

VETERANS HEALTH ADMINISTRATION

# Office of Health Equity

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Translation Lead

Office of Health Equity

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# OFFICE OF HEALTH EQUITY

Created in 2012

Vision: To ensure that VHA provides appropriate individualized health care to each Veteran in a way that-

- Eliminates disparate health outcomes and
- Assures health equity

# OFFICE OF HEALTH EQUITY GOALS


1. **Leadership:** Strengthen VA leadership to address health inequalities and reduce health disparities.
2. **Awareness:** Increase awareness of health inequalities and disparities.
3. **Health Outcomes:** Improve outcomes for Veterans experiencing health disparities.
4. **Workforce Diversity:** Improve cultural and linguistic competency and diversity of the VHA workforce.
5. **Data, Research and Evaluation:** Improve data and diffusion of research to achieve health equity.

Veterans who experience greater obstacles to health related to:

- Race or ethnicity
- Gender
- Age
- Geographic location
- Religion
- Socio-economic status
- Sexual orientation
- Mental health
- Military era
- Cognitive /sensory / physical disability

# OFFICE OF HEALTH EQUITY WEBSITE

<https://www.va.gov/healthequity>

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## Office of Health Equity

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**New Equity Report**

The National Veteran Health Equity Report (NVHER) 2021 provides data on patient experiences and healthcare quality for Veterans who receive VHA care.

[Learn more »](#)

**NVHER 2021** | **AIAN Chartbook** | **Listen to Episodes**

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# Racial and Ethnic Differences in the Prescription of SGLT2 Inhibitors and GLP1 Receptor Agonists Among Patients With Type 2 Diabetes in the Veterans Health Administration System



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# Prescription Patterns of Cardiovascular and Kidney Protective Therapies Among Patients with Type 2 Diabetes in the VHA

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# Presenter Disclosure



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## Research Support:

- NHLBI K99/R00 career development award
- Bayer Pharmaceuticals (Kidney Health Research Collaborative UCSF/SFVA)

