

Eighth Annual World Health Continuing Medical Education Conference

Health Disparities Impacting Global and Local Populations

June 6, 2025

SUNY Downstate Health Sciences University
Alumni Auditorium
395 Lenox Road
Brooklyn, New York 11203

Jointly provided by Healthfirst, Howard University College of Medicine, Howard University College of Pharmacy Office of Continuing Professional Education, MediNova, and SUNY Downstate Health Sciences University



Eighth Annual World Health Continuing Medical Education Conference: "Health Disparities Impacting Global And Local Populations"

Program Overview

This Continuing Medical Education activity is designed to update primary care and specialty practices on evolving strategies for implementing evidence-based medicine to meet the needs of local, regional, and global communities. The intent is to inform the attendees on innovations in treating special patient populations. Using evidence-based prevention, chronic-disease management, pharmacotherapy, and cutting-edge treatment options, participants will be introduced to advanced approaches to improve patient outcomes.

Program Objectives

At the conclusion of this activity, participants will be able to:

- **Outline** pragmatic tools and innovations that can be used in practice to address health equity in the communities they serve
- **Explain** the cause for increased prevalence of chronic conditions amongst vulnerable populations and recognize care models that are in place to address these disparities
- **Discuss** the role of cultural factors in trauma experiences and responses and how to integrate trauma-informed care into practice to address mental and behavioral health needs of marginalized communities
- **Identify** solutions and resources available to address the needs of the communities discussed

Target Audience

This activity is designed for physicians, physician assistants, nurse practitioners, registered nurses, pharmacists, social workers, residents, fellows, medical students, graduate students, and practice leaders that serve high-risk populations.

Joint Providership Accreditation

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 the State University of New York (SUNY) Downstate Health Sciences University and Healthfirst. The State University of New York Downstate Health Sciences University is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

Designation Statement

SUNY Downstate Health Sciences University designates this live activity for a maximum of **6.75 AMA PRA Category 1 Credit(s)TM**. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Nursing: SUNY Downstate Health Sciences University is approved as a provider of nursing continuing professional development by the Northeast Multistate Division Education Unit, an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation. Attendance of at least 90% of the live activity is required for nursing contact credits.

Social Workers: SUNY Downstate Health Sciences University is recognized by the New York State Education Department's State Board for Social Work as an approved provider of continuing education for licensed social workers #SW-0469.

Eighth Annual World Health Continuing Medical Education Conference: "Health Disparities Impacting Global And Local Populations"

Disclosure Summary

SUNY Downstate Health Sciences University Office of CME (OCME) and its affiliates are committed to providing educational activities that are objective, balanced, and as free of bias as possible. The OCME has established policies to identify and mitigate conflicts of interest prior to this educational activity. As an accredited provider, we are required to mitigate and disclose to the activity audience the financial relationships of the planners, presenters, and authors involved in the development of accredited content. A financial relationship exists if he or she has a financial relationship in any amount occurring in the past 24 months with an ineligible company whose products or services are discussed in the accredited activity content over which the individual has control. All financial relationships have been fully disclosed and mitigated. No commercial support is being received for this event. This educational activity does not include any content that relates to the products and/or services of an Ineligible company with whom there is a financial relationship.

ADA Statement

Special Needs: In accordance with the Americans with Disabilities Act, SUNY Downstate Health Sciences University seeks to make this conference accessible to all. If you have a disability that might require special accommodation, please email your need(s) to Angela Sullivan at asullivan@healthfirst.org or call 917-748-8455.

ACPE Pharmacist CE Credit Available

Howard University College of Pharmacy, (COP) is accredited by the Accreditation Council for Pharmacy Education (ACPE) as a provider of continuing pharmacy education. This program meets ACPE criteria for 7.75 contact hours (0.775 CEUs) for Pharmacists. CE credit will be awarded through the CPE Monitor within 3–4 weeks of the seminar to those who successfully complete the program by registering for this event, attending the webinar, obtaining a score \geq 70% on the POST-TEST and completing the evaluation. The UANs for each educational CE activity are listed in the program brochure. The deadline to claim CE for this program is August 1, 2025.



Registration

If you need additional information or to register for the conference, please email Angela Sullivan, Healthfirst, at ASullivan@healthfirst.org or call 917-748-8455.

AGENDA

7:30AM – 8:15AM

Breakfast and Registration

Welcome and Introduction into CME Activity

Karen M. Costley, MD, MPH, CHCQM

Assistant Vice President, Medical Director, Healthfirst

Shelly McDonald-Pinkett, MD, FACP, CPHQ

Director, Howard University Health and Wellness Center

8:15AM – 8:30AM

Henry R. Paul, MD

President, MediNova

Moro O. Salifu, MD, MPH, MBA, MACP

Chair of the Department of Medicine

Tenured Professor of Medicine

Department of Medicine, Division of Nephrology,

SUNY Downstate Health Sciences University

Session 1

Advancing Justice: Historical Roots and Future Solutions for Health Equity

Torian Easterling, MD, MPH

Senior Vice President for Population and Community Health

Chief Strategic and Innovation Officer, One Brooklyn Health

Patient Engagement and Cultural Competence: Road Map to Achieve Health Equity

8:30AM – 10:30AM

Mauvareen Beverley, MD, PLLC

Patient Engagement and Cultural Competence Specialist

Ethical Decision Making in Diverse Populations

Karen Roberts Turner, JD, MA

Senior Associate General Counsel for Health Sciences

Adjunct Assistant Professor of Ethics, Howard University

The Cost of Getting it Wrong

Brenda D. McDonald, RN, BSN, JD, MBA, CPHRM

Chief Risk Advisor, National Healthcare Practice, Aon

10:30AM - 10:45AM

Question and Answer Session

10:45AM - 11:00AM

Break: 15-minutes

Session 2

Ensuring Optimal Kidney Health for All: The Past, the Present, and the Future

Dinushika Mohottige, MD, MPH

*Assistant Professor, Institute of Health Equity Research
Icahn School of Medicine at Mount Sinai
Mount Sinai Barbara T. Murphy Division of Nephrology*

Equity in Kidney Care: Reducing Nephrotoxin Burden and Improving Acute Kidney Injury Outcomes

Dhakrit (Jesse) Rungkitwattanakul, PharmD, BCPS, FNKF

*Associate Professor, Nephrology Pharmacist
Howard University College of Pharmacy*

Bridging the Gap: Addressing Disparities in Access to Kidney Transplantation

Anthony C. Watkins, MD, FACS

*Surgical Director, Kidney & Pancreas Transplant Program
Tampa General Hospital Transplant Institute*

11:00AM - 12:30PM

12:30PM - 12:45PM

Question and Answer Session

12:45PM - 1:30PM

Lunch: 45-minutes

Session 3

Advances in Hypertension Control: New Concepts and Approaches

Keith C. Ferdinand, MD, FACC, FAHA, FASPC, FNLA, FPCNA (hon.)

*Gerald S. Berenson Endowed Chair in Preventative Cardiology
Professor of Medicine,
Tulane University School of Medicine*

Global Burden of Disease of Benign Gynecological Conditions

Christina Pardo, MD, MPH, FACOG

*Assistant Professor, Weill Cornell Medicine
Medical Director, Women's Health Practice
NewYork-Presbyterian - Ambulatory Care Network*

Uterine Myomas

Ambereen Sleemi, MD, MPH, MSc, FACOG, FURPS

*Co-Founder, Executive Director and Surgical Director
International Medical Response Foundation*

1:30PM - 3:00PM

3:00PM - 3:15PM

Question and Answer Session

AGENDA

3:15PM - 3:30PM

Break: 15-minutes

Panel Discussion: Mental Health and Trauma-informed Care

Wisdom, Courage and Hope: Effective Interdisciplinary Care
for Survivors of Torture and Forced Migrant Populations

Hawthorne E. Smith, PhD

Director, Bellevue Program for Survivors of Torture

President - National Consortium of Torture Treatment Programs

Getting to the Root: Examining Trauma Conscious Care
from a Decolonized Lens

3:30PM - 4:30PM

Krystal Miller, LCSW, CIMHP, Spiritual Herbalist

Holistic Practitioner and Clinical Psychotherapist

Melanated Masks

The Significance of Culturally Informed Care
for Vulnerable Populations with Mental Illness

Asa T. Briggs, DNP, PMHNP, MA

Psychiatric Nurse Practitioner

Briggs Psychiatry & Behavioral Health, PC

4:30PM

Closing Remarks and Adjournment



Ensuring optimal kidney health for all: The past, the present, and the future

DINUSHIKA MOHOTTIGE, MD, MPH

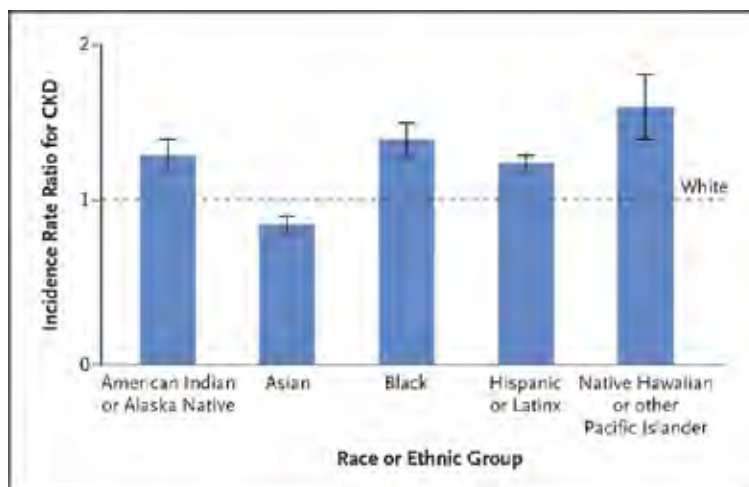


What racial disparities exist in kidney disease and associated chronic conditions?



