuminuria categories, number of primary care, cardiology, endocrinology, and nephrology visits, VHA frailty index, COVID-19 diagnosis.
Additional system-level characteristics: VHA station parent facility-complexity level, United States Census Division.

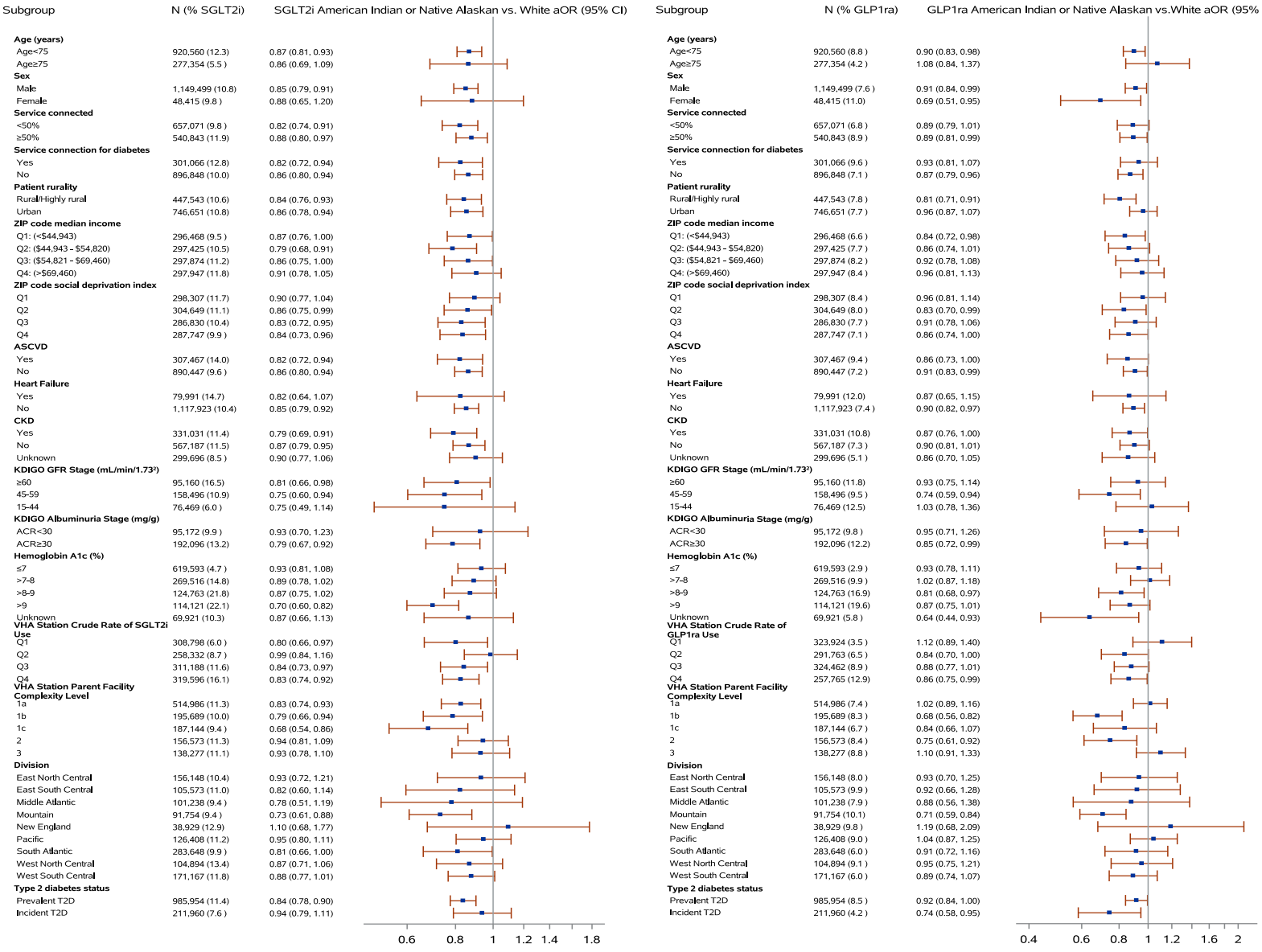
eFigure 5. Variability in SGLT2i prescription across VHA stations