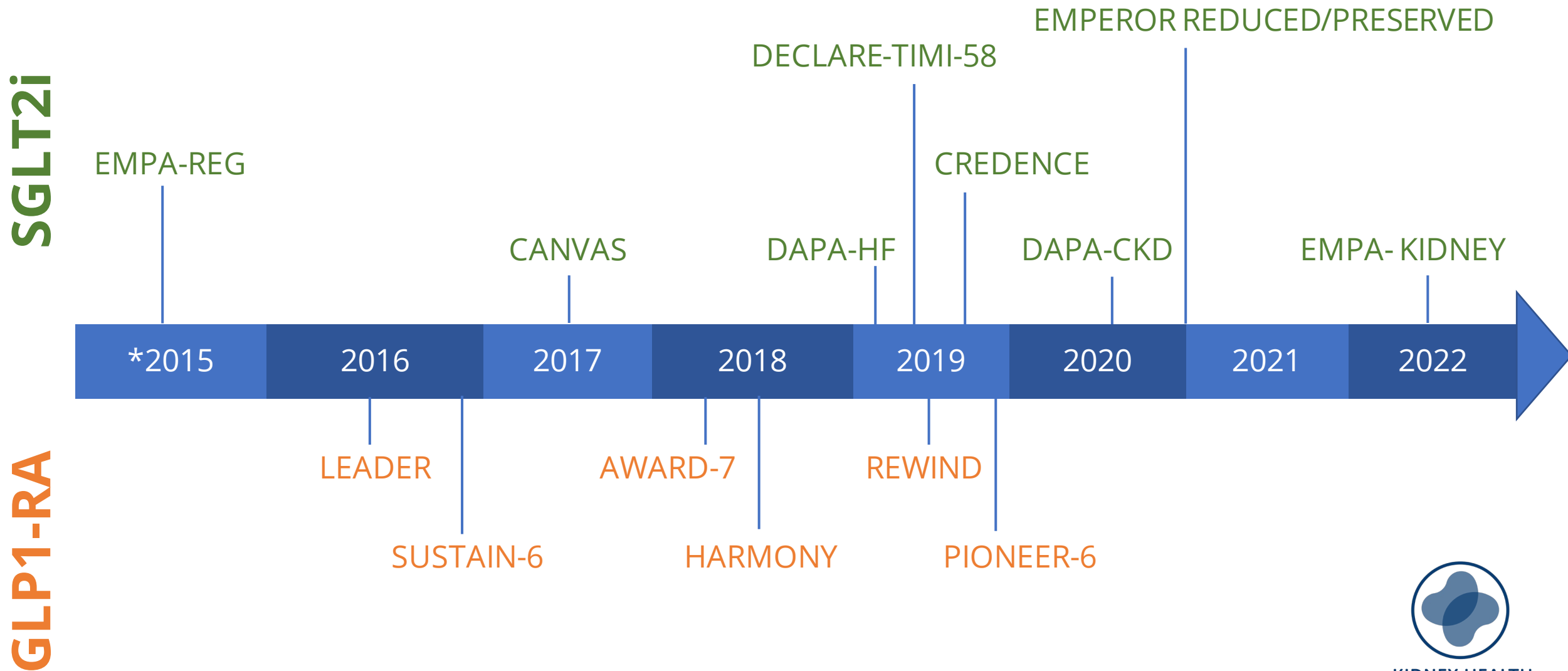
# Outline



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- Discuss paradigm shift in cardiac and kidney preventive care among patients with type 2 diabetes
- Explain racial and ethnic disparities in prescription
- Identify other structural barriers to the adequate implementation of these therapies

# Timeline of key SGLT2i and GLP1-RA clinical trials



\*2008: FDA guidance for new diabetic therapies on CVD risk



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# Cardiac and kidney protective effects of SGLT2i and GLP1-RA



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- Reduction in cardiovascular mortality
- Reduction in atherosclerotic cardiovascular events
- Reduction in incident and progressive heart failure
- Reduction in chronic kidney disease progression

# Paradigm shift in cardiac and kidney prevention among patients with type 2 diabetes



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- Current ADA guidelines recommend a sodium glucose cotransporter 2 inhibitor (SGLT2i) and/or a glucagon-like receptor 1 agonist (GLP1-RA) irrespective of glycemic control among patients with T2D and:
  - Atherosclerotic cardiovascular disease (ASCVD) or high ASCVD risk
  - Heart failure: SGLT2i
  - Chronic kidney disease (CKD):
    - SGLT2i if eGFR 20-60 ml/min/1.73 m<sup>2</sup> or ACR>30 mg/g
    - GLP1-RA otherwise



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Given the implications of this paradigm shift for Veteran health and existing health disparities in cardiovascular and kidney diseases, we sought to address the following questions:

- Are there racial and ethnic disparities in SGLT2i and GLP1-RA prescriptions?
- If so, are these disparities explained by patient- and/or system-related factors?



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Research

JAMA | **Original Investigation**

# 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

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Carmen Peralta, MD, MAS; Torsten B. Neilands, PhD; Paola K. Garcia, MD; Anthony Muiru, MD, MPH;  
Leah Karliner, MD; Michael G. Shlipak, MD, MPH; Michelle M. Estrella, MD, MHS





# Prescription of SGLT2i and GLP1-RA by race and ethnicity in the VHA system

- **STUDY SETTING:** Veterans Health Administration System (VHA)
- **STUDY DESIGN:**
  - Cross-sectional analyses of SGLT2i and GLP1-RA prescription
  - January 1<sup>st</sup>, 2019 to December 31<sup>st</sup>, 2020
- **EXPOSURE:** Self-identified race and ethnicity categories
- **OUTCOME:** Prevalent prescription, defined as any active prescription of SGLT2i or GLP1-RA during the study period

# Study population: VHA 2019-2020



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**Patients with  $\geq 2$  outpatient primary care encounters in 2019-2020**

**N=5,563,438**



**Patients with T2D**

**N=1,250,988**



**Patients with T2D remaining after exclusions**

**N=1,197,914**

**SGLT2i: 128,523 (11%)**

**GLP1-RA: 92,497 (8%)**

**Exclusions:**

- Post-kidney transplant
- ESKD on dialysis
- CKD and eGFR<15
- Patients in hospice

# Low Prescription of SGLT2i and GLP1-RA in key co-morbid conditions across the VHA



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## ASCVD

(n=307,467)

**SGLT2i**

**GLP1-RA**

14%

9%



## Heart Failure

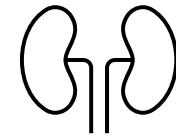
(n=79,991)

**SGLT2i**

**GLP1-RA**

14%

12%



## CKD

(n=331,031)