DKD DISPARITIES

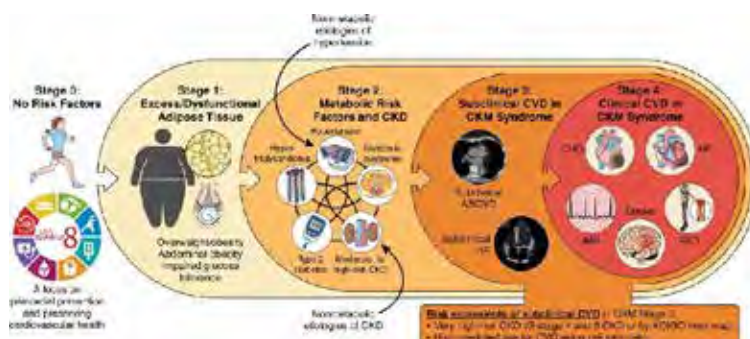
Incident rate-ratios for CKD among individuals with diabetes are higher for NHPI, Black, Hispanic/Latinx, and AIAN individuals vs. White individuals



Tuttle Katherine, R., Jones Cami, R., Daratha Kenn, B., Koyama Alain, K., Nicholas Susanne, B., Alicio Radica, Z., Duru, O. K., Neumiller Joshua, J., Norris Keith, C., Rios Burrows, N., & Pavkov Meda, E. (2022). Incidence of Chronic Kidney Disease among Adults with Diabetes, 2015–2020. *New England Journal of Medicine*, 387(15), 1430–1431. <https://doi.org/10.1056/NEJMc2207018>

CKM DISPARITIES

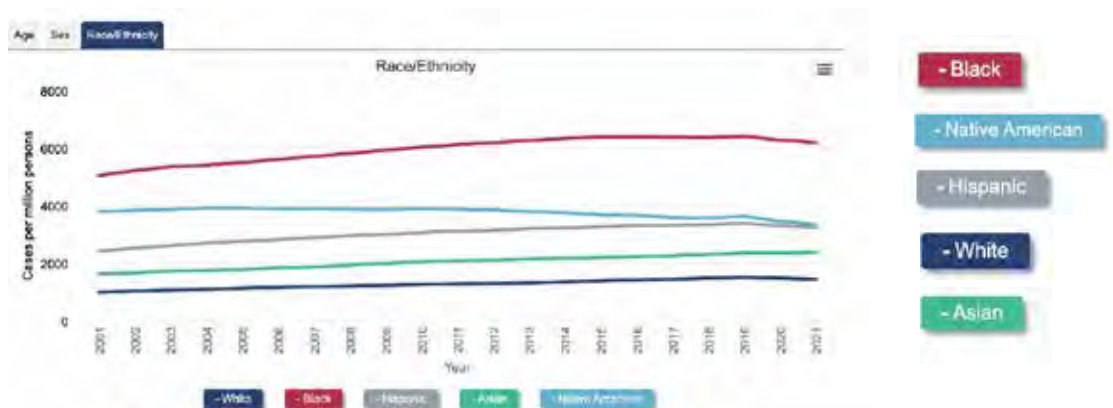
Racial/ethnic minority individuals and men have a **greater prevalence ratio** of advanced cardiovascular kidney metabolic syndrome stages vs. White and female counterparts





ESKD DISPARITIES

Adjusted ESKD prevalence by race and ethnicity in U.S. 2001-2021



Black individuals have a persistent 3-4 fold higher incidence of ESKD versus White counterparts.

NIH NIDDK USRDS

PRE-DIALYSIS CARE



Racial and ethnic disparities in receipt of 12 months of nephrology care did not improve between 2005-2015 among individuals with ESKD



UNEQUAL DISCUSSIONS

Black individuals, women and people who made less than \$20,000 a year were less likely to have a transplant discussion than dialysis



Tyler M. Barrett, Clementina A. Davenport, Patti L. Ephraim, Sarah Peskoe, Dinushika Mohottige, Nicole DePasquale, Lisa McElroy, L. Ebony Boulware Disparities in Discussions about Kidney Replacement Therapy in CKD Care Kidney360 Jan 2022.

UNEQUAL PRESCRIBING

Predictors, Disparities, and Facility-Level Variation: SGLT2 Inhibitor Prescription Among US Veterans With CKD

Setting & Participants	Variables & Outcomes	Results
Retrospective cohort N = 174,443 US veterans Comorbidities: T2DM, CKD, ASCVD Primary care visit between Jan-Dec 2020	Race: Black vs White Sex: Women vs Men Individual VA location: Median rate ratios (MRR) (likelihood that 2 randomly selected VA facilities differ in SGLT2i use among similar patients)	SGLT2i prescription was low N = 20,024 (11.5%) Lower odds of prescription was seen in Black vs White patients OR = 0.87 (0.83-0.91) Lower odds of prescription among women vs men OR = 0.59 (0.52-0.67) Large variations exist between VA facilities MRR = 1.58 (1.48-1.67)

CONCLUSION: Prescription for SGLT2 inhibitors was low among likely eligible patients, with evident disparities by sex and race and between individual VA facilities.

L. Parker Gregg, David J. Ramsey, Julia M. Akeroyd, et al

@AJKDonline | DOI: 10.1053/j.ajkd.2022.11.017

AJKD



LDKT DISPARITIES

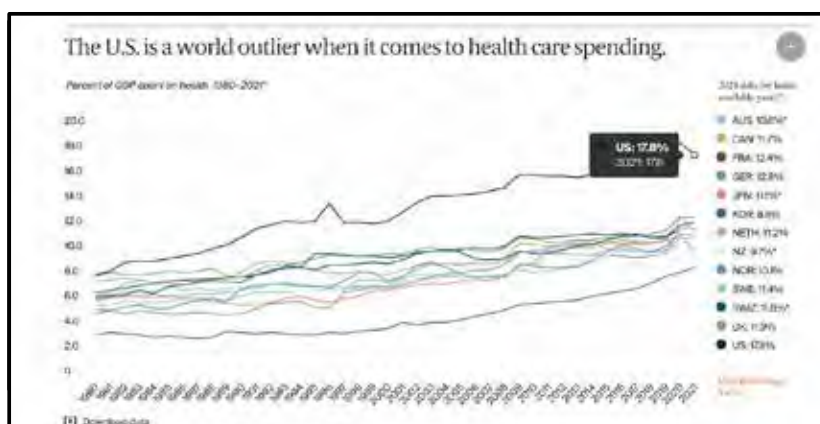
Have Racial and Ethnic Disparities With Live Donor Kidney Transplantation (LDKT) Changed From 1995 to 2014?



COST > RETURN

US life expectancy at birth is lower than the OECD average despite significantly higher US spending on health care

White individuals are not faring better in health outcomes compared to peers in OECD nations





EARLY DETECTION

Race, sex, and age related differences in estimated GFR are components of prior patient-facing educational materials which previously reinforced the idea that **race confers fundamental biological difference in kidney function**

THE SAME SERUM CREATININE: VERY DIFFERENT eGFR			
	22-YR-OLD BLACK MAN	59-YR-OLD WHITE MAN	80-YR-OLD WHITE WOMAN
Serum creatinine	1.2 mg/dL	1.2 mg/dL	1.2 mg/dL
GFR as estimated by the MDRD equation	98 mL/min/1.73 m ²	66 mL/min/1.73 m ²	45 mL/min/1.73 m ²
Kidney function	Normal GFR or stage 1 CKD if kidney damage is also present	Stage 2 CKD if kidney damage is also present	Stage 3 CKD

RACIALIZED HARMS

981,038 new individuals with GFR 30-59 (RAS-I, SGLT2-inhibitor use)

67,957 with new GFR <30 who need KRT education and discussion re: LDKT

Removal of Black race coefficient resulted in reduction by **1.9** years in median wait time for transplant eligibility (eGFR <20)



CKD is classified based on:		Albuminuria categories		
		Description and range		
GFR category (mL/min/1.73 m ²)	Description and range	A1	A2	A3
		Normal to mildly increased <30 mg/g <3 mg/mmol	Moderately increased 30-299 mg/g 3-29 mg/mmol	Severely increased ≥300 mg/g ≥30 mg/mmol
G1	Normal or high	≥90	1 if CKD	Treat 1
G2	90-59 mL/min/1.73 m ²	1 if CKD	Treat 1	Refer* 2
G3a	Mildly to moderately decreased	45-59	1 if CKD	Treat 2
G3b	Moderately to severely decreased	30-44	1 if CKD	Treat 3
G4	Severely decreased	15-29	Refer* 2	Refer* 4+
G5	Kidney failure	<15	Refer 4+	Refer 4+

Bojko-Grethner J, Zhang X, Li D, et al. Prevalence of Chronic Kidney Disease Among Black Individuals in the US After Removal of the Black Race Coefficient From a Glomerular Filtration Rate Estimating Equation. *JAMA Network Open*. 2021;4(1):e2020536. doi:10.1001/jamanetworkopen.2020.3553

Davis AJ, Wu G, Taylor HA, et al. Clinical Implications of Removing Race From Estimates of Kidney Function. *Jama*. 2020.