eFigure 6. Variability in GLP1-RA prescription across VHA stations



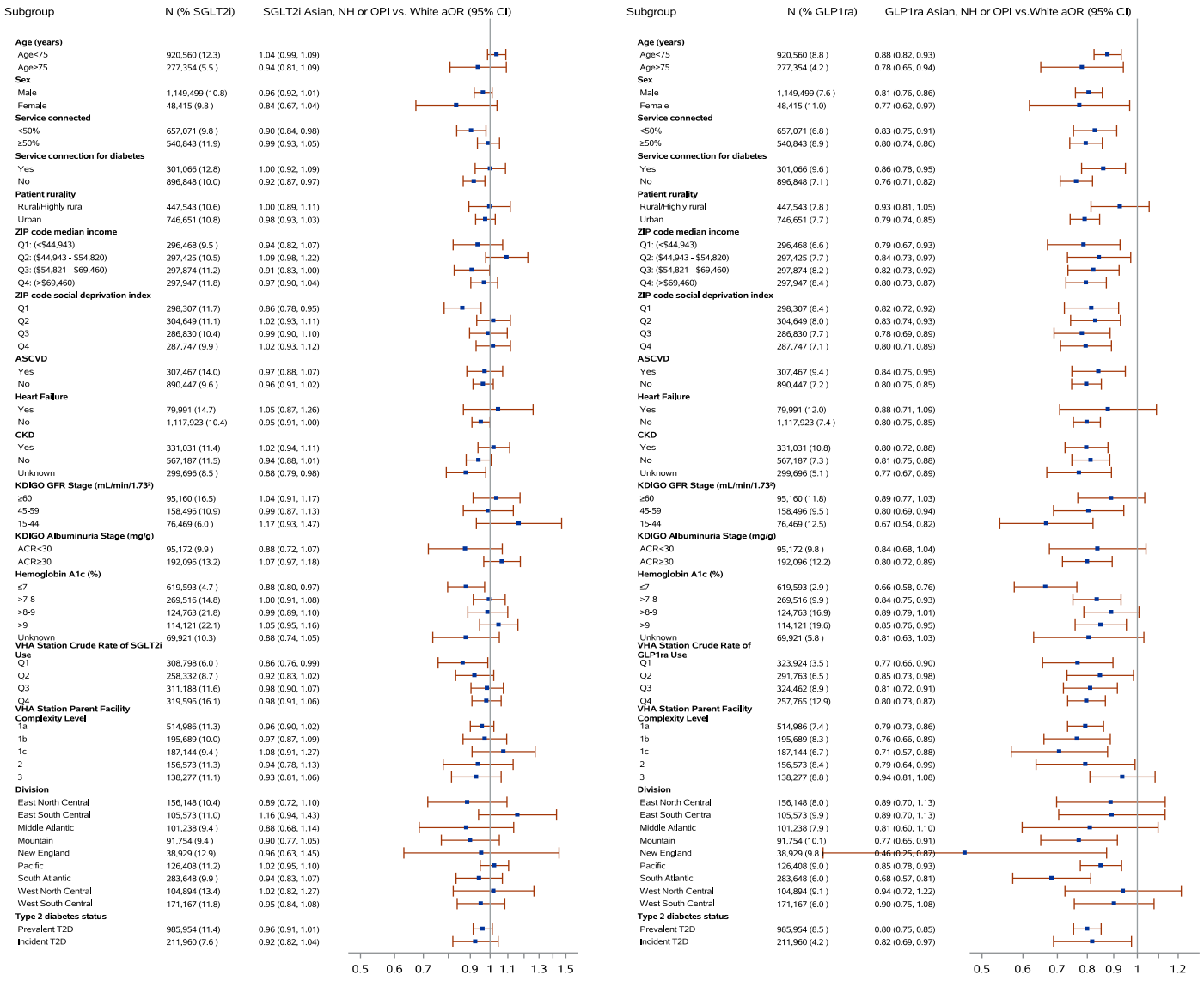
eFigure 7. Prescription of SGLT2i and GLP1-RA comparing American Indian or Alaska Native patients versus White patients across patient- and system-level characteristics



Multivariable models adjusted for demographic factors, Zip Code median income, Zip Code social deprivation index, VHA diabetes and service connection, rurality, smoking status, unhealthy alcohol use, hemoglobin A1C, other anti-diabetic agents, hypertension, body mass index, mental health diagnosis, ASCVD, heart failure, no CKD, CKD: estimated GFR and albuminuria categories, number of primary care, cardiology, endocrinology, and nephrology visits, VHA frailty index, COVID-19 diagnosis, VHA station parent facility-complexity level, United States Census Division.