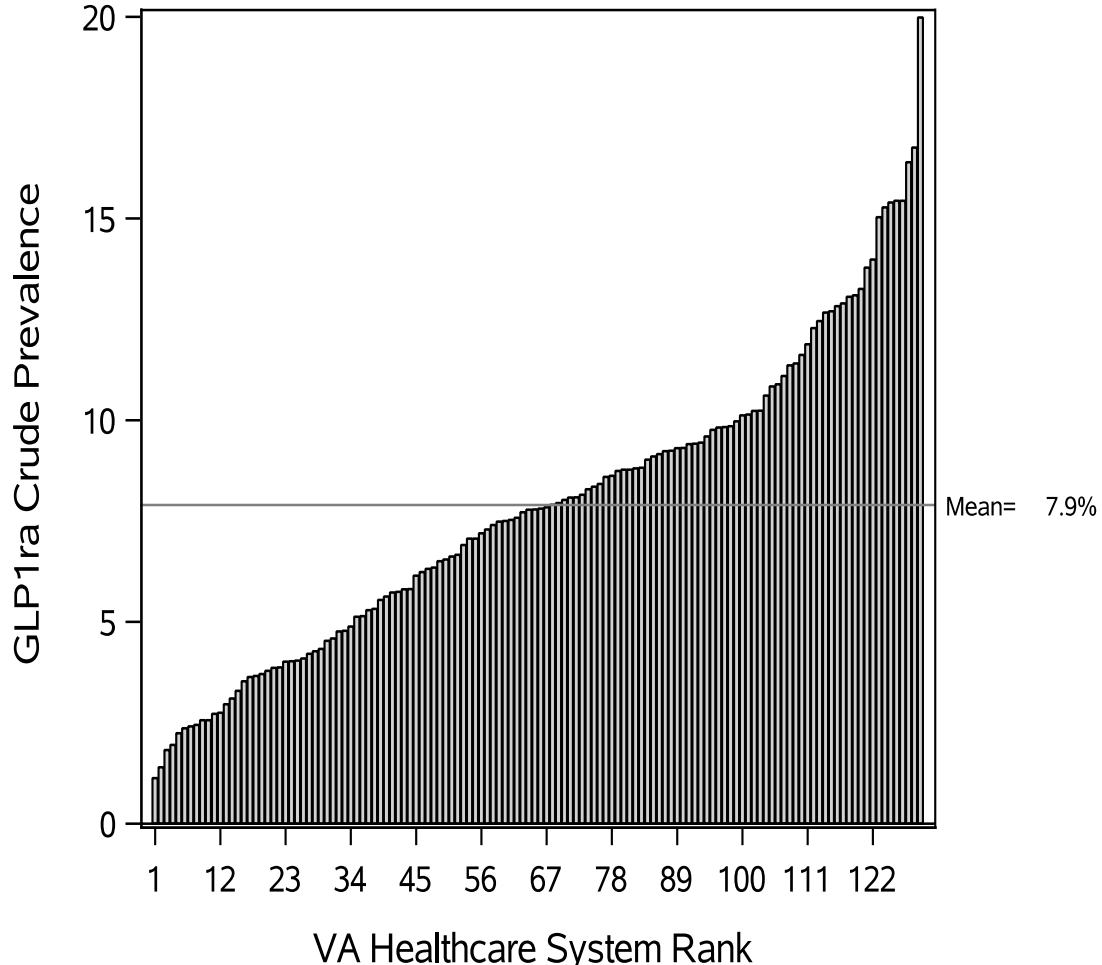
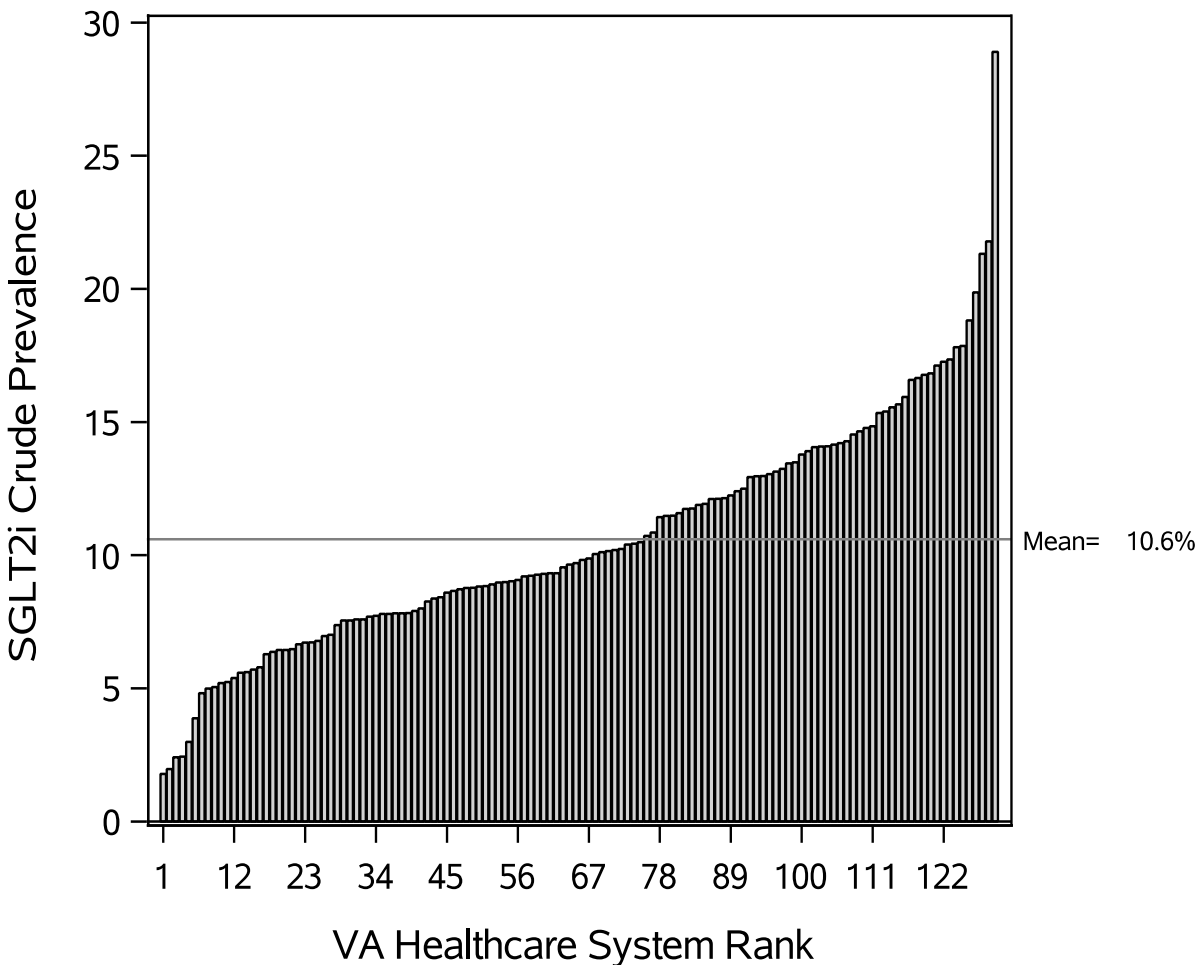
**SGLT2i**