Zhang X, Li D, Liang Y, et al. Association of the estimated glomerular filtration rate with or without a coefficient for race with time to eligibility for kidney transplant. *JAMA Network Open*. 2021;4(1):e2020404.

Verhaegh A, et al. "Racial" coefficient in diagnosis and management of chronic kidney disease for the primary care clinician. *The American journal of medicine*. 133(2):2010-2014.

North KD, Edwards ND, Bushnell LA. Removal of Race From Estimates of Kidney Function: First Do No Harm. *Jama*. 2020.

Huang M, et al. (2020). "Removal of the Black race coefficient from the estimated glomerular filtration equation improves transplant eligibility for Black patients at a single center." *Clin Transl Med* 10(2): e14487.

Huang L, et al. (2021). "New Creatinine- and Cystatin C-based Equations to Estimate GFR without Race." *New England journal of Medicine* 384(19): 1737-1746.

Bouillon-Bu, et al. (2020). "Removal of the Black race coefficient from the estimated glomerular filtration equation improves transplant eligibility for Black individuals: Examining the implications of proposed kidney function estimating equations." *JAMA Network Open*. 2021;4(1):e2020405.



RACE: SOCIO-POLITICAL



Measuring Race and Ethnicity Across the Decades: 1790–2010 Mapped to 1997 U.S. Office of Management and Budget Classification Standards



What progress did we make?



RESTORING TRUST



Widely used test kept Black people from getting kidney transplants sooner. Now that's changing.



RESTORATIVE POLICY

>18,000 individuals had wait time modified with a **median of 1.7 years** returned

Race-Neutral Estimates of Kidney Function: Enhancing Equity



In January 2023, the U.S. Organ Procurement & Transplantation Network (OPTN) reported that the waitlist for kidney transplant had increased for Black patients. In a follow-up study, Dr. David Asch, MD, MPH, and Dr. David Asch, MD, MPH, found that the use of a race-neutral coefficient in the calculation of eGFR led to a significant reduction in waitlist time for Black patients.

January 11, 2023 | 1 min read

Black patients impacted by eGFR race coefficient can modify transplant waitlist time





RACE-BASED HARMS

KDPI Race Variable Found to Up Black Donor Kidney Discard Rate

Natalie Perrell



VOICES FOR A SOBER HEALTH

Take Race Out of the Kidney Transplant Equation

Kidney Donor Profile Index



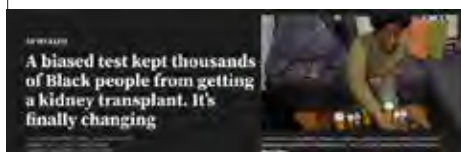
Race-based question removed from Kidney Donor Profile Index to improve transplant equity

By Steve Walicki



Kidney donors will no longer have to answer a race-based question, the National Kidney Foundation announced Monday. The organization is aiming to increase equity of kidney transplantation while increasing the safety for nearly 80,000 people on the waitlist of kidney transplant every day. The move is...

RESTORING TRUST



Immunosuppressive Drug Coverage for Medicare Patients is Here



IAAP Social Needs Screening Tool

1. Does the patient have any of the following social needs?
a. Food insecurity
b. Housing instability
c. Transportation barriers
d. Financial concerns
e. Social isolation
f. Limited health literacy
g. Other (specify):

2. How many of the above social needs does the patient have?
a. 0
b. 1
c. 2
d. 3 or more

3. How many of the above social needs does the patient have?
a. 0
b. 1
c. 2
d. 3 or more

Kidney Health For All

Advancing equitable access to care and optimal medication practice



January 17, 2023 | 11 min read

Black patients impacted by eGFR race coefficient can modify transplant waitlist time

Restoring the Harms of Race-Based Kidney Function Calculations

Restoring the Harms of Race-Based Kidney Function Calculations

Black patients who have been impacted by the eGFR race coefficient can now modify their transplant waitlist time. This is a significant step towards restoring equity in kidney transplantation.

The eGFR race coefficient has been a source of controversy for years, as it has been found to disproportionately impact Black patients. The National Kidney Foundation (NKF) has announced that it will remove the race coefficient from its eGFR calculations, which will result in a more accurate assessment of kidney function for all patients.

For Black patients who have been impacted by the eGFR race coefficient, this change will result in a higher eGFR value, which will move them up the transplant waitlist. This is a significant step towards restoring equity in kidney transplantation.

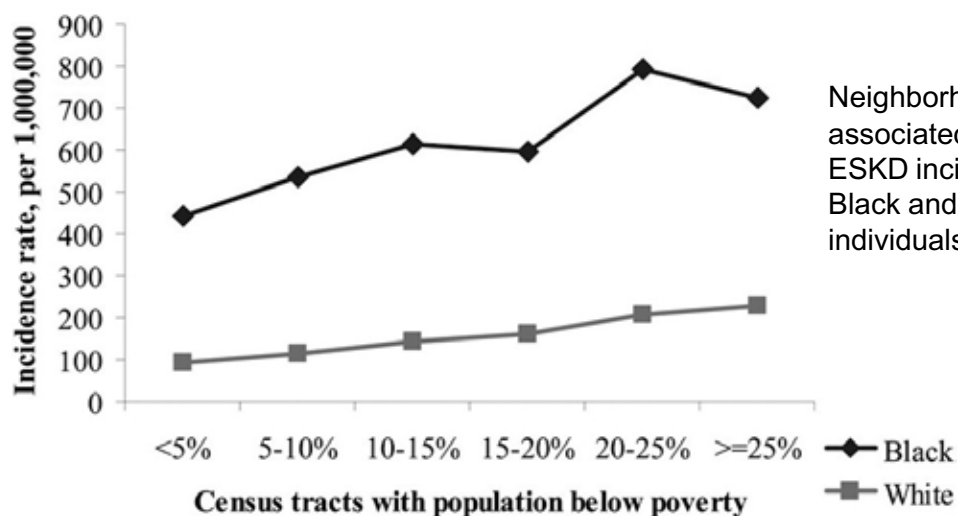
The NKF has also announced that it will provide a tool to help patients understand their eGFR value and how it impacts their waitlist time. This tool will be available on the NKF website and will be updated regularly to reflect the latest research.

This change is a significant step towards restoring equity in kidney transplantation. It is a step towards ensuring that all patients have access to the care they need, regardless of their race or ethnicity.



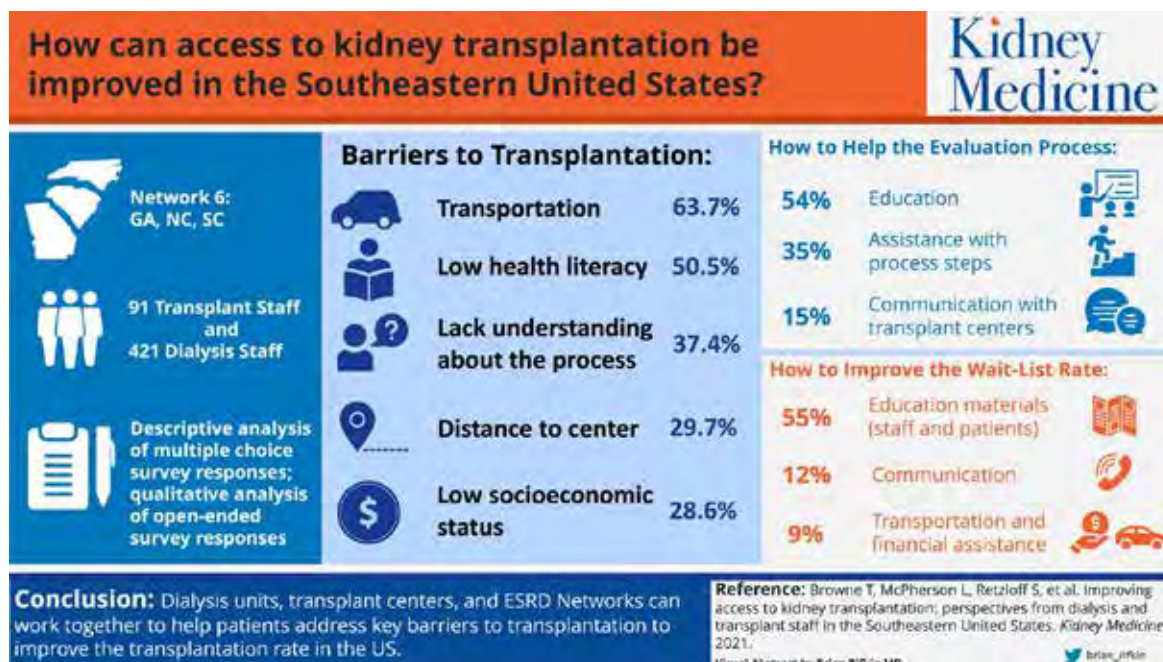
How is structural inequality linked to kidney health disparities?