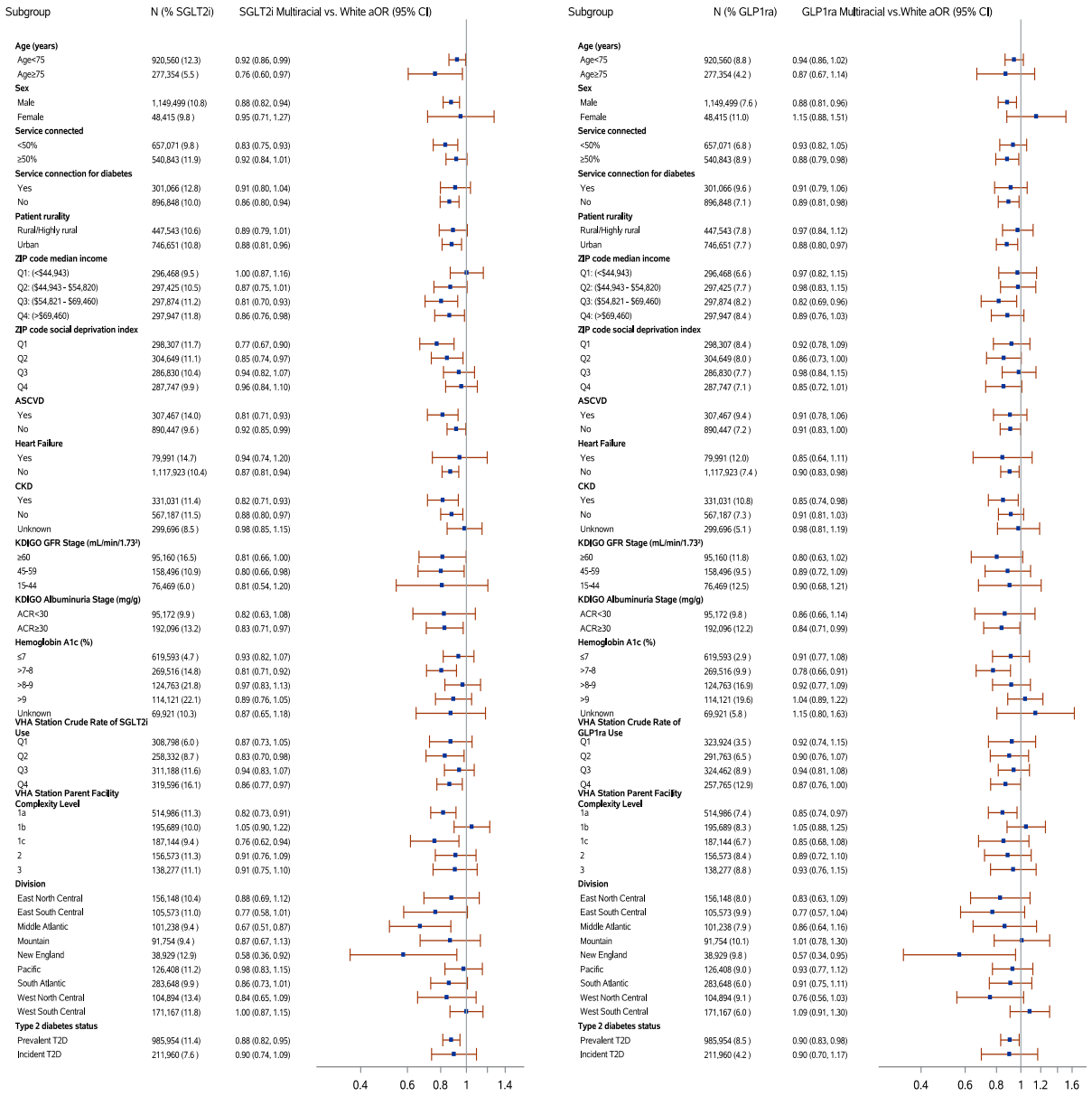
Abbreviations: ASCVD, atherosclerotic cardiovascular disease; CKD, chronic kidney disease; KDIGO, Kidney Disease Improving Global Outcomes CKD classification, T2D, type 2 diabetes.

