Today's Webinar Agenda

Time	Title	Speaker
00:00 – 00:10	Introductions and Announcements	Nicolas Cuttriss, MD, MPH, FAAP
00:10 – 00:25	Approaches to Identifying CKD and the New Kidney Health Evaluation	Katherine Tuttle, MD, FASN, FACP, FNKF
00:25 – 00:30	Presentation Q & A	Questions submitted via Q & A by attendees
00:30 – 00:35	Case presentation	Sumera Ahmed, MD
00:35 – 00:55	Case questions and recommendations	Hub team faculty & attendees Please provide your clarifying questions and recommendations via the Q&A
00:55 – 01:00	Wrap-up and announcements	Nicolas Cuttriss, MD, MPH, FAAP

Learning Objectives

Participants should be able to:

- Describe the new 2-test HEDIS Kidney Health Evaluation for Patients With Diabetes (KED) screening and the need for the measure
- Increase evidence-based screening in underserved populations to address disparities in care and prevent diabetes complications
- Prepare to improve patient care by using the new HEDIS Kidney Health Evaluation for Patients With Diabetes (KED) measure to address gaps in screening

Presenting Faculty

Katherine R. Tuttle, MD, FASN, FACP, FNKF
Executive Director for Research
Providence Health Care
Professor of Medicine, Division of Nephrology
Co-Principal Investigator
Institute of Translational Health Sciences
Spokane, WA

Disclosure Information

Boston University School of Medicine asks all individuals involved in the development and presentation of Accredited Continuing Education activities to disclose all financial relationships with ineligible companies. This information is disclosed to all activity participants prior to the start of the educational activity. Boston University School of Medicine has procedures to mitigate all relevant financial relationships with ineligible companies. In addition, faculty members are asked to disclose when any unapproved use of pharmaceuticals and devices is being discussed.

In accordance with the Standards for Integrity and Independence in Accredited Continuing Education, all relevant financial relationships with ineligible companies that faculty, planners, authors and anyone who may be in control of content have been mitigated.

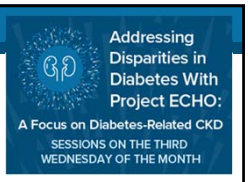
Faculty members do not plan on discussing unlabeled/investigational uses of a commercial product.

Faculty Presenters		
Robert Gabbay, MD, PhD	Presenting Faculty	Consulting fees/advisory boards: Lark, Health Reveal, Vida Health, Onduo
Crystal Gadegbeku, MD, FASN	Presenting Faculty	Consulting fees/advisory boards: Fresenius Kidney Care. Research Study Advisory Board: Bristol Myers Squibb
Katherine R. Tuttle, MD, FASN, FACP, FNKF	Presenting Faculty	Consulting fees/advisory boards: AstraZeneca, Bayer HealthCare Pharmaceuticals, Boehringer Ingelheim, Eli Lilly and Company, Gilead Sciences, Inc., Goldfinch Bio, Inc., Novo Nordisk Contracted research: Bayer HealthCare Pharmaceuticals, Goldfinch Bio, Inc., Travere Therapeutics, Inc.
Joseph Vassalotti, MD	Presenting Faculty	Consulting fees/advisory boards: Boehringer Ingelheim, Eli Lilly and Company, Renalytix

Disclosure Information, *cont.*

Curriculum Development		
Nicolas Cuttriss, MD, MPH, FAAP	Course Director, Core Faculty	Nothing to disclose
Nayan Arora, MD	Core Faculty	Consulting fees/advisory boards: George Clinical
Matthew Bouchonville, MD, CDCES	Core Faculty	Nothing to disclose
Phyllisa Deroze, PhD	Patient Advocate, Core Faculty	Nothing to disclose
Korey Hood, PhD	Core Faculty	Consulting fees/advisory boards: Cecelia Health, Insulet Corporation, LifeScan Diabetes Institute
Sean Oser, MD	Core Faculty	Consulting fees/advisory boards: Dexcom, Inc.
Daniel Saltman, MD	Core Faculty	Nothing to disclose
Jay H. Shubrook, DO	Core Faculty	Consulting fees/advisory boards: Abbott, AstraZeneca, Bayer HealthCare Pharmaceuticals Inc., Eli Lilly and Company, Novo Nordisk
Lisa Taylor, DNP, FNP-BC, BC-ADM, CDCES	CNE Nurse Advisor, Core Faculty	Nothing to disclose
Julie Valdes, PharmD	Core Faculty	Nothing to disclose
Planning Committee		
Linda G. Baer, MSPH, CHCP	Planning Committee Member	Nothing to disclose
Michael Burk, BS	BU, Senior Program Manager	Nothing to disclose
Samantha Gordon, MS	Manager, Accreditation	Nothing to disclose
Ilana Hardesty, MLA	BU, Assistant Director	Nothing to disclose
Catherine Sullivan, MD	BU, CME Accreditation Reviewer	Nothing to disclose
Sara C. Miller, MS, CPHQ	Planning Committee Member	Nothing to disclose
Julie White, MS, CHCP	Director, CME	Nothing to disclose

Accreditation



Physicians:

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of Boston University School of Medicine and the ECHO Diabetes Action Network. Boston University School of Medicine is accredited by the ACCME to provide continuing medical education for physicians.

Boston University School of Medicine designates this live activity for a maximum of 1.0 *AMA PRA Category 1 Credit(s)™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Nurses:

This educational activity has been provided by Boston University School of Medicine Continuing Nursing Education and jointly-provided by the ECHO Diabetes Action Network.

Boston University School of Medicine Continuing Nursing Education is accredited with distinction as a provider of nursing continuing professional development by the American Nurses Credentialing Center's Commission on Accreditation.

Contact Hours: 1.0

Project ECHO® collects registration and participation data for some teleECHO® programs. Your individual data will be kept confidential. These data may be used for reports, maps, communications, surveys, quality assurance, evaluation, research, and to inform new initiatives.

Assessment, Evaluation and How to Claim CME/CE Credit

In order to successfully complete this activity, you are required to attend the entire live virtual presentation and complete a posttest assessment and evaluation. A link to the assessment will be provided at the end of the presentation and in a follow-up email you will receive after the program. Upon completing the assessment, you will be provided with a link to complete the evaluation and claim your credit on Boston University School of Medicine's website.

Presentation Slides

A link to today's slides can be found in the Chat and in the Announcement email sent yesterday.

Case Presentations

Sign up to present a case!
https://redcap.link/caseform

Thank you for joining us. The program will begin shortly.