POVERTY AND ESKD RISK



Volkova N. et al; Neighborhood Poverty and Racial Differences in ESRD. JASN; 2008 19(2):356-364

JASN



23

BIAS IN CHARTS



Compared with White patients, Black patients had **2.54 times** the odds of having at least one negative descriptor in the history and physical notes

Sun, M. et al. (2022). "Negative Patient Descriptors: Documenting Racial Bias In The Electronic Health Record." *Health Affairs* 41(2): 203-211.
A. P. Godde, K. J. O'Connor, S. Landron, M. O. Saheed, S. Saha, M. E. Peak, C. Haywood, Jr., and M. C. Beach. 2018. "Do Words Matter? Stigmatizing Language and the Transmission of Bias in the Medical Record." *J Gen Intern Med* 33 (5):685-691. doi: 10.1007/s11606-017-4289-2.
Illustration Mike Cassi, Johns Hopkins University

HealthAffairs



CONTEXT MATTERS



Sometimes I have to sit and wait at least an hour and I have to call and say my ride is not here yet, which makes me late getting there, which makes me late getting on the machine...and then coming to pick you up if you're not ready when they get there they will leave you and you'll have to sit and wait and wait....

|| 84% of Nephrology social workers report public transport issues lead to shortened dialysis treatments

STRUCTURAL INEQUALITY

Environmental, and occupational inequity

Psychosocial stressors



Inequity in health care access and delivery

Targeted marketing of health-harming products

Neighborhood resources: redlining and disinvestment

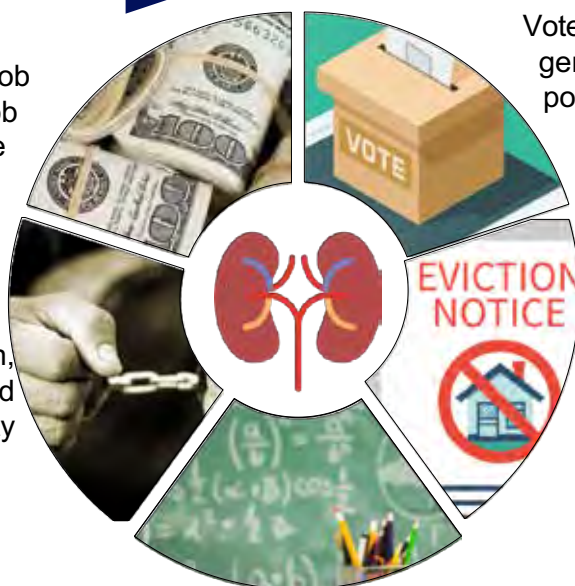
Bailey ZD, Krueger N, Agüero M, Graves J, Liao N, Bassett MT. Structural racism and health inequities in the USA: evidence and interventions. *The Lancet*. 2017; 389(10077): 1453-1463.
Mchizige D, et al. (2021). "Time to Repair the Effects of Racism on Kidney Health Inequity." *American Journal of Kidney Diseases*.
Pumell, T. S., et al. (2021). "Dismantling structural racism as a root cause of racial disparities in COVID-19 and transplantation." *American Journal of Transplantation* n/a(n/a).



STRUCTURAL INEQUALITY

Economic inequity, job discrimination, job segregation, wage inequity

Criminalization, policing and neighborhood safety



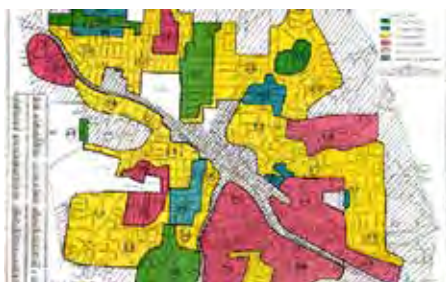
Voter disenfranchisement/ gerrymandering/lack of political representation

Housing insecurity/ unregulated gentrification and racialized disinvestment

Educational inequity

Mohdjee, D., et al. (2021). "Time to Repair the Effects of Racism on Kidney Health Inequity." *American Journal of Kidney Diseases*.
 Punnett, T. S., et al. (2021). "Dismantling structural racism as a root cause of racial disparities in COVID-19 and transplantation." *American Journal of Transplantation* *wa/na*.
 Abou ZD, Robinson WK, Pittman L, Doll MA. Incorporating Measures of Structural Racism into Population Studies of Reproductive Health in the United States: A Narrative Review. *Health Equity* 2023; Krueger N, Aginor M, Graves J, Liao N, Bassett MT. Structural racism and health inequities in the USA: evidence and interventions. *The Lancet* 2017; 389(10077): 1453-1463.

RACISM AND CKD



14. RACIAL RESTRICTIONS. No property in said addition shall at any time be sold, conveyed, rented or leased in whole or in part to any person or persons not of the White or Caucasian race. No person other than one of the White or Caucasian race shall be permitted to occupy any property in said addition or portion thereof or building thereon except a domestic servant actually employed by a person of the White or Caucasian race where the latter is an occupant of such property.





Durham NC: Mid-sized US city of nearly 269,702
US news and world report “# 2 among best places to live”
50 fastest growing U.S. Cities
39% Black, 42% White, 14% Latinx

DATA SOURCE

• **Electronic health data** from patients in Duke Health Systems and at Durham County’s Federally Qualified Health Center

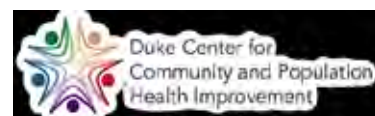
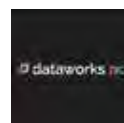
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• **Novel locally and nationally sourced socio-contextual data** (at census block group level)

 **Duke Clinical & Translational Science Institute**

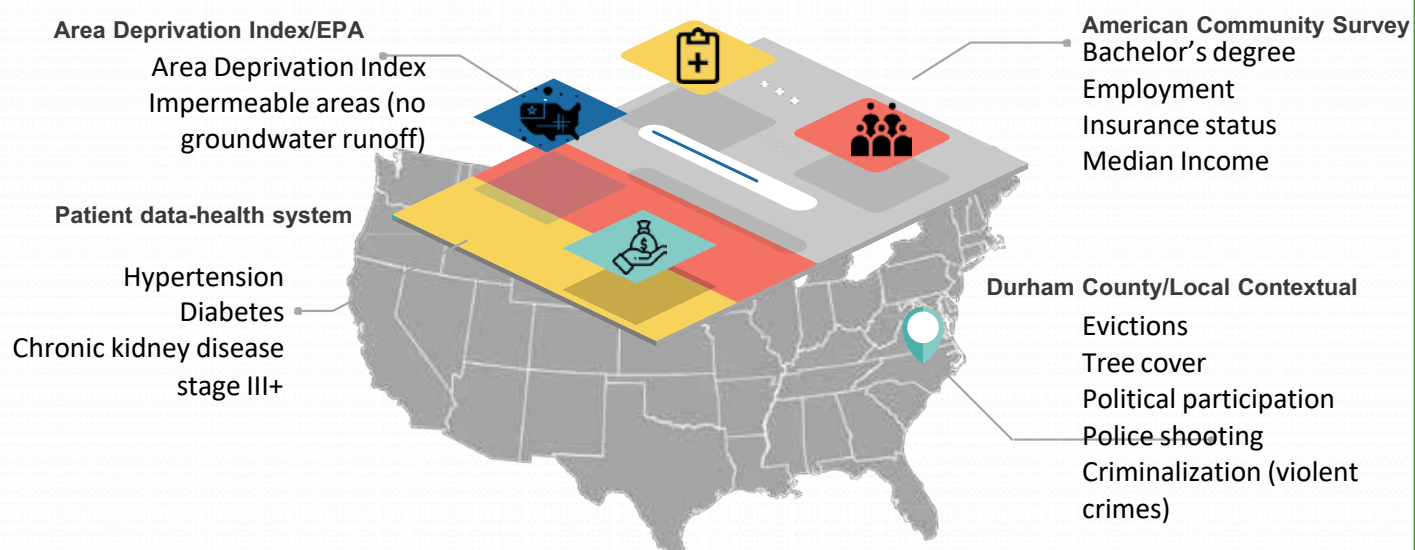


Public Health





Multi-layer, multi-source data



COMMUNITY PROFILE

Black / White / Latinx

Retirement age

Median Income (Mean \$58,529)

Bachelor's degree or more (Mean 44.1%)

Commute to work by bike

Near fast food/convenience stores

Property "crimes" per square mile

Primary election voting %

REDLINED HAYTI

70% 12% 13%

7.8%

\$21,259

7%

0%

100%

491

11.9%

WATTS- HILLDALE

6% 83% 6%

10.1%

\$85,328

58%

8%

10-15%

121

58%



THE ROLE OF RACISM

Structural racism constructs are associated with CKD, Diabetes, and Hypertension prevalence

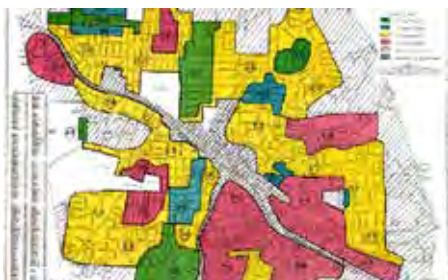


Table 3. Association of Composite and Discrete Structural Racism Constructs With Neighborhood Chronic Kidney Disease, Diabetes, and Hypertension Prevalence, Adjusted for Median Age of Residential Neighborhood Population and Spatial Correlation