Prevalent T2D includes patients with a diagnosis of type 2 diabetes before January 1st, 2019. Incident T2D includes patients with a diagnosis of type 2 diabetes between January 1st 2019 to December 31st 2020.



eFigure 8. Prescription of SGLT2i and GLP1-RA comparing Asian, Native Hawaiian or Other Pacific Islander patients versus White patients across patient- and system-level characteristics

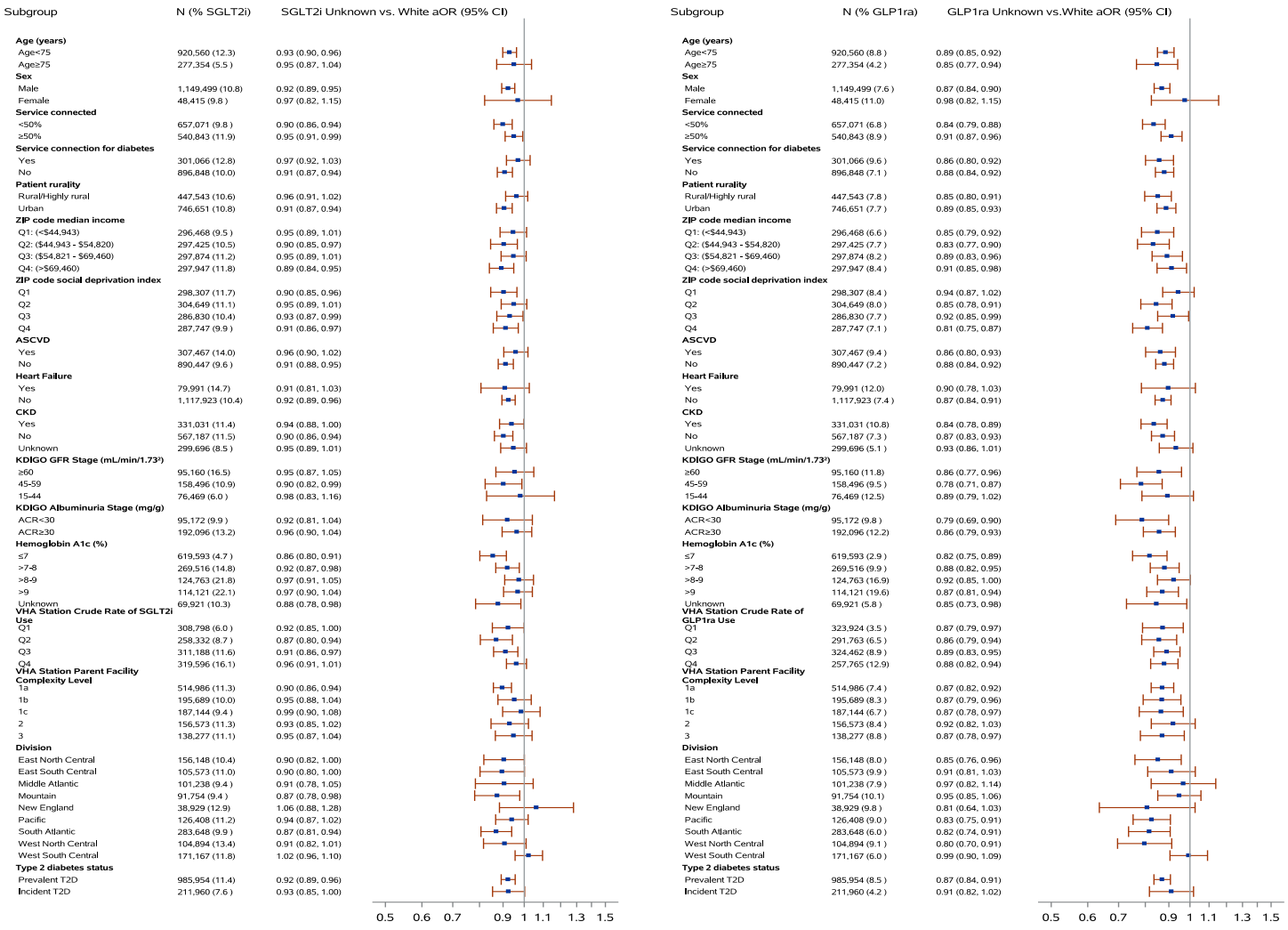
Multivariable models adjusted for demographic factors, Zip Code median income, Zip Code social deprivation index, VHA diabetes and service connection, rurality, smoking status, unhealthy alcohol use, hemoglobin A1C, other anti-diabetic agents, hypertension, body mass index, mental health diagnosis, ASCVD, heart failure, no CKD, CKD: estimated GFR and albuminuria categories, number of primary care, cardiology, endocrinology, and nephrology visits, VHA frailty index, COVID-19 diagnosis, VHA station parent facility-complexity level, United States Census Division. Abbreviations: ASCVD, atherosclerotic cardiovascular disease; CKD, chronic kidney disease; KDIGO, Kidney Disease Improving Global Outcomes CKD classification, T2D, type 2 diabetes. Prevalent T2D includes patients with a diagnosis of type 2 diabetes before January 1st, 2019. Incident T2D includes patients with a diagnosis of type 2 diabetes between January 1st 2019 to December 31st 2020.