During the Webinar

Q&A Feature
For questions directed to the faculty related to the content of the session

Chat Feature
For Technical Questions or to Share Resources

Language Matters:
Help Facilitate System Change With Language in Your Workplace

*We are working hard to change the language around diabetes by adopting person-centered, strengths-based, and empowering words and messages. In accordance with updated standards, **please note:***

- ***We no longer use the word "diabetic" in any context**. Instead, we use "**person with diabetes**," "**person living with diabetes**," or "**diabetes-related**."*
- *Please refrain from using the words "**compliant**," "**adherent**," or "**control**," regarding people with diabetes, because these can be judgmental terms.*
- *Please refer to https://tinyurl.com/SpeakingtheLanguageofDiabetes and https://tinyurl.com/UseofLanguageDiabetes for more information*
  Thank you for helping us to reduce stigma and change the language of diabetes!

American Diabetes Association (ADA) and Association of Diabetes Care & Education Specialists (ADCES)

Our ECHO is a safe space for everyone.

We have a zero-tolerance policy for language that is discriminatory, disrespectful, racist, sexist, bullying, or offensive. As such, any participant will be removed from the webinar if you engage in any such behavior.

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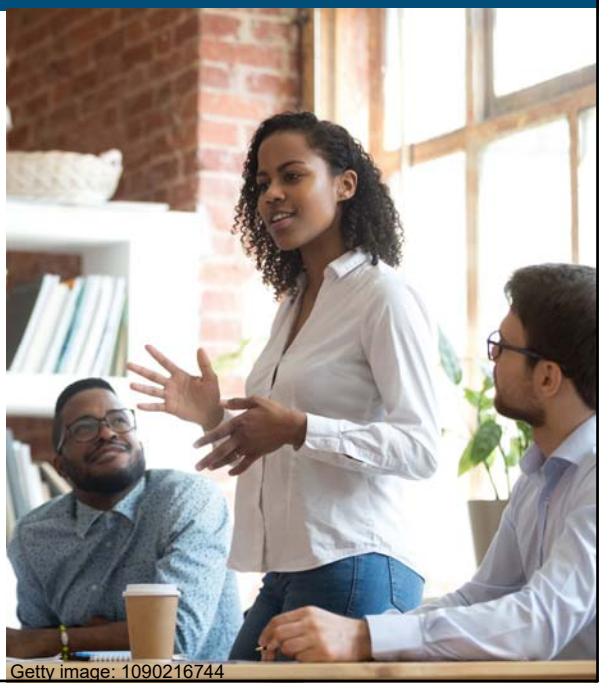

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Join us for the Next Session:
Wednesday, February 16, 2022

Robert Gabbay, MD, PhD, FACP

Chief Science & Medical Officer
American Diabetes Association
Arlington, VA

Presents:
Looking Beyond Glucose Control: Best Practices to Address Diabetes-Related CKD

Registration Required
https://cvent.me/qvDxg3

Addressing Disparities in Diabetes With Project ECHO:
A Focus on Diabetes-Related CKD
SESSIONS ON THE THIRD WEDNESDAY OF THE MONTH

Thank you for joining us. The program will begin shortly.

Questions?
Looking for resources or more information?

Visit our website: **https://cvent.me/qvDxg3**

Acknowledgment of Commercial Support

This activity is supported by an educational grant from Bayer HealthCare Pharmaceuticals.

Welcome! Thank you for joining!

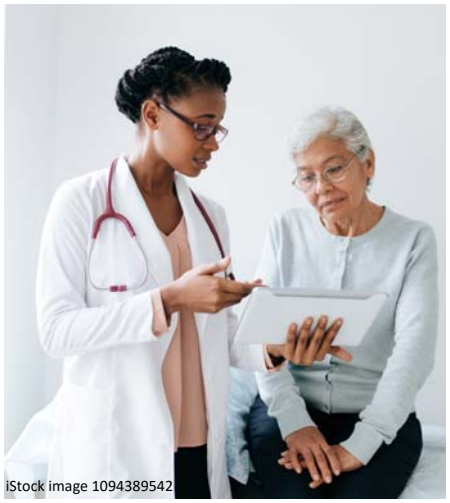
Acknowledgment

This activity is supported by an educational grant from Bayer HealthCare Pharmaceuticals

Our Goal

Address the urgent and persistent needs of vulnerable populations of people with diabetes complicated by CKD.

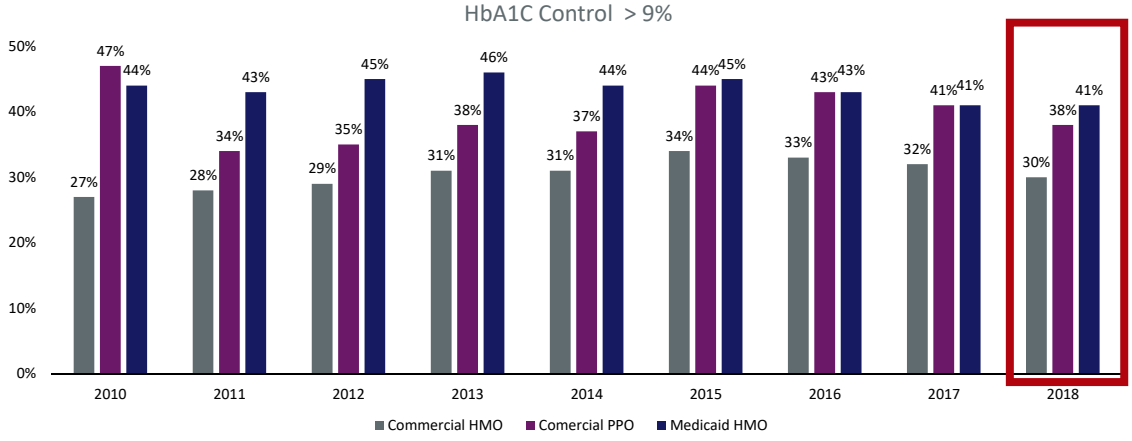
We seek to engage clinicians in the primary care setting by empowering and increasing their capacity to screen, diagnose, and manage renal complications of diabetes using the Project ECHO® (Extension for Community Healthcare Outcomes) model.



iStock image 1094389542

System Failure (Pre-Covid): Comprehensive Diabetes Care

National HEDIS Report Card:
HbA1C Control > 9%



https://www.ncqa.org/hedis/measures/comprehensive-diabetes-care/

Diabetes-Related CKD: System Failure

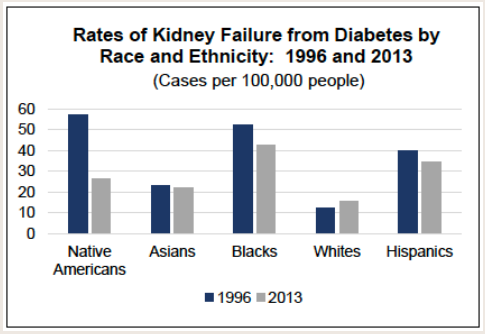
1 in 10 adults in US have diabetes

(double the burden in community health centers)

1 in 3 with diabetes have CKD

3 in 4 with DKD (stage 3 - 4) are UNAWARE!