Measure	Estimated adjusted prevalence ratio (95% highest density interval) ^a		
	Chronic kidney disease	Diabetes	Hypertension
Composite measures of structural racism			
Percentage of White population, per 1-SD decrease	1.27 (1.18-1.35)	1.43 (1.37-1.52)	1.19 (1.14-1.25)
White ≥\$100,000 IGE-RI, per 1-SD decrease	1.27 (1.20-1.35)	1.35 (1.28-1.44)	1.14 (1.09-1.19)
ADI	1.25 (1.18-1.32)	1.15 (1.10-1.43)	1.15 (1.10-1.19)
Discrete measures of structural racism			
Child care centers	1.10 (1.03-1.17)	1.14 (1.07-1.22)	1.08 (1.03-1.13)
Homes near bus stops	1.03 (0.97-1.14)	1.08 (0.99-1.17)	0.97 (0.92-1.03)
Tree cover, per 1-SD decrease	1.04 (0.96-1.12)	1.04 (0.96-1.12)	0.96 (0.92-1.01)
Violent crimes	1.15 (1.07-1.23)	1.20 (1.13-1.28)	1.08 (1.02-1.14)
Impervious area	1.01 (0.94-1.09)	0.99 (0.92-1.07)	0.93 (0.88-0.98)
Eviction rate	1.09 (1.02-1.17)	1.14 (1.07-1.22)	1.07 (1.02-1.12)
Primary election participation, per 1-SD decrease	1.15 (1.06-1.23)	1.32 (1.23-1.41)	1.05 (1.01-1.14)
Median household income, per 1-SD decrease	1.19 (1.12-1.28)	1.25 (1.18-1.33)	1.08 (1.03-1.14)
Poverty rate	1.14 (1.06-1.22)	1.23 (1.15-1.31)	1.07 (1.02-1.13)
Percentage with Bachelor's degree, per 1-SD decrease	1.22 (1.15-1.3)	1.3 (1.23-1.37)	1.16 (1.12-1.22)
Percentage unemployed	1.08 (1.03-1.16)	1.15 (1.08-1.22)	1.06 (1.01-1.11)
Percentage uninsured	1.15 (1.05-1.24)	1.24 (1.17-1.32)	1.19 (1.05-1.16)
Police shootings	1.01 (0.95-1.08)	1.06 (0.99-1.13)	1.02 (0.96-1.07)

Mohottige D, Davenport CA, Bhavsar N, et al. Residential Structural Racism and Prevalence of Chronic Health Conditions. *JAMA Netw Open*. 2023;6(12):e2348914. doi:10.1001/jamanetworkopen.2023.48914



What about OTC product marketing and CKD?



CASE PRESENTATION



A 52-year old man sees you to establish care in clinic. He has 14 years of poorly controlled diabetes and high blood pressure. He is a LCHC patient. He has macro-albuminuria and his Cr is 2.6 mg/dl. He denies ibuprofen and other NSAID use but tells you his back pain has gotten so bad, he uses a few headache powders each day.

WHY POTENT NSAIDS?

NSAID use common in CKD

NSAID use occurs in spite of CKD recognition

Poverty associated with lower NSAID knowledge and safety

NSAID Use persists post-AKI

No studies examine analgesic powder use





WHY POTENT NSAIDS?



No FDA warning for kidney health on single-use packets

Sold as BC, Goody, and Stanback powders

Each powder pack contains **500-1000mg** aspirin

SUMMARY OF DISPARITY



Price Promotion and Sales in Action and Safety

Cost of BC (2 pack) = \$0.99

Cost of Motrin (2 pill) = \$1.39

Cost of Tylenol (2 pill) = \$1.50

Advertised for < \$1.00

Ads use words "fast or best" and prominently feature the word "pain"

Ads and package do not contain a warning for kidney health



WHY POTENT NSAIDS?



Individuals with CKD are more likely to have pain.

Black and low SES individuals are less likely to have well-controlled pain compared to White

NIELSON MARKETING DATA



Consumer Panels

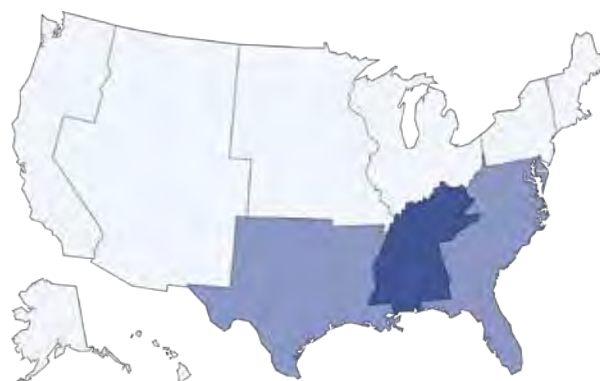


Data set:
longitudinal data track
40,000-60,000 US
households and
products from retail
outlets



NIELSON MARKETING DATA

		Weighted Purchased	No Purchase
Race	White	48,616 (3.6)	1,291,393 (96.4)
	Black	23,211 (4.7)	469,735 (95.3)
Income	<\$25,000	29,935 (6.8)	410,691 (93.2)
	\$100,000	7,068 (1.4)	487,881 (98.6)



% Purchased 0.00% - 1.25% 1.25% - 3.75% 3.75% - 5.00%

Consumer purchasing varies regionally, and by household income and race

Mohottige, D., Wilson, J.; Pendergast J; Diamantidis, B Benson K; and Boulware, L.E. under review

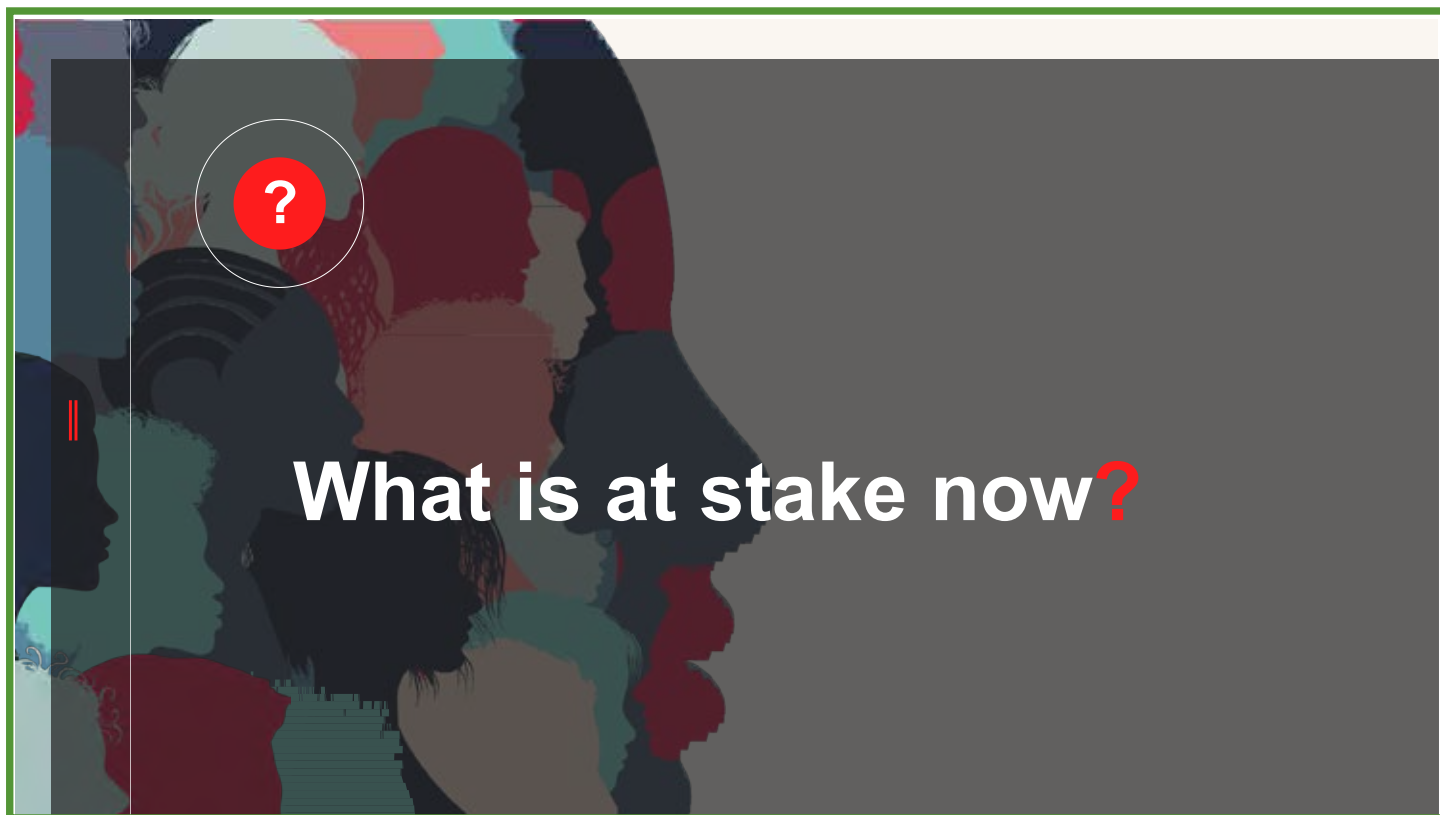
Disproportionate purchasing



- Households located in counties with greater social deprivation, greater marginalized population prevalence, and greater kidney disease prevalence had greater odds of high potency NSAID powder purchasing

Benson KRK, Diamantidis CJ, Davenport CA, Sandler RS, Boulware LE, Mohottige D. Racial Differences in Over-the-Counter Non-steroidal Anti-inflammatory Drug Use Among Individuals at Risk of Adverse Cardiovascular Events. J Racial Ethn Health Disparities. 2023 Aug 18. doi: 10.1007/s40615-023-01743-x.

Mohottige, Dinushika, Jonathan Wilson, Clarissa Diamantidis, Cleomantina Davenport, Kathryn Benson, and L Ebony Boulware. "PATTERNS OF 'HIGH-POTENCY LOW-COST' NSAID ANALGESIC POWDER PURCHASING IN THE US." In AMERICAN JOURNAL OF KIDNEY DISEASES, 81:S68-69, 2023.