eFigure 9. Prescription of SGLT2i and GLP1-RA comparing Multiracial patients versus White patients across patient- and system-level characteristics

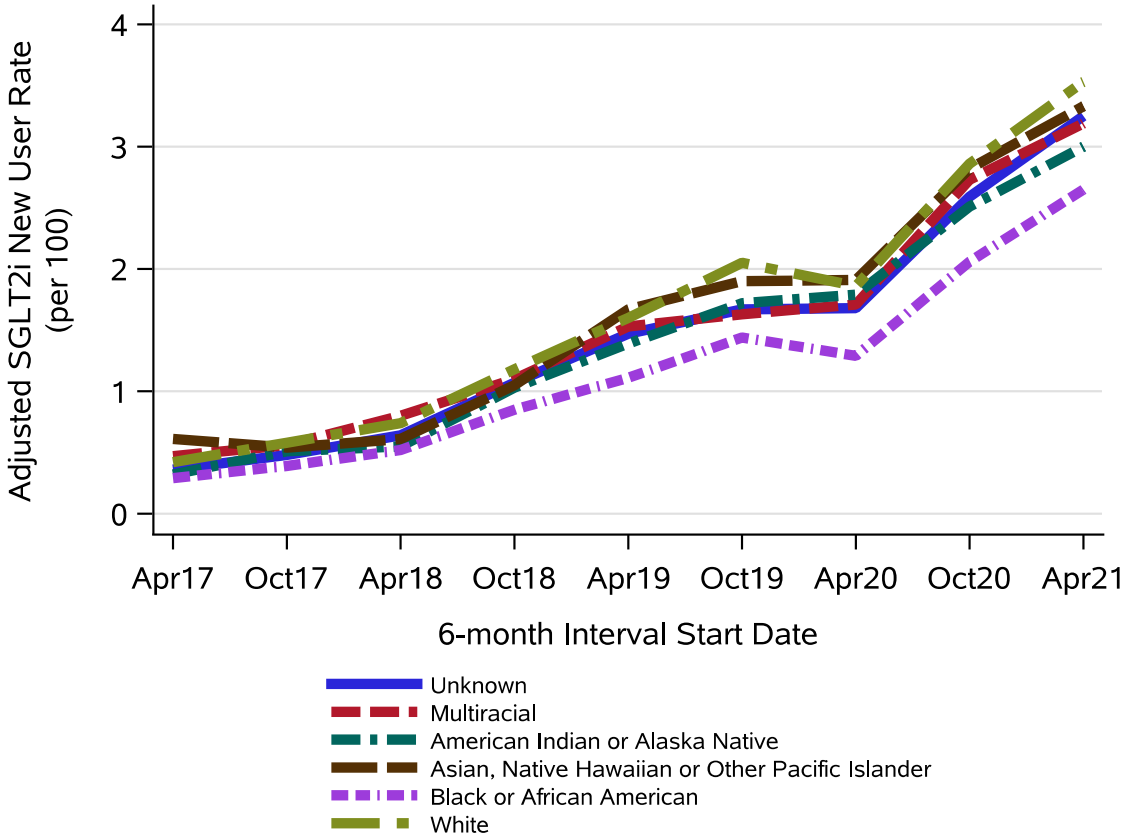
Multivariable models adjusted for demographic factors, Zip Code median income, Zip Code social deprivation index, VHA diabetes and service connection, rurality, smoking status, unhealthy alcohol use, hemoglobin A1C, other anti-diabetic agents, hypertension, body mass index, mental health diagnosis, ASCVD, heart failure, no CKD, CKD: estimated GFR and albuminuria categories, number of primary care, cardiology, endocrinology, and nephrology visits, VHA frailty index, COVID-19 diagnosis, VHA station parent facility-complexity level, United States Census Division.
Abbreviations: ASCVD, atherosclerotic cardiovascular disease; CKD, chronic kidney disease; KDIGO, Kidney Disease Improving Global Outcomes CKD classification, T2D, type 2 diabetes.
Prevalent T2D includes patients with a diagnosis of type 2 diabetes before January 1st, 2019.
Incident T2D includes patients with a diagnosis of type 2 diabetes between January 1st 2019 to December 31st 2020.

eFigure 10. Prescription of SGLT2i and GLP1-RA comparing patients with Unknown race versus White patients across patient- and system-level characteristics