**GLP1-RA**

11%

10%

# High variability in SGLT2i and GLP1-RA prescriptions across VHA stations



# Select demographic and clinical characteristics by race categories



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Characteristic	White (n=850,648)	Black (n=234,932)	Asian, Native Hawaiian, or Other Pacific Islander (n=24,633)	American Indian or Alaska Native (n=10,127)	Unknown (n=67,749)
Age (mean); years	69	63	64	65	68
Hispanic or Latino ethnicity	8%	2%	8%	13%	19%

# Black Veterans have lower likelihood of being prescribed SGLT2i

Race group	Patients prescribed SGLT2i (%)	Adjusted OR (95% CI)
White	11.3	Reference
<b>Black or African American</b>	<b>8.8</b>	
Demographic factors only		0.69 (0.68, 0.70)
Additional patient-level characteristics		0.73 (0.71, 0.74)
Additional system-level characteristics		0.72 (0.71, 0.74)

Demographic factors only model: age, sex, and self-identified race or ethnicity. Additional patient-level characteristics model: demographic factors and zip code median income; zip code Social Deprivation Index; VHA diabetes and service connection; rurality; smoking status; unhealthy alcohol use; A1C level; other antidiabetic agents; hypertension; body mass index; mental health diagnosis; atherosclerotic CVD; heart failure; no CKD ; CKD, eGFR and albuminuria categories; number of primary care, cardiology, endocrinology, and nephrology visits; VHA frailty index; and COVID-19 diagnosis. Additional system-level characteristics model: VHA station parent facility-complexity level and US Census division.