Addressing Racial Disparities: Reasons for Hope



CDC National Diabetes Statistic Report; Bullock *et al. MMWR Morb Mortal Wkly Rep.* 2017;66:26-32; Narva A. *Am J Kidney Dis*. 2018;71(3):407-411.

#HealthEquityNow

American Diabetes Association®
Connected for Life

Health Equity Bill of Rights

The current health pandemic and its disproportionate toll on minority, low-income, and historically underserved Americans shines a troubling light on historic, systemic inequities in American health care. It is time for health equity now.

The **Health Equity Bill of Rights** envisions a future without unjust health disparities. It ensures the 122 million Americans living with diabetes and prediabetes, along with the millions more who are at high risk for diabetes – no matter their race, income, zip code, age, education or gender – get equal access to the most basic of human rights: their health. These rights include:

https://www.diabetes.org/healthequitynow

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American Diabetes Association (ADA) and Association of Diabetes Care & Education Specialists (ADCES)

Project ECHO
Extension for Community Healthcare Outcomes

Response to:

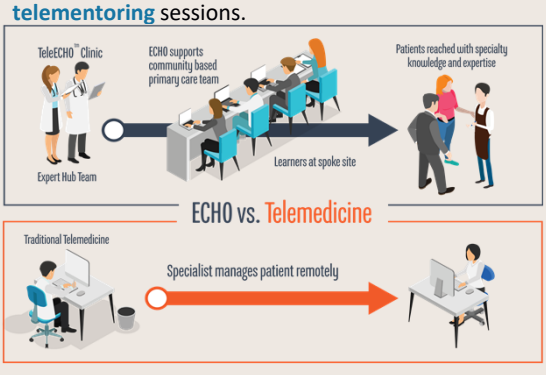
1. Poor outcomes and system failure
2. Lack of specialists
3. Increase disparities in care
4. Lack of confidence in primary care healthcare professions managing complex medical conditions

www.echo.unm.edu www.diabetescovid.stanford.edu www.echodiabetes.org

Project ECHO® Mission:
Democratizing medical knowledge and get best practice care to underserved people all over the world.

How ECHO® works:

ECHO is a hub-spoke model that connects providers with specialists through ongoing, interactive, **telementoring** sessions.



Moving knowledge instead of patients

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00:55 – 01:00	Wrap-up and announcements	Nicolas Cuttriss, MD, MPH, FAAP

Housekeeping Items for Webinar

For questions about the ***content*** of the Webinar or case presentations, please use the **Q & A Feature**

For questions about ***technical issues or for sharing resources***, please use the **Chat Feature**

EDAN ECHO DIABETES ACTION NETWORK

https://cvent.me/qvDxg3 website will have additional resources related to diabetes and CKD in primary care

Please complete the **assessment** at the end of the session (essential for CME/CE credit)

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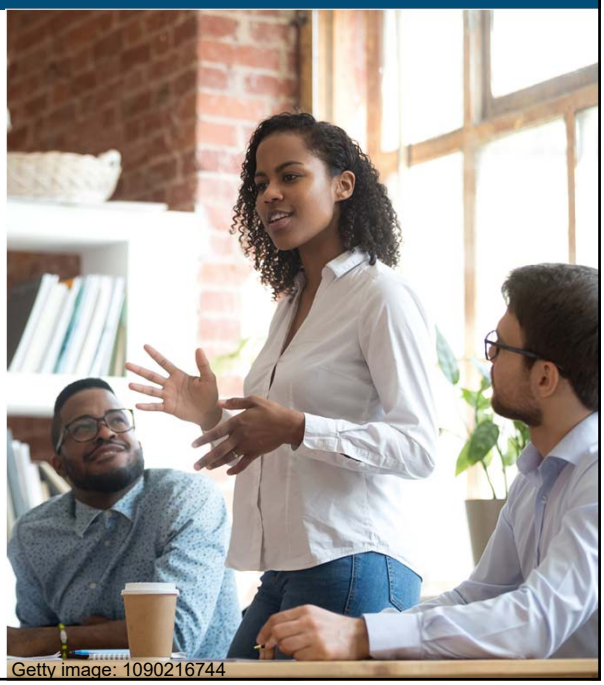
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Series Topics

Today: Approaches to Identifying CKD & the New Kidney Health Evaluation

Katherine R. Tuttle, MD, FASN, FACP, FNKF, Providence Health Care

March 16: Addressing CKD Disparities and Social Determinants of Health to Achieve Diabetes Management Goals

Crystal Gadegbeku, MD, FASN, Cleveland Clinic

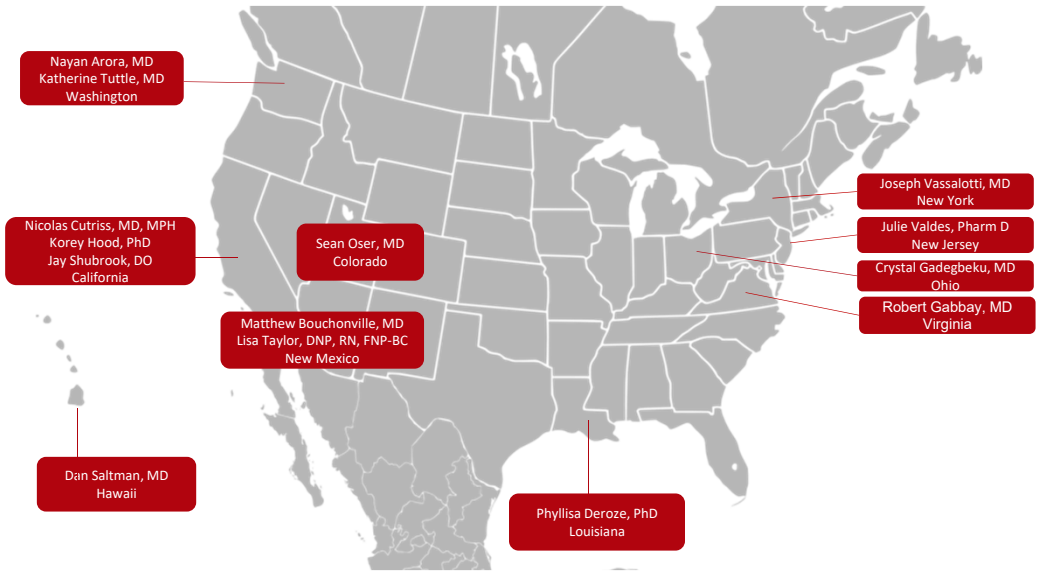
February 16: Looking Beyond Glucose Control: Best Practices to Address Diabetes-Related CKD