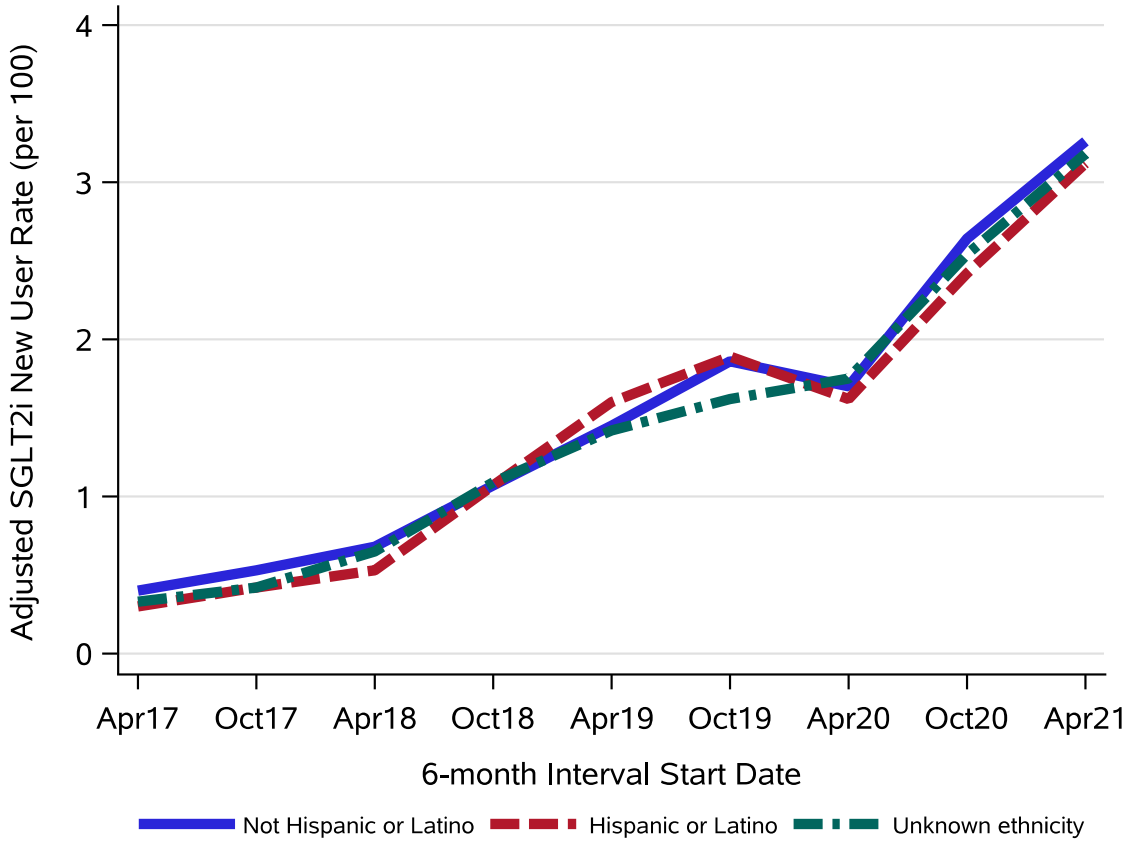
Multivariable models adjusted for demographic factors, Zip Code median income, Zip Code social deprivation index, VHA diabetes and service connection, rurality, smoking status, unhealthy alcohol use, hemoglobin A1C, other anti-diabetic agents, hypertension, body mass index, mental health diagnosis, ASCVD, heart failure, no CKD, CKD: estimated GFR and albuminuria categories, number of primary care, cardiology, endocrinology, and nephrology visits, VHA frailty index, COVID-19 diagnosis, VHA station parent facility-complexity level, United States Census Division. Abbreviations: ASCVD, atherosclerotic cardiovascular disease; CKD, chronic kidney disease; KDIGO, Kidney Disease Improving Global Outcomes CKD classification, T2D, type 2 diabetes. Prevalent T2D includes patients with a diagnosis of type 2 diabetes before January 1st, 2019. Incident T2D includes patients with a diagnosis of type 2 diabetes between January 1st 2019 to December 31st 2020.

eFigure 11. Incident prescription rates for SGLT2i from 2017 to 2021 across race groups