# Black and Hispanic Veterans have lower likelihood of being prescribed SGLT2i

Race group	Patients prescribed SGLT2i (%)	Adjusted OR (95% CI)
<b>White</b>	11.3	Reference
<b>Black or African American</b>	8.8	
Demographic factors only		0.69 (0.68, 0.70)
Additional patient-level characteristics		0.73 (0.71, 0.74)
Additional system-level characteristics		0.72 (0.71, 0.74)
<b>Not Hispanic or Latino</b>	10.7	Reference
<b>Hispanic or Latino</b>	11.0	
Demographic factors only		0.96 (0.94, 0.99)
Additional patient-level characteristics		0.90 (0.88, 0.93)
Additional system-level characteristics		0.90 (0.88, 0.93)

Demographic factors only model: age, sex, and self-identified race or ethnicity. Additional patient-level characteristics model: demographic factors and zip code median income; zip code Social Deprivation Index; VHA diabetes and service connection; rurality; smoking status; unhealthy alcohol use; A1C level; other antidiabetic agents; hypertension; body mass index; mental health diagnosis; atherosclerotic CVD; heart failure; no CKD ; CKD, eGFR and albuminuria categories; number of primary care, cardiology, endocrinology, and nephrology visits; VHA frailty index; and COVID-19 diagnosis. Additional system-level characteristics model: VHA station parent facility-complexity level and US Census division.

# Black Veterans have lower likelihood of being prescribed a GLP1-RA

Race group	Patients prescribed SGLT2i (%)	Adjusted OR (95% CI)
White	8.2	Reference
<b>Black or African American</b>	6.1	
Demographic factors only		0.64 (0.63, 0.66)
Additional patient-level characteristics		0.64 (0.63, 0.66)
Additional system-level characteristics		0.64 (0.63, 0.66)

Demographic factors only model: age, sex, and self-identified race or ethnicity. Additional patient-level characteristics model: demographic factors and zip code median income; zip code Social Deprivation Index; VHA diabetes and service connection; rurality; smoking status; unhealthy alcohol use; A1C level; other antidiabetic agents; hypertension; body mass index; mental health diagnosis; atherosclerotic CVD; heart failure; no CKD ; CKD, eGFR and albuminuria categories; number of primary care, cardiology, endocrinology, and nephrology visits; VHA frailty index; and COVID-19 diagnosis. Additional system-level characteristics model: VHA station parent facility-complexity level and US Census division.



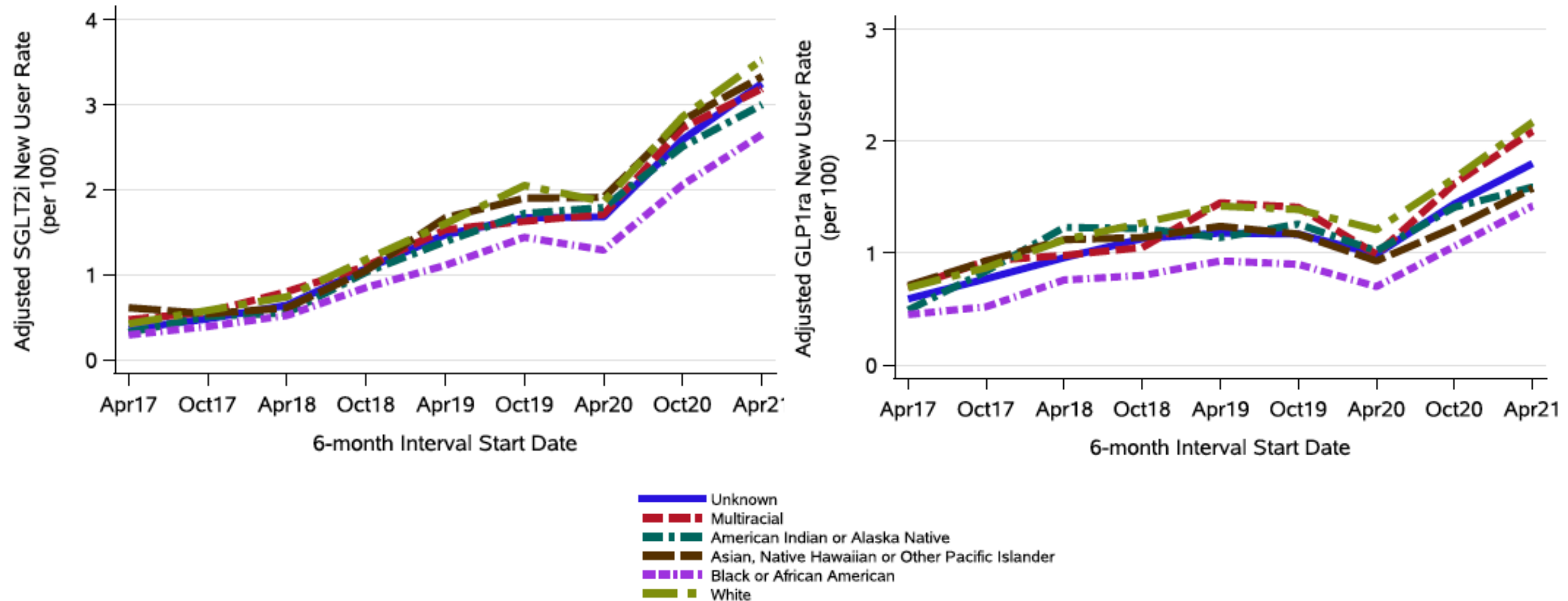
# Black and Hispanic Veterans have lower likelihood of being prescribed a GLP1-RA