Robert Gabbay, MD, PhD, FACP, American Diabetes Association

April 20: Halting CKD Progression: From Optimizing Hypertension Management to Newer Agents

Joseph Vassalotti, MD, National Kidney Foundation

Faculty Representing 10 States



Katherine R. Tuttle, MD, FASN, FACP, FNKF

Executive Director for Research
Providence Health Care
Professor of Medicine, Division of Nephrology
Co-Principal Investigator
Institute of Translational Health Sciences
Spokane, WA

Presents:

Approaches to Identifying CKD & the New Kidney Health Evaluation

Approaches to Identifying CKD in Diabetes and The New Kidney Health Evaluation

Katherine R. Tuttle, MD, FASN, FACP, FNKF
Executive Director for Research
Providence Health Care

Professor of Medicine
Nephrology Division and Kidney Research Institute
Institute of Translational Health Sciences
University of Washington

UNIVERSITY of WASHINGTON

Providence

In the spirit of honoring the composition of place, I acknowledge that I live and work on the homelands of the Spokane, Palouse, Nez Perce, Coeur d'Alene, and Kootenai Tribal People.

I am grateful to be on this land and ask for its support as we work to create an equitable, diverse, and inclusive community.

DIABETIC KIDNEY DISEASE COLLABORATIVE

Today's Goals

- Review current approaches for the detection and management of CKD in diabetes
- Describe the new 2-test HEDIS Kidney Health Evaluation for Patients with Diabetes (KED) screening and the need for the measure
- Increase evidence-based screening in underserved populations to address disparities in care and prevent diabetes complications
- Prepare to improve patient care by using the new HEDIS KED measure to address gaps in screening

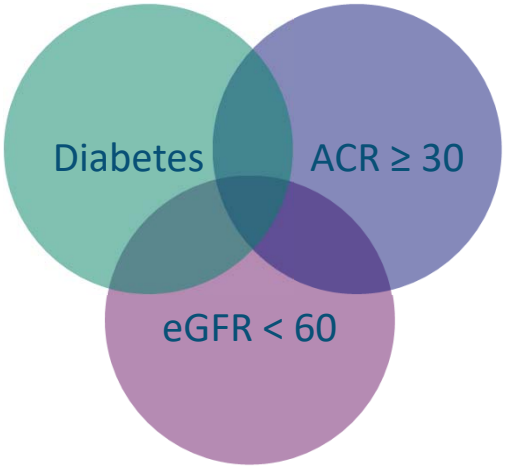
Development of Diabetic Kidney Disease: A Serious Matter

- CKD is common in patients with diabetes
  - Type 1 diabetes ~30%
  - Type 2 diabetes ~40%
- Diabetes is responsible for one-half of all cases of CKD and kidney failure or ESRD worldwide
  - Diabetes prevalence in American patients with ESRD: 66%-86%
- CKD amplifies CVD risk
  - Most of diabetes-associated excess CVD risk occurs in those with CKD

Alicic RZ, et al. *Clin J Am Soc Nephrol.* 2017;12:2032-45;
Afkarian M, et al. *J Am Soc Nephrol.* 2013;24:302-8.

Diabetic Kidney Disease Risks

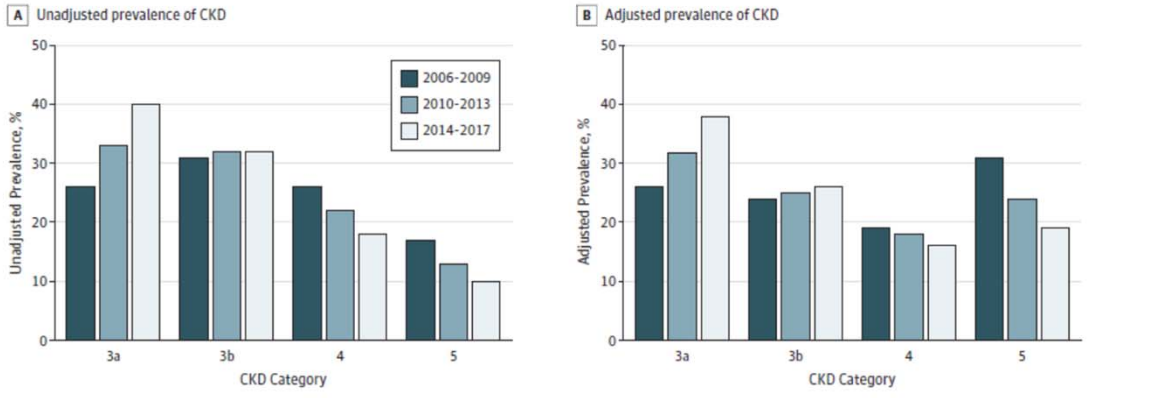
- 10% of those with DKD progress to ESRD
  - Dialysis
  - Kidney transplant
- 90% die of other causes without reaching ESRD
  - One-half die of CVD
  - One-third die of infection



Alicic RZ, et al. *Clin J Am Soc Nephrol.* 2017;12:2032-45;
USRDS. https://adr.usrds.org/2021.

CKD Prevalence at Providence and UCLA Health: Data From the CURE-CKD Registry

N = 606,064

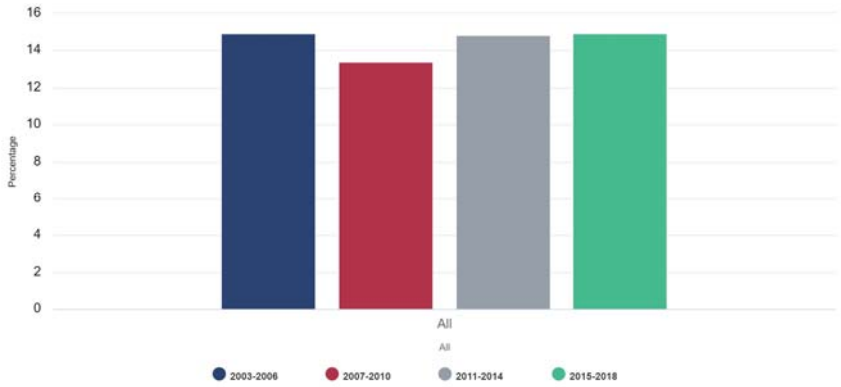


A, Unadjusted prevalence. B, Prevalence adjusted by age, sex, and race/ethnicity.