ERASURE/CENSORING



Small text block, likely a caption or description of the sculpture.

Trump executive order targets the Smithsonian over 'divisive, race-centered ideology'

The exhibit further claims that "sculpture has been a powerful tool in promoting scientific racism" and promotes the view that race is not a biological reality but a social construct, stating "Race is a human invention."

From White House. GOV EO

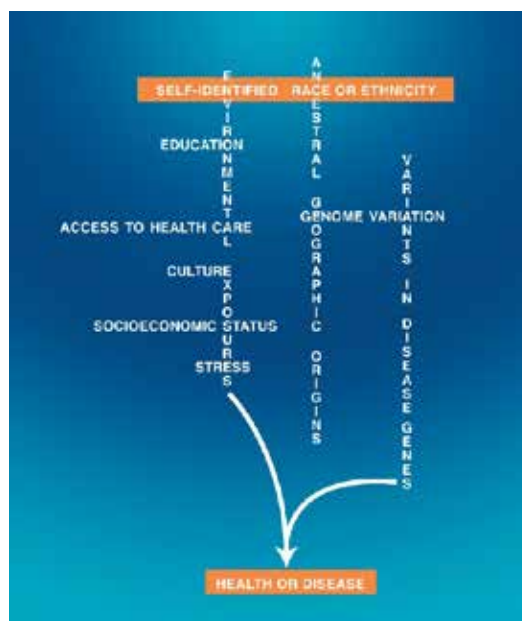


BEYOND RACE AND ETHN.

'Race' and 'ethnicity' are poorly defined terms that serve as **flawed surrogates** for multiple environmental and genetic factors in disease causation, including ancestral geographic origins, socioeconomic status, education and access to health care.

Research must **move beyond these weak and imperfect proxy relationships** to define the more proximate factors that influence health.

Francis Collins, MD, PhD
16th Director of the NIH
Nature Genetics 2004



RACE: SOCIO-POLITICAL



Measuring Race and Ethnicity Across the Decades: 1790–2010
Mapped to 1997 U.S. Office of Management and Budget Classification Standards





SICKLE CELL CASE STUDY

JAMA

This group

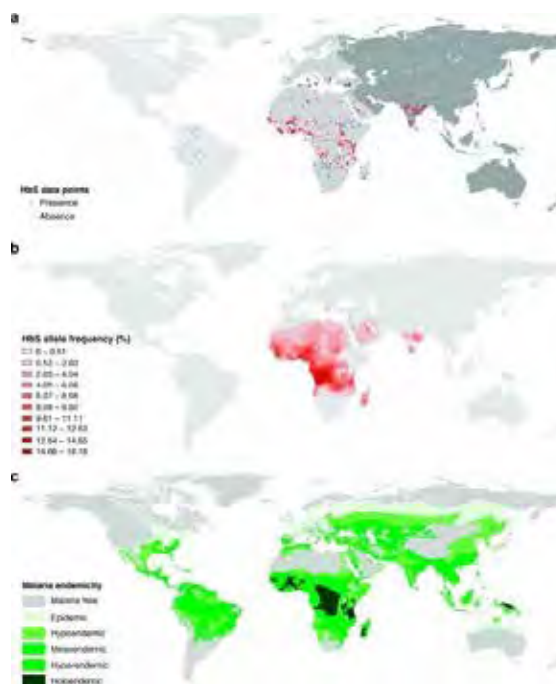
Article

January 4, 1947

SICKLE CELL ANEMIA, A RACE SPECIFIC DISEASE

JAMA. [042,1387] 2:1-14. <https://doi.org/10.1001/jama.1947.01000010000001>

Geography and evolution
explain the SS story: **not race**



Piel, Frédéric B et al. "Global distribution of the sickle cell gene and geographical confirmation of the malaria hypothesis." *Nature communications* vol. 1 104. 2 Nov. 2010. doi:10.1038/ncomms1104

ENSURE PRECISION

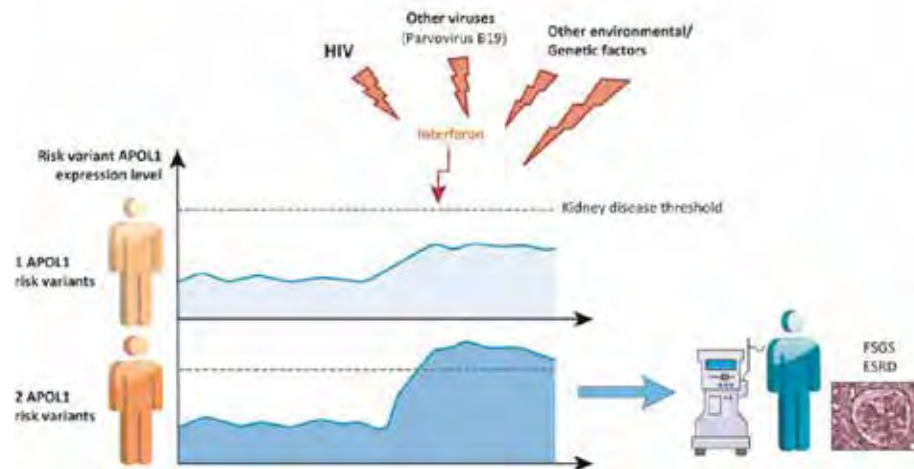
APOL1 risk alleles
impact individuals
across the globe,
including those who
may identify as Hispanic
or Latino/a and other
groups

**Assuming
race=genetics would
cause harm**





MULTI-HIT HYPOTHESIS



Second and third hits (which require further study) may increase kidney disease among those with APOL1 risk alleles

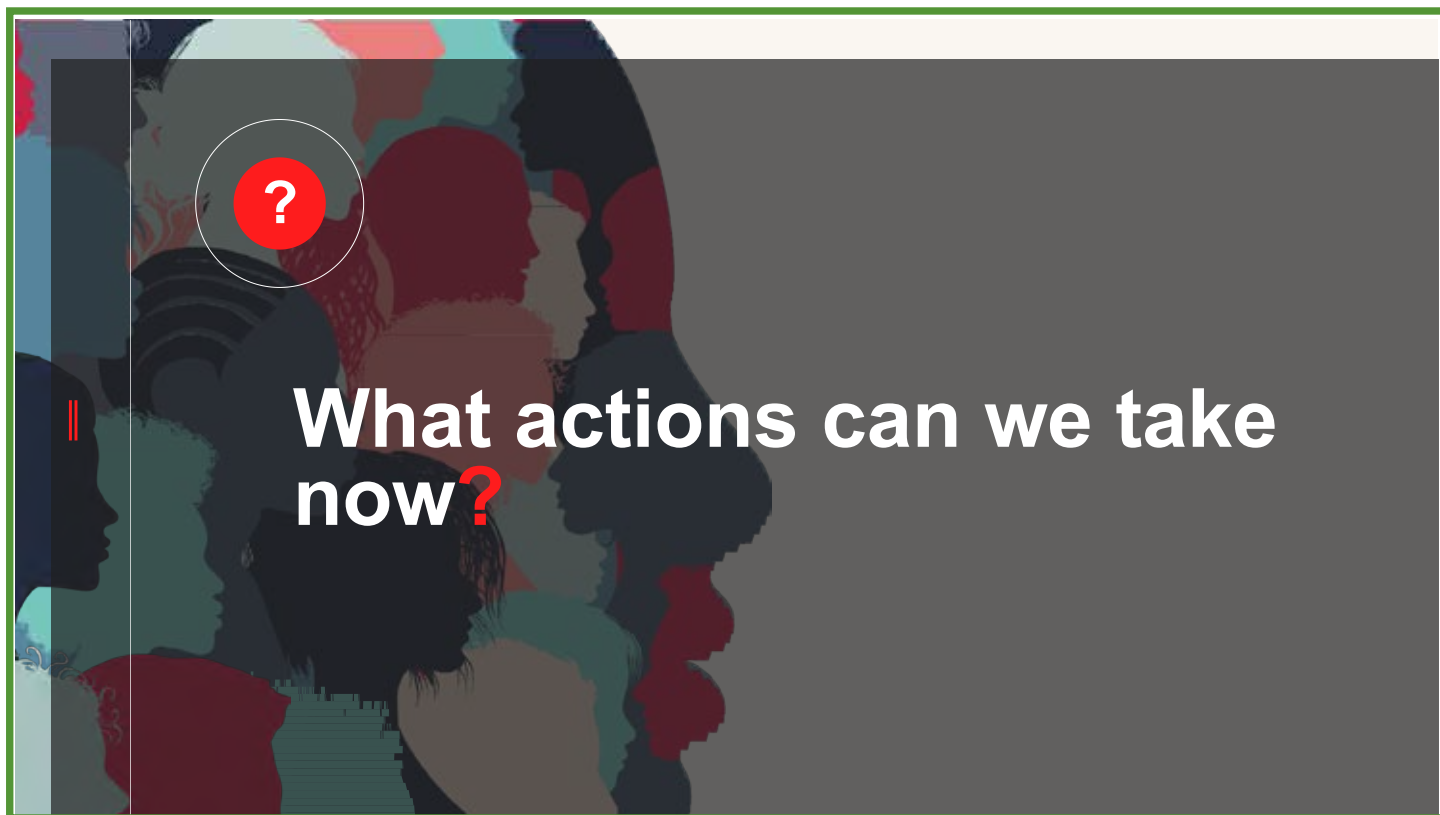
49

Beckerman P, Susztak K. APOL1: The Balance Imposed by Infection, Selection, and Kidney Disease. Trends Mol Med. 2018 Aug;24(8):682-695. doi: 10.1016/j.molmed.2018.05.008.