Race group	Patients prescribed SGLT2i (%)	Adjusted OR (95% CI)
<b>White</b>	8.2	Reference
<b>Black or African American</b>	6.1	
Demographic factors only		0.64 (0.63, 0.66)
Additional patient-level characteristics		0.64 (0.63, 0.66)
Additional system-level characteristics		0.64 (0.63, 0.66)
<b>Not Hispanic or Latino</b>	7.8	Reference
<b>Hispanic or Latino</b>	7.1	
Demographic factors only		0.95 (0.92, 0.98)
Additional patient-level characteristics		0.88 (0.85, 0.91)
Additional system-level characteristics		0.88 (0.85, 0.91)

Demographic factors only model: age, sex, and self-identified race or ethnicity. Additional patient-level characteristics model: demographic factors and zip code median income; zip code Social Deprivation Index; VHA diabetes and service connection; rurality; smoking status; unhealthy alcohol use; A1C level; other antidiabetic agents; hypertension; body mass index; mental health diagnosis; atherosclerotic CVD; heart failure; no CKD ; CKD, eGFR and albuminuria categories; number of primary care, cardiology, endocrinology, and nephrology visits; VHA frailty index; and COVID-19 diagnosis. Additional system-level characteristics model: VHA station parent facility-complexity level and US Census division.