Tuttle KR, et al. *JAMA Netw Open.* 2019;2:e1918169.

CKD Is Common in the General US Population: 15% Prevalence, With Nominal Variation by Race

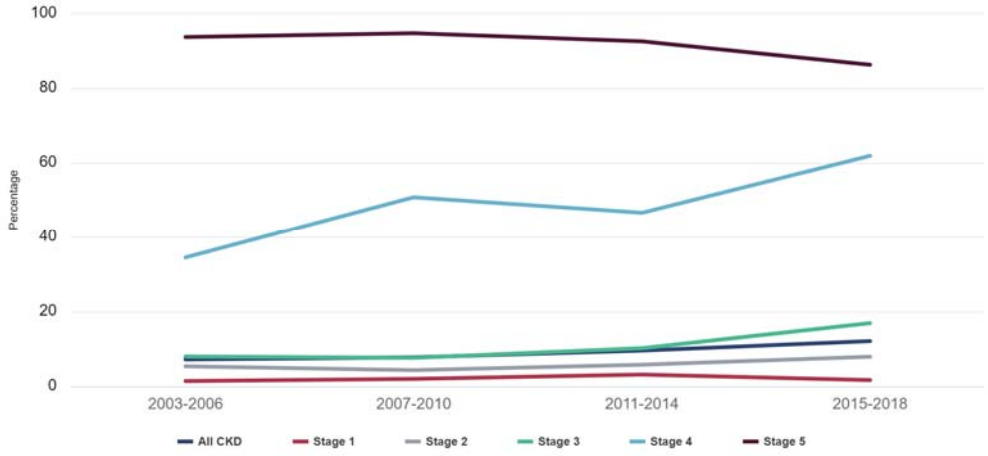
Prevalence of CKD in US adults within age, sex, race/ethnicity, and risk factor categories, 2003-2018



USRDS. https://adr.usrds.org/2021.

CKD Awareness in US Adults

Percent of US adults with CKD who are aware of their kidney disease, 2003-2018



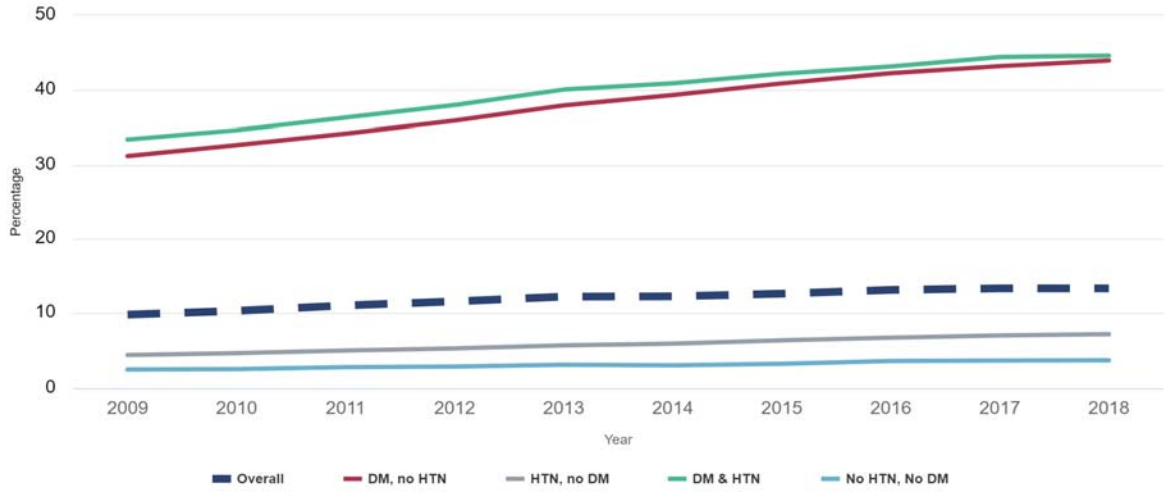
USRDS. https://adr.usrds.org/2021.

Clinical Characteristics of Patients in the CURE-CKD Registry

	All CKD	CKD/DM/PDM/HTN	CKD/HTN	CKD/DM/PDM	CKD Alone
UACR, mg/g					
≤30	17 651 (2.9)	12 703 (4.2)	1776 (1.3)	2224 (2.7)	948 (1.1)
>30 to ≤300	27 227 (4.5)	21 435 (7.1)	1089 (0.8)	4066 (5.0)	637 (0.7)
>300	7673 (1.3)	5860 (2.0)	509 (0.4)	995 (1.2)	309 (0.3)
Not measured	553 513 (91.3)	260 159 (86.7)	131 126 (97.5)	73 981 (91.0)	88 247 (97.9)
UPCR, mg/g					
≤150	14 467 (2.4)	7823 (2.6)	2723 (2.0)	2076 (2.6)	1845 (2.0)
>150 to ≤500	5688 (0.9)	3087 (1.0)	1163 (0.9)	763 (0.9)	675 (0.7)
>500	4880 (0.8)	2978 (1.0)	785 (0.6)	696 (0.9)	421 (0.5)
Not measured	581 029 (95.9)	286 269 (95.4)	129 829 (96.5)	77 731 (95.7)	87 200 (96.7)
Age, median (IQR) [No.], y	70 (59-81) [606 064]	70 (60-79) [300 157]	72 (60-83) [134 500]	73 (63-83) [81 266]	64 (42-81) [90 141]
eGFR, median (IQR) [No.], mL/min/1.73 m^2	53 (41-61) [524 169]	54 (43-63) [266 838]	53 (44-59) [115 061]	49 (35-59) [74 366]	53 (41-66) [67 904]
SBP, mean (SD) [No.], mm Hg	129 (18) [365 561]	131 (18) [202 951]	132 (18) [92 051]	119 (17) [25 533]	119 (16) [45 026]
DBP, mean (SD) [No.], mm Hg	72 (11) [365 561]	72 (10) [202 951]	74 (11) [92 051]	67 (10) [25 533]	70 (10) [45 026]

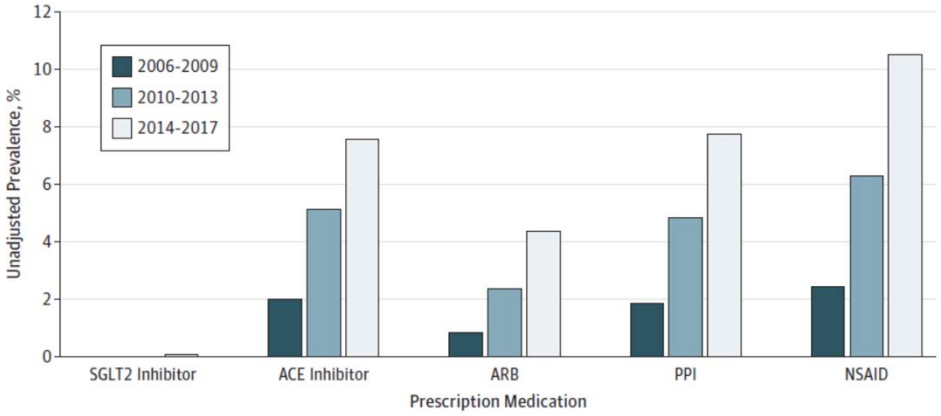
Tuttle KR, et al. *JAMA Netw Open.* 2019;2:e1918169.