TERMINATION NOTICE: “This award is related to DEI: research programs based primarily on artificial non-scientific categories...are antithetical to scientific inquiry, do nothing to expand of our knowledge of living systems, provide low returns on investment and do not enhance or lengthen life or reduce illness.”

The perspective of most patients on our board was that the termination letter reads as:

“We don’t care if you die.”



RESIST MYTHS

Equity is not a zero sum game



When we ensure equal opportunities and resources for the most disadvantaged, we improve systems and outcomes for all of us.



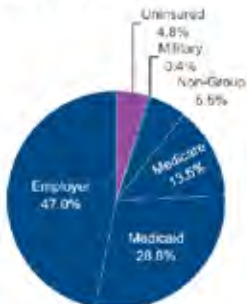


CONNECT THE DOTS

House Vote Tees Up Billions In Cuts To Medicaid, Disability Services

By Michelle Elamand, February 21, 2013

Figure 1
Health Insurance Coverage of the Total Population



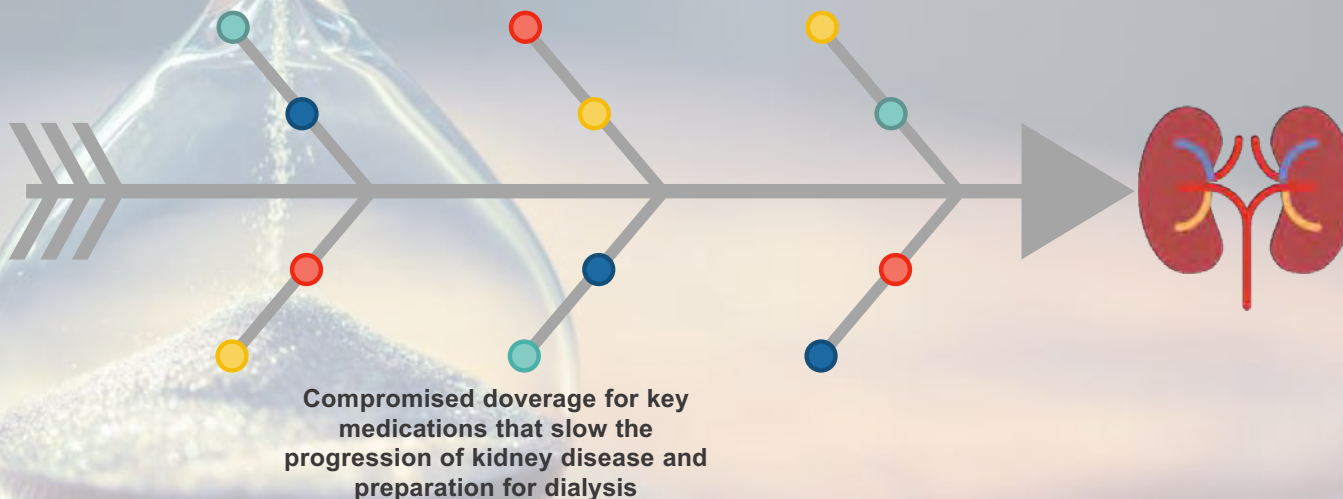
KFF



HOW COULD MEDICAID CUTS IMPACT OUR PATIENTS?

Before dialysis - more than 1 in 3 kidney patients rely on Medicaid before dialysis

Loss of access to home dialysis modalities and kidney transplant, navigators





INEQUALITY COSTS US

Total Burden
Estimated to be

\$451B
Nationwide

\$1,377
Per Person

This is equivalent to
2% of the GDP*

Burden by Racial & Ethnic Minority Groups

Black/African American	\$310B	69%
Hispanic/Latino	\$94B	21%
American Indian/ Alaska Native	\$36B	6%
Native Hawaiian/ Pacific Islander	\$12B	3%
Asian	\$0B	2%

Burden by Economic Components and Racial & Ethnic Minority Groups



LaVeist, T. A., Pérez-Stable, E. J., Richard, P., Anderson, A., Isaac, L. A., Santiago, R., Okoh, C., Breen, N., Farhat, T., Assenov, A., & Gaskin, D. J. (2023). The economic burden of racial, ethnic, and educational health inequities in the US. *JAMA*, 329(19), 1682-1692. doi:10.1001/jama.2023.5965

THE PATH FORWARD



Am I reinforcing stereotypes?

Does this blame the patient?

Does this include extraneous
information?

Is the language biased or
harmful?

How would my patient or their
loved one feel if they read this?



ENCOURAGE DISRUPTION

Community-partnered novel strategies to provide social support in the transplant journey can enhance transformative change



PARTNERED ADVOCACY

Speak clearly about the harm to patients and society at large

Partner to center and elevate the voices of community advocates





THANK YOU



You

Our generous patients caregivers and collaborators



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Equity in Kidney Care: Reducing Nephrotoxin Burden and Improving Acute Kidney Injury Outcomes

Eighth Annual World Health CME –
Health Disparities Impacting Global and Local Populations 2025

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SUNY Downstate Health Sciences University, Brooklyn, New York

Disclosure



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- ☐ Nothing to disclose



Objectives



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- Describe the impact of nephrotoxin burden
- Discuss strategies to mitigate risk of kidney injury and improve outcomes

Outline



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- Introduction
- Disparities in outcomes among Black patients
- Medication burden and acute kidney injury
- Recent evidence that can improve care
- Summary and key takeaways



Let's start with a case



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- A 45-year-old male African American presented to the hospital with acute respiratory symptoms. He was later diagnosed with severe community acquired pneumonia now admitted to the medical ICU.
- He has the following past medical history
 - ▣ Poorly controlled hypertension
 - ▣ Poorly controlled diabetes
 - ▣ Heart failure with reduced ejection fraction (EF-35%)



Let's compare these two patients



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- At the hospital, a Black patient receives



Diabetes,
Hypertension,
Heart failure

Nephrotoxic



Pneumonia

Nephrotoxic

- An otherwise healthy White man admitted for severe pneumonia.

- At the hospital, a white patient receives



Pneumonia

Nephrotoxic

*Who will be more likely to have
acute kidney injury?*



Prevalence of AKI and drug associated AKI



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Using KDIGO AKI definition
(worldwide)

- 21.6% in hospital, mortality rates of 24%

At an HBCU hospital (serving
75% Black patients)

- 34% developed hospital-acquired AKI

Drug
associated
AKI

- Prospective observational study, 54 hospitals in 23 countries
- 20% (74/355) of AKI associated with drugs
- Prospective observational study
- 25% (157/618) of AKI associated with drugs

3rd – 5th
leading
cause of AKI
= Drugs

JAMA. 2005;294(7):813-818.

Clin J Am Soc Nephrol. 2013;8(9):1482-1493.

Am J Nephrol. 2012;35(4):349-55.

Kidney Int. 2004;66(4):1613-1621.

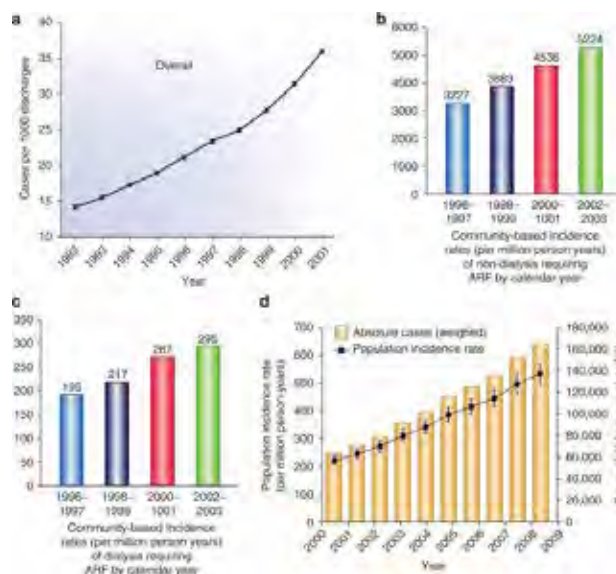
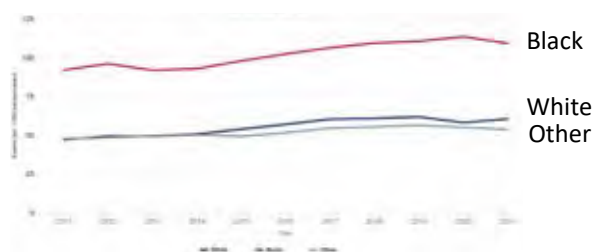
Pharmacy (Basel). 2022;10(4):68

Rising incidence of AKI



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- Over the past 2 decades, dramatic rises in the incidences of AKI have been reported, particularly within the United States.



Kidney Int. 2015;87(1):46-61.

United States Renal Data System. 2022 USRDS Annual Data Report: 2022.