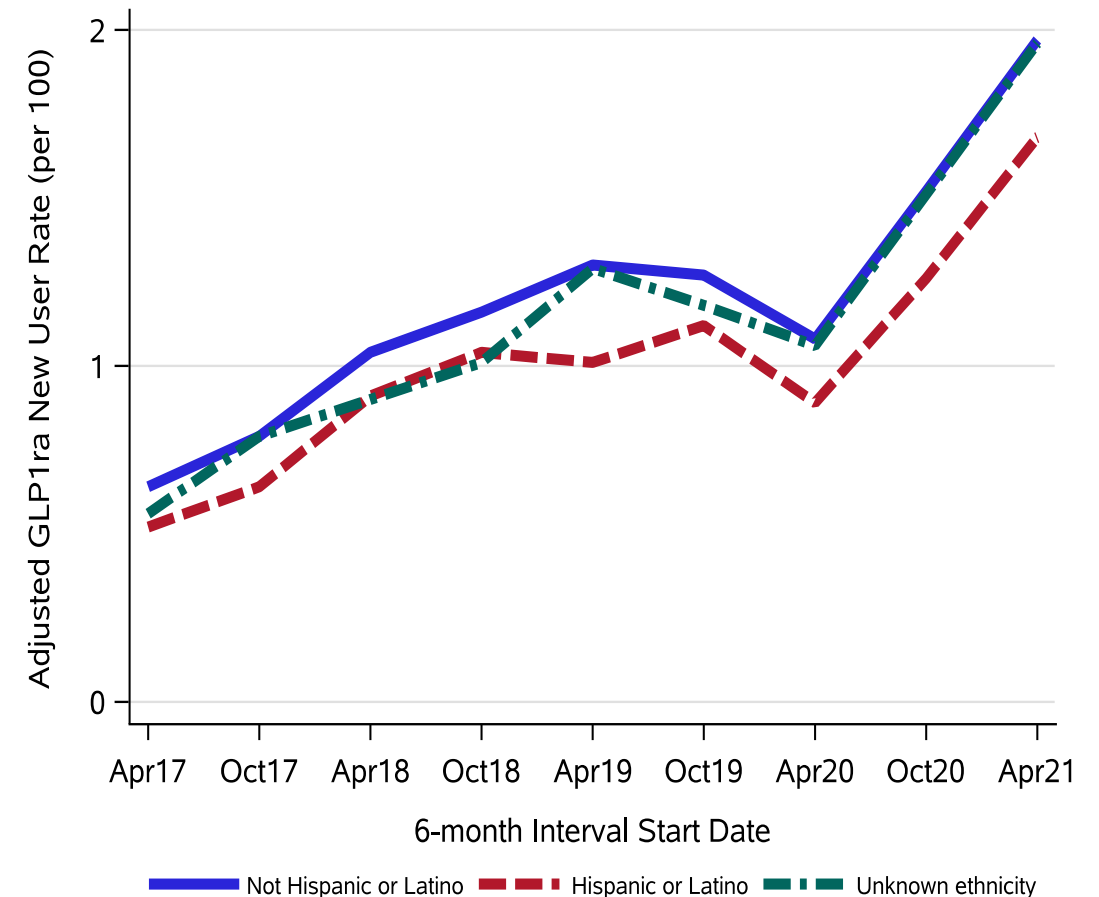
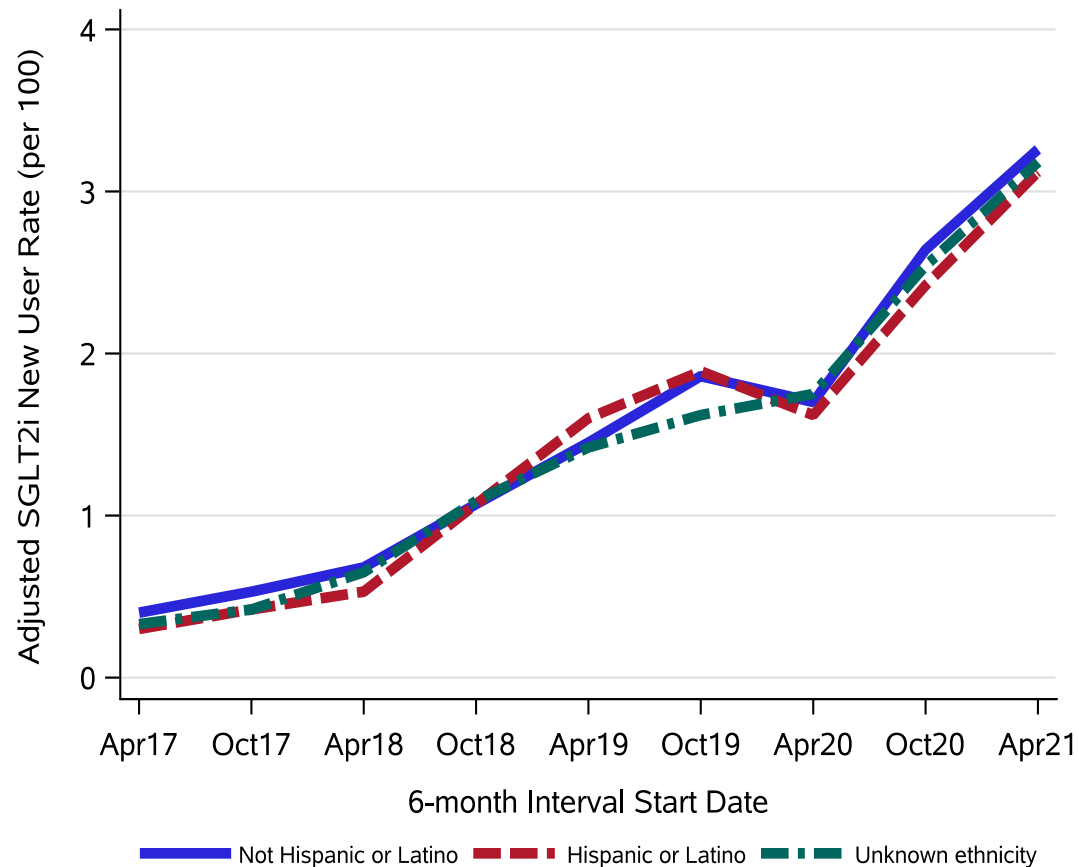
# Lower incident SGLT2i and GLP1-RA prescription among racial minorities