Proteinuria/Albuminuria Testing in Medicare Beneficiaries Aged 66 Years and Older



USRDS. https://adr.usrds.org/2021.

Medication Use in CKD Stages 3-5 at Providence and UCLA Health (N = 660,000)



25% of patients who have diabetes with CKD and hypertension used an ACE inhibitor or ARB

Tuttle KR, et al. *JAMA Netw Open.* 2019;2:e1918169.

SGLT2 Inhibitors: Cardiovascular Outcomes Trials in Type 2 Diabetes

- Reduce risk of major adverse CVD events
  - 3-point MACE (myocardial infarction, stroke, CVD death)
  - Heart failure (empagliflozin, canagliflozin, dapagliflozin)
  - CVD death (empagliflozin, dapagliflozin)
- Decrease in macroalbuminuria and kidney failure, slow decline in eGFR
- CVD and CKD benefits present in patients with preexisting CKD

Zinman B, et al. *N Engl J Med*. 2015;373(22):2117-2128; Ghosh RK, et al. *Am J Cardiol*. 2019;124(11):1790-1796; Neal B, et al. *N Engl J Med*. 2017;377(7):644-657; McMurray JJV, et al. *N Engl J Med*. 2019;381(21):1995-2008; Packer M, et al. *N Engl J Med*. 2020;383(15):1413-1424; Heerspink HJL, et al. *N Engl J Med*. 2020;383(15):1436-1446.

GLP-1 Receptor Agonists: Cardiovascular Outcomes Trials in Type 2 Diabetes

- Reduce risk of major adverse CVD events
  - Atherosclerotic CVD (3-point MACE: myocardial infarction, stroke, CVD death)
  - CVD death (liraglutide, semaglutide)
- Decrease macroalbuminuria and slow eGFR decline from early to late-stage CKD (liraglutide, dulaglutide, semaglutide)
- CVD and CKD benefits present in patients with preexisting CKD

Marso SP, et al. *N Engl J Med*. 2016;375(4):311-322; Marso SP, et al. *N Engl J Med*. 2016;375(19):1834-1844; Gerstein HC, et al. *Lancet*. 2019;394(10193):121-130.

Finerenone Use in CKD and Type 2 Diabetes: FIDELITY Trial

FIDELITY Meta-Analysis

- 13,026 patients followed for median of 3.0 years
- CVD outcome: HR, 0.86; 95% CI, 0.78-0.95
- Kidney disease outcome: HR, 0.77; 95% CI, 0.67-0.88
- Similar risk reductions in SGLT2 inhibitor users (5%-10%)

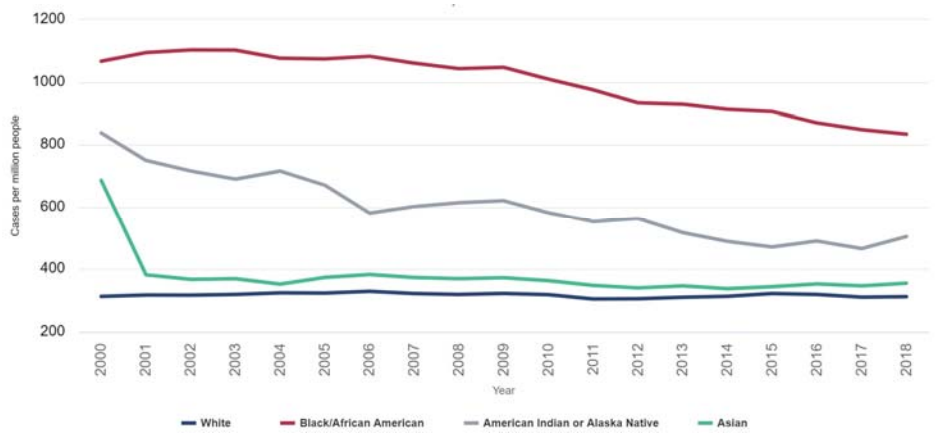
Finerenone Adverse Reactions

- Adverse reactions ≥ 1% of patients on finerenone and more frequently than placebo: hyperkalemia (18.3% vs. 9%), hypotension (4.8% vs. 3.4%), and hyponatremia (1.4% vs. 0.7%)

Bakris GL, et al. *N Engl J Med.* 2020;383:2219-29;Pitt B, et al. *N Engl J Med.* 2021;385:2252-63;Filippatos G, et al. Presented at the European Society of Cardiology Congress. August 28, 2021.

Black People Experience 3-Fold Higher Incidence of Kidney Failure Than White People

Adjusted ESRD incidence by age, race, ethnicity, and sex, 2000-2018



USRDS. https://adr.usrds.org/2021.

A Unifying Approach for GFR Estimation: Recommendations of the NKF-ASN Task Force on Reassessing the Inclusion of Race in Diagnosing Kidney Disease

Recommend immediate implementation of the *CKD-EPI creatinine equation refit without the race variable* in all laboratories in the U.S.

The equation refit excludes race in the calculation and reporting, includes diversity in its development, is immediately available to all labs in the U.S. and has acceptable performance characteristics and potential consequences that do not disproportionately affect any one group of individuals.

Recommend national efforts to facilitate increased, routine, and timely use of cystatin C, especially to confirm eGFR in clinical decision-making

Encourage and fund research on GFR estimation with new endogenous filtration markers and on interventions to eliminate racial and ethnic disparities

The Task Force gathered input from diverse stakeholders and carefully reviewed the evidence to create these recommendations

Delgado C, et al. *Am J Kidney Dis*. 2021;S0272-6386(21)00828-3;
Delgado C, et al. *J Am Soc Nephrol*. 2021;32:2994-3015.
Graphic by Edgar Lerma, MD, FASN.