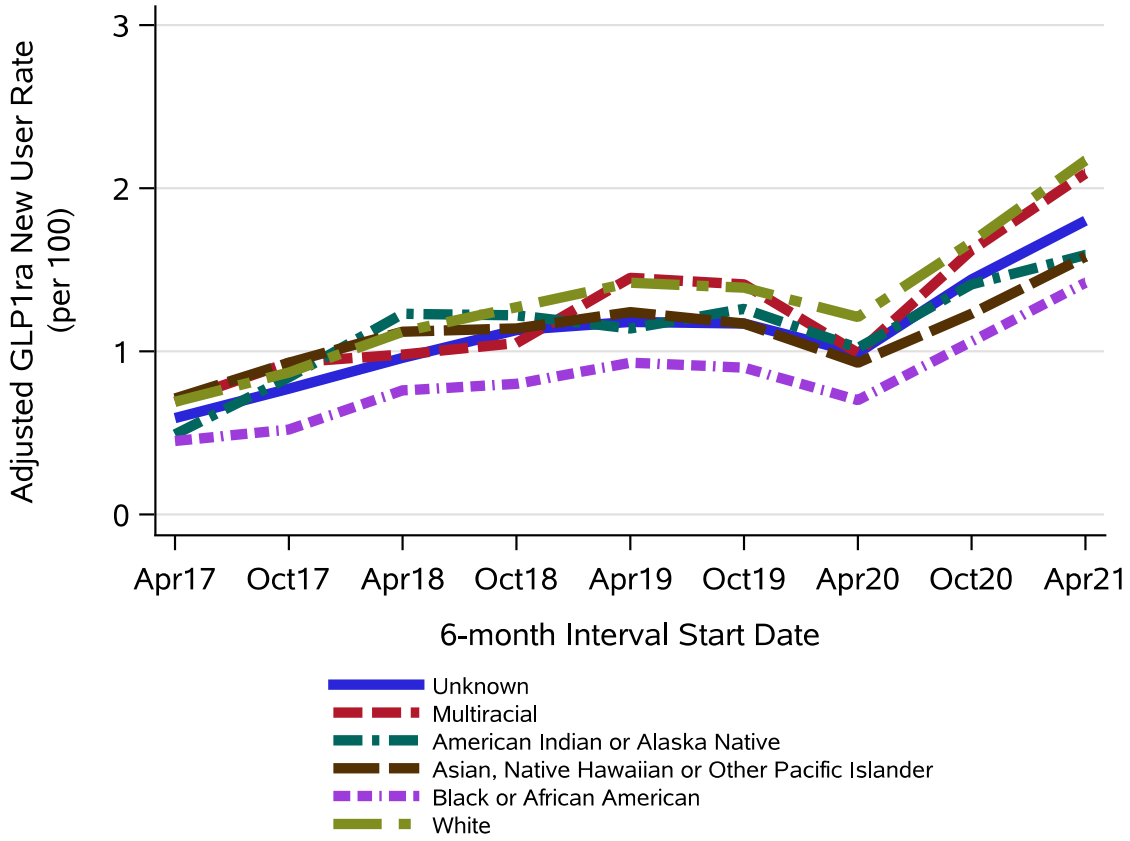
Rates are per 100 patients with type 2 diabetes not previously prescribed a GLP1-RA in the previous interval with marginal estimates averaged over age, sex, race and ethnicity

eFigure 12. Incident prescription rates for SGLT2i from 2017 to 2021 across ethnicity groups