## Incident SGLT2i and GLP1-RA prescription (2017-2021)



# Lower incident SGLT2i and GLP1-RA prescription among patients of Hispanic ethnicity

## Incident SGLT2i and GLP1-RA prescription (2017-2021)



# Other structural barriers to implementation

- Novelty
- **Need for PCP centered multidisciplinary teams of care**



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# Marked increase in SGLT2i and GLP1-RA prescriptions among Veterans receiving endocrinology care

Endocrine care	SGLT2i		GLP1-RA	
	% prescribed	Multivariable model Odds Ratio (95% CI)	% prescribed	Multivariable model Odds Ratio (95% CI)
<b>No. of visits</b>				
<b>0*</b>	9%	Reference	6%	Reference
<b>1</b>	16%	1.26 (1.21, 1.07)	12%	1.37 (1.29, 1.45)
<b>2</b>	18%	1.37 (1.30, 1.44)	15%	1.55 (1.44, 1.66)
<b>3+</b>	28%	2.02 (1.86, 2.19)	29%	2.70 (2.44, 1.99)

**\*0 endocrine visits=1,037,983 (86% of the sample)**



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# Other structural barriers to implementation

- Novelty
- Need for PCP centered multidisciplinary teams of care
- **Historical barriers to adequate CKD care**
  - Albuminuria detection gap: ~50% of patients with T2D do not get yearly albuminuria testing
  - Treatment gap (ACEI/ARBs are under-prescribed) even in patients with albuminuria

# Albuminuria associated with lower likelihood of SGLT2i and GLP1-RA prescription



KDIGO Stage	SGLT2i		GLP1-RA	
	% prescribed	Multivariable model Odds Ratio (95% CI)	% prescribed	Multivariable model Odds Ratio (95% CI)
<b>Urinary albumin to creatinine ratio (mg/g)</b>				
<b>A1: &lt;30</b>	11%	<b>Reference</b>	9%	<b>Reference</b>
<b>A2: 30-300</b>	13%	0.96 (0.94, 0.98)	10%	1.00 (0.98, 1.02)
<b>A3: &gt;300</b>	11%	0.89 (0.87, 0.91)	11%	0.95 (0.93, 0.98)



# Conclusions

- Prescription of SGLT2i and GLP1-RA is low among Veterans with T2D.
- There are pervasive racial and ethnic disparities in SGLT2i and GLP1-RA prescriptions, even after accounting for a wide array of patient- and system-level characteristics.
- Need to contextualize quantitative findings on racial and ethnic disparities: mixed methods research.
- Adequate implementation of these therapies requires coordinated efforts to overcome barriers to care.





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- Erin Madden, MPH.
- Michael G. Shlipak. MD, MPH.
- Michelle M. Estrella. MD, MHS.
- Colleagues at the SFVA/UCSF KHRC.

## *Discussion*

Looking forward: VA, novel diabetes medications, and how we can advance health equity

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# KEY TAKEAWAYS

- Known racial/ethnic disparities exist in non-VA studies for the prescription of SGLT2i and GLP1-RA medications
- Within VA, Dr. Lamprea-Montealegre's study also suggests overall racial/ethnic disparities in the prescription of both classes of medications and a wide variation in overall prescribing of these medication classes across VA facilities
- Financial constraints do not alone account for these disparities
- Additionally, these classes of medications are under-prescribed nationally as well as across VHA among those eligible for diabetes treatment intensification and for whom additional kidney and cardiovascular benefits would support their use

# VA RESPONSE

- Office of Health quickly added a call for QI project proposals to its annual QI Pilot Award RFP process for FY23
- Awarded pilot projects represent diverse geography and focus on decreasing racial/ethnic disparities, rural/urban disparities, and increasing overall utilization of SGLT2i and GLP-1 RA medications
- OHE is convening a QI collaborative/community of practice for the awardee cohort

## In your clinical practice:

- Examine utilization of these medications among your eligible patients
- Understand and be able to address potential patient concerns around taking newer medications
- Address potential clinical assumptions/bias around patient adherence
- Overcome clinical therapeutic inertia through clinical team/PACT education
- Leverage pharmacist-driven approaches to intensifying treatment where possible

# QUESTIONS

- Discussant Q&A
- Audience Q&A

Thank you!