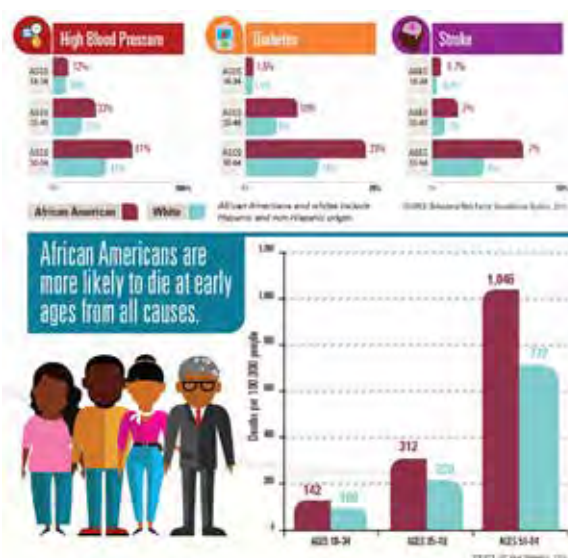
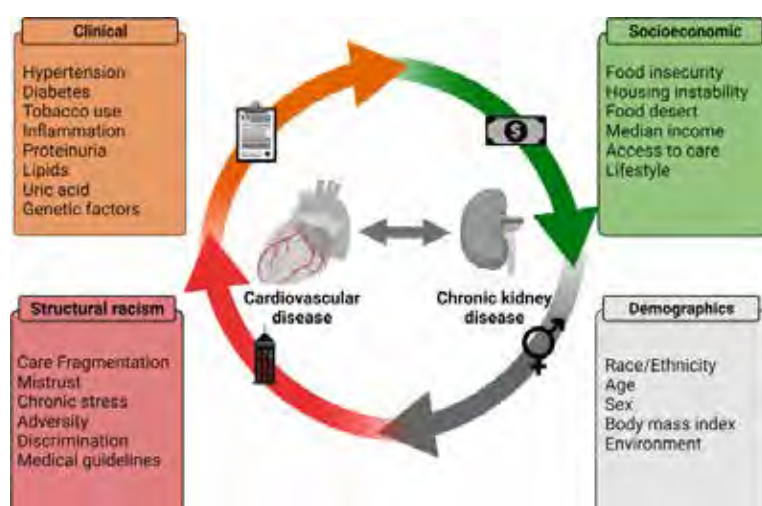
Race and incidence of AKI

- Black patients face higher risk of AKI

	Incidence in African Americans	Incidence in Caucasians	Incidence in Asians
2018 USRD Annual Data Report	34.3%	23%	25.9%
2016/2017 USRD Annual Data	30.4%	24.1%	24.2%

United States Renal Data System. 2016 USRDS Annual Data Report: 2016.
United States Renal Data System. 2018 USRDS Annual Data Report: 2018.
Clin Med. 2022 Sep 30;11(19):5822.

Why?



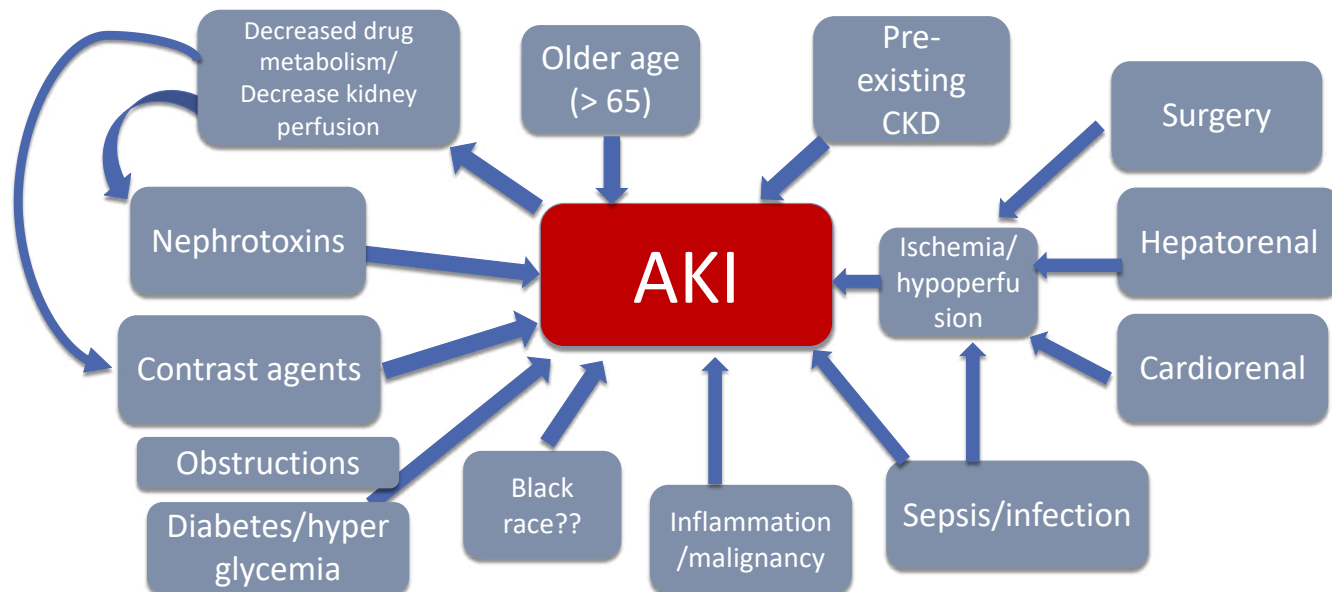
Curr Cardiovasc Risk Rep 16, 145–157 (2022)



Risk factors of hospital acquired AKI



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APOL-1 mediated kidney diseases (AMKD)



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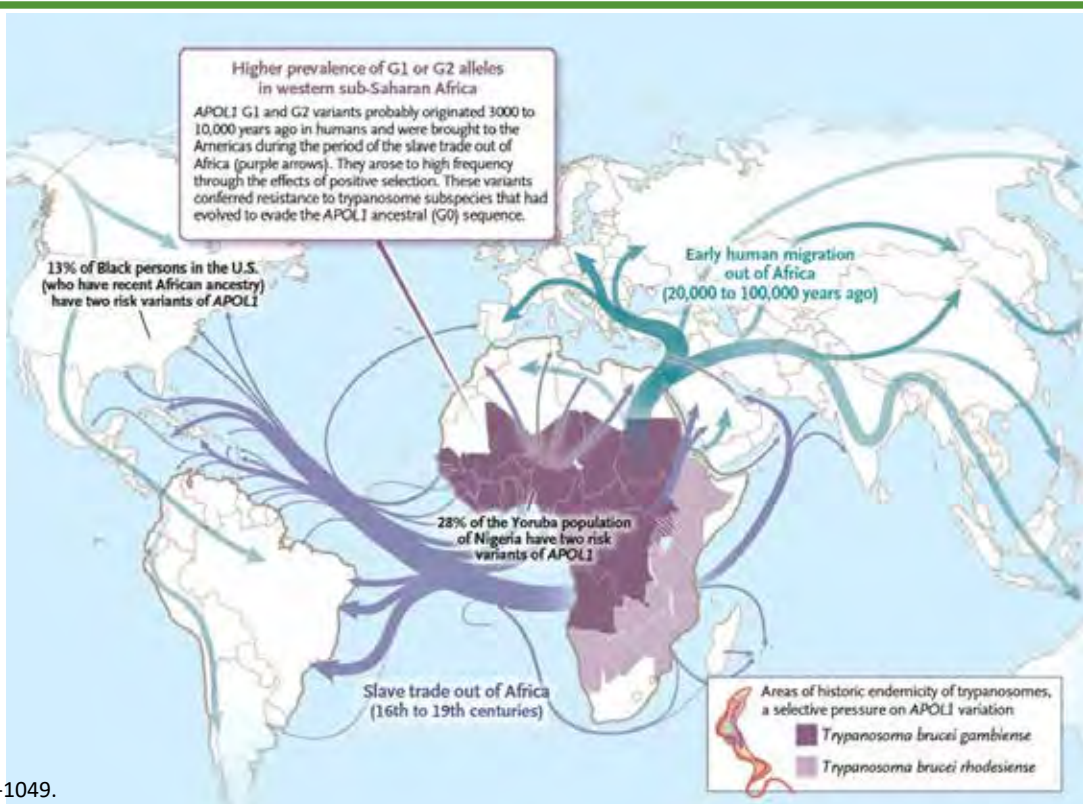
- APOL-1 gene was discovered in 1997
 - ▣ Coded from chromosome 22, recessive gene
- APOL-1 variants - Two specific APOL1 risk alleles are associated with increased kidney failure risk
 - ▣ G1- ~21% of Black individuals carry this haplotype.
 - ▣ G2- ~13% of Black individuals carry this haplotype.
 - ▣ G0- refers to a low-risk haplotype that does not contribute to kidney failure.
- High risk genotype: homozygosity for G1 or G2
- Low risk genotype: carriage of none or only 1 G1 or G2 allele





Who is at risk?

Global migration and the prevalence of G1/G2 variants



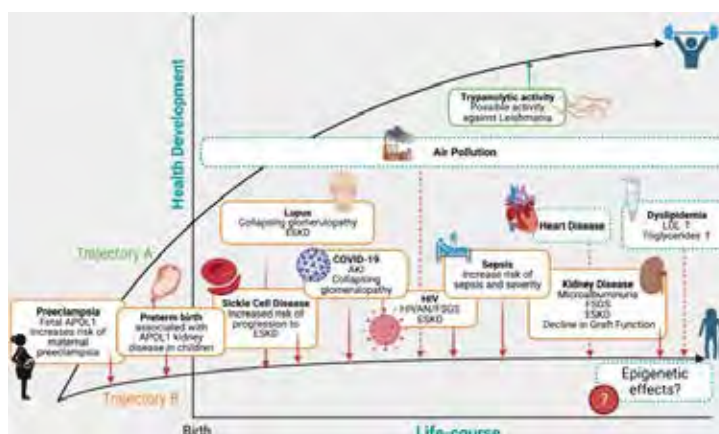