JASN AJKD

HEDIS Kidney Health Evaluation for Patients With Diabetes

Two Tests for Kidney Health		
eGFR	Blood test to assess kidney function	serum creatinine (mg/dL) with equation (mL/min/1.73m2)
uACR	Urine test to assess kidney damage	urine albumin (mg/dL)
		urine creatinine (g/dL)

Risk of progression by intensity of coloring + Guide to frequency of monitoring (number of times per year) + Referral decision making by GFR and albuminuria category

GFR categories (ml/min/ 1.73 m²), Description and range			Persistent albuminuria categories, Description and range: A1 Normal to mildly increased <30 mg/g <3 mg/mmol	A2 Moderately increased 30-300 mg/g 3-30 mg/mmol	A3 Severely increased >300 mg/g >30 mg/mmol
G1	Normal or high	≥90	1 if CKD	1 Monitor	2 Refer
G2	Mildly decreased	60-89	1 if CKD	1 Monitor	Refer
G3a	Mildly to moderately decreased	45-59	1 Monitor	2 Monitor	3 Refer
G3b	Moderately to severely decreased	30-44	2 Monitor	3 Monitor	3 Refer
G4	Severely decreased	15-29	3 Refer	3 Refer	4+ Refer
G5	Kidney failure	<15	4+ Refer	4+ Refer	4+ Refer

New HEDIS Measure: Kidney Health Evaluation for Patients with Diabetes

NUMERATOR: Members who received an annual kidney health evaluation, including both eGFR and uACR

DENOMINATOR: Members 18–85 years of age with diabetes (type 1 and type 2)

https://blog.ncqa.org/kidneyhealth; https://www.kidney.org/kidneydisease/siemens_hcp_quickreference

Take-Home Points

- Diabetes is the most common cause of CKD worldwide, yet rates of awareness and detection are low
- ACE inhibitors and ARBs are the standard-of-care treatment for CKD in diabetes but are underused
- SGLT2 inhibition and finerenone are new treatments that may reduce rates of kidney failure, heart failure, atherosclerotic CVD, and death in people with type 2 diabetes
- GLP-1 receptor agonists slow eGFR decline and lower rates of albuminuria, atherosclerotic CVD, and death in people with type 2 diabetes
- Eliminating race in GFR estimation is an important step toward reducing disparities in CKD identification and treatment
- The new HEDIS measure will support efforts to improve CKD management in diabetes by prioritizing screening and monitoring in clinical practice

The NEW ENGLAND JOURNAL of MEDICINE

EDITORIAL

Time to Eliminate Health Care Disparities in the Estimation of Kidney Function

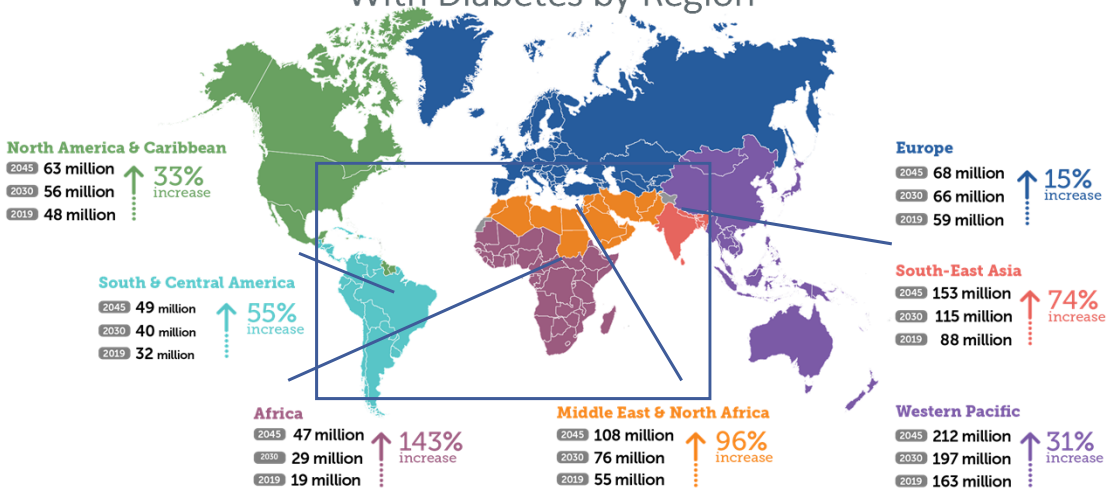
Winfred W. Williams, M.D., Joseph W. Hogan, Sc.D., and Julie R. Ingelfinger, M.D.

Williams WW, et al. *N Engl J Med*. 2021;385:1804-6.

Questions?

Back Up Slides

Number of People (Aged 20-79 Years) With Diabetes by Region



International Diabetes Federation. https://diabetesatlas.org/atlas/ninth-edition.

Clinical Trials for Diabetic Kidney Disease

PKC inhibition
Ruboxistaurin - business termination

Anti-AGE treatments
Pyridoxamine – business termination
Aminoguanidine – safety termination
Alagebrium – business termination

RAAS inhibition
Eplerenone – under study
Spironolactone – under study
Finerenone – under study
Aliskiren – safety termination
Dual blockade– safety termination
Aldosterone synthase inhibition – under study

Anti-fibrotic treatments
Pirfenidone – under study
Anti-TGF Ab – futility termination
Anti-CTGF Ab – business termination

Uric acid and gout treatments
Allopurinol – futility termination
Colchicine – under study
Febuxostat – futility termination

Cell therapies
Mesenchymal stem cells – under study
Kidney autologous cells – under study

Newer anti-hyperglycemic treatments
SGLT2 inhibitors – under study
GLP-1 receptor agonists – under study
DPP-4 inhibitors – futility termination

Antioxidants and anti-inflammatories
Baricitinib – under study
Selonsertib – under study
CCL2 (MCP-1) receptor antagonists – business termination
Pentoxifylline – under study
Bardoxolone – studies resumed after prior safety termination
N-acetylcysteine under study
Alpha lipoic acid – under study
Repository corticotropin injection– under study
sGC activators/stimulators – under study
TRPC5 channel inhibitor – under study

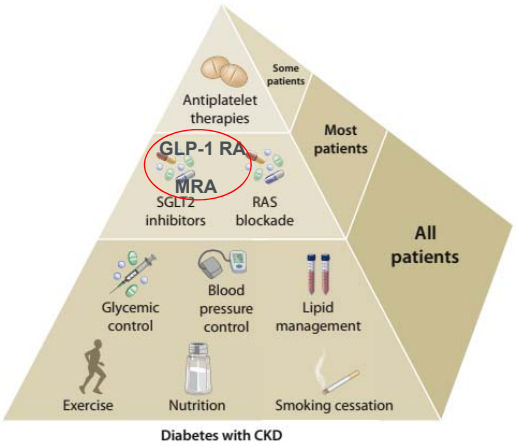
Endothelin antagonists
Atrasentan – under study
Avosentan – safety termination
Bosentan – safety termination

Supplements, diet, weight loss
Vitamin D- under study
Thiamine – under study
Green tea – under study
Turmeric – under study
Magnesium oxide – under study
Bariatric surgery – under study
Very-low-calorie diet – under study
Resveratrol – under study
Fenofibrate – under study
Cannabinoids – under study

ClinicalTrials.gov. September 8, 2021.

Comprehensive Care for Patients With Diabetes and CKD

Patients with diabetes and CKD should be treated with a comprehensive strategy to reduce risks of kidney disease progression and CVD.



KDIGO Diabetes Work Group. *Kidney Int.* 2020;98:S1-115.

An Emerging Menu of Therapies Drives More Precise Clinical Phenotyping

- 75-year-old woman with HTN and type 2 diabetes
- Originally from rural Alabama, moved to the Inland Northwest 40 years ago with the US Airforce
- Hospitalized 3 times in 4 months for CHF
- Medications: furosemide, metoprolol, ACE inhibitor, metformin
- Presents to PCP with worsening dyspnea
- BP 124/68 mm Hg, bilateral rales, 2+ edema to mid-calf
- Lab results: serum K 5.2 mEq/L, serum creatinine 1.5 mg/dL, eGFR 34 mL/min/1.73m^2 (not adjusted for race), uACR 800 mg/g, HbA1C 6.8%
- LVEF 36% by echocardiogram

Microsoft Office stock image

Personalize kidney and heart protection

DKD with CHF

- Add an SGLT2 inhibitor (dapagliflozin, canagliflozin, empagliflozin)
- The SGLT2 inhibitor can lower serum K and allow introduction of an MRA (finerenone)
- Consider neprilysin inhibitor/ARB (sacubitril/valsartan) in place of ACE inhibitor

An Emerging Menu of Therapies Drives More Precise Clinical Phenotyping

- 42-year-old man with type 2 diabetes diagnosed at age 15, obesity, HTN, dyslipidemia, referred to nephrology for CKD
- Lifelong resident on Coeur d'Alene Tribal lands
- Medications: ACE inhibitor, dihydropyridine CCB, statin, metformin, and insulin glargine
- BP 142/94 mm Hg, BMI 38 kg/m^2, clear lungs, no edema
- Lab results: serum K 4.8 mEq/L, serum creatinine 3.2 mg/dL, eGFR 23 mL/min/1.73m^2, uACR 1,400 mg/g, HbA1C 8.2%, HDL cholesterol 32 mg/dL, LDL cholesterol 94 mg/dL
- Chest CT showed incidental coronary artery calcification

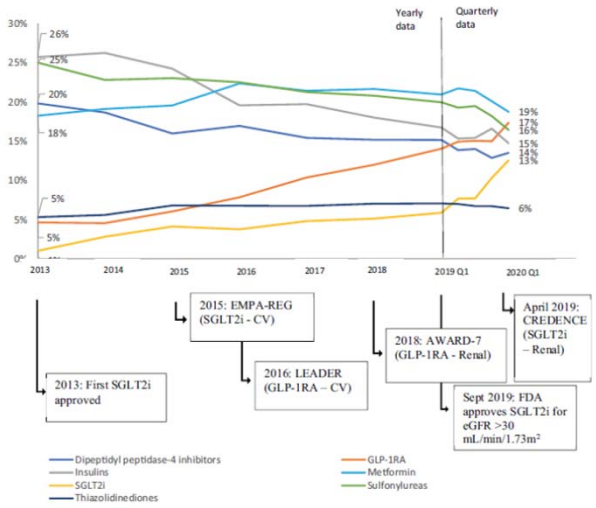
Microsoft Office stock image

Personalize kidney and heart protection

DKD with atherosclerotic CVD

- Stop insulin glargine and metformin and start a long-acting GLP-1 receptor agonist (dulaglutide)
- Intensify antihypertensive therapy to lower BP to ≤ 130/80 mm Hg
- Add aspirin, provide high-intensity statin
- Counsel about regular physical activity, nutrition, and weight management

Initiation of Glucose-Lowering Therapies in DKD



Harris ST, et al. *Diabetes Care.* 2021; [Epub ahead of print].

Case Presentations

Sign up to present a case!

https://redcap.link/caseform

Submitted Case Presentation:

47 y/o M with T2D and Stage 2 CKD with A1c above target- what medication adjustments should be made?

47 y/o M with T2D and Stage 2 CKD with A1c above target- what medication adjustments shouldd be made?

Patient is a 47-year-old male with a 7-year history of type 2 diabetes (T2D) complicated by Stage 2 CKD and hypertension and hypercholesterolemia. Most recent HbA1C is 8.1% on metformin and a sulfonylurea. Currently checking glucose in AM with readings between 110-145.

Kidney disease/Cardiometabolic disease:

- **CKD:** Stage 2 CKD with a recent eGFR of 67 mL/min (improved from 60 mL/min), uACr 128 mg/g (increased from 112 mg/g)
- **ASCVD:** AMI 6 years ago with CABG **Heart Failure**: No
- **Hypertension:** yes **Hypercholesterolemia:** yes
- **Recent BP:** 137/72 mmHg **BMI:** 37 **Weight** 118kg **Recent lipid panel:** LDL: 72, HDL 26, TG: 165 mg/dL
- **Diabetes:** Diagnosed with T2D x 7 years with last A1c 8.1%, Morning fasting BG 110-145

Current Medication Management

- Statin: Lipitor (atorvastatin) 20mg
- Beta-blocker: Lopressor (metoprolol tartrate) 25mg
- ARB: Cozaar (losartan) 25mg
- Aspirin: 325mg

Glucose-lowering agent

- Glucophage (metformin) 1000mg BID
- Glucotrol (glipizide) 5mg BID

Social support and concerns:

- **Last PQH-9:** N/A **Last PHQ-2:** N/A **Last Diabetes Distress Scale:** N/A
- **Barriers:** Concerns about health literacy and language differences with healthcare team. Patient may not truly understand the severity of his disease but is willing to do what is necessary to be well.
- **Support:** strong family support system

Question to the ECHO Diabetes Community: Is a GLP-1 RA or a SGLT-2 inhibitor the best next step for this patient?

Robert Gabbay, MD, PhD, FACP

Chief Science & Medical Officer
American Diabetes Association
Arlington, VA

Presents:

Looking Beyond Glucose Control: Best Practices to Address Diabetes-Related CKD

Wednesday 2/16/2022

(Registration Required)

https://cvent.me/qvDxg3