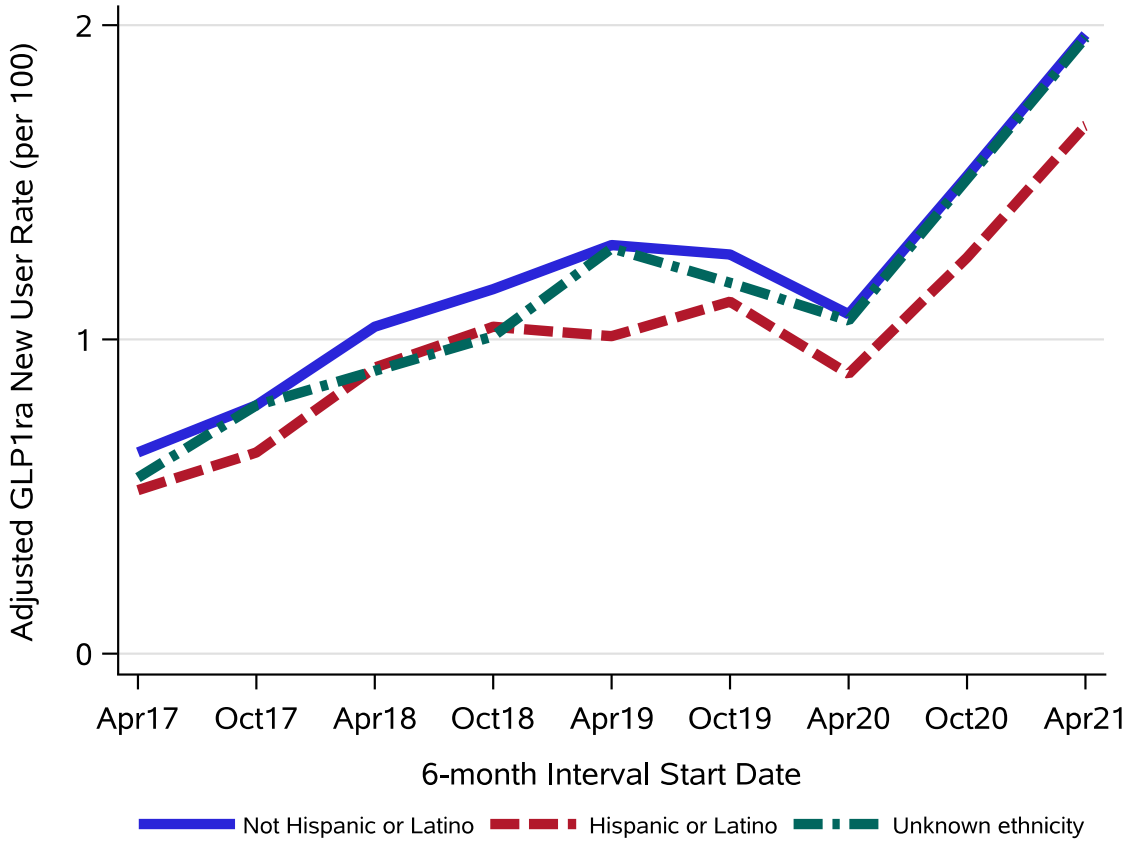
Rates are per 100 patients with type 2 diabetes not previously prescribed a GLP1-RA in the previous interval with marginal estimates averaged over age, sex, race and ethnicity

eFigure 13. Incident prescription rates for GLP1-RA from 2017 to 2021 across race groups



Rates are per 100 patients with type 2 diabetes not previously prescribed a GLP1-RA in the previous interval with marginal estimates averaged over age, sex, race and ethnicity

eFigure 14. Incident prescription rates for GLP1-RA from 2017 to 2021 across ethnicity groups



Rates are per 100 patients with type 2 diabetes not previously prescribed a GLP1-RA in the previous interval with marginal estimates averaged over age, sex, race and ethnicity

eAppendix. Sensitivity analyses

Multiple sensitivity analyses were conducted. First, we conducted multivariable regression analyses adding an indicator variable to identify the site of the first primary care clinic visit within the study period (community-based outpatient center, VHA medical center, or other) and the driving time in minutes to the nearest VHA tertiary center from the patient's address. Second, the analyses were restricted to patients that had at least 2 prescription fills for SGLT2i and GLP1-RA prescription in a single year: January 1st 2019 to December 31st 2019. Third, because the prescription analyses combined prevalent and incident prescriptions, we conducted analyses for trends in incident prescription across race and ethnicity groups. For every 6-month-interval between April 1st, 2017, through April 30th, 2021, we assessed new SGLT2i and GLP1-RA prescriptions defined as new prescriptions within the interval and absence of prescriptions in the 18-month period prior[14]. Fourth, to assess the influence of system-level differences in racial composition across facilities, we included a VHA station specific race percentage to the multilevel models[15]. We assessed whether the association of an individual's race with prescription differed by the racial composition of the VHA station by including an interaction term between individual's race and VHA station-level percentage of a given racial category.

Results

Analyses that included the type of VHA facility and the driving time to a tertiary VHA facility are presented in **Supplement eTables 4 and 5**. Analyses that restricted the outcome to at least two prescription fills per year are presented in **Supplement eTable 6**. Results were consistent with the main findings.

Analyses that assessed incident prescriptions of SGLT2i and GLP1-RA prescriptions demonstrated that they have increased for all racial and ethnic groups **(Supplement eTables 7 and 8 and eFigures 12-14)**. Differences in the racial composition across facilities were not associated with statistically significant differences of SGLT2i or GLP1-RA prescription; VHA station-specific proportion of Black race individuals was not associated with prevalence of these prescriptions, independent of individual patient race: adjusted odds ratio (95% CI) 0.99 (0.99, 1.01) for SGLT2i

and 1.00 (0.99, 1.01) for GLP1-RA. For SGLT2i, the association of an individual's race with prescription did not significantly differ by the racial composition of the facility (p=0.398 for interaction between race category and station-level racial composition); conversely, a Black individual had lower likelihood of GLP1-RA prescription within a facility comprising higher versus lower percentage of Black patients (p=0.023).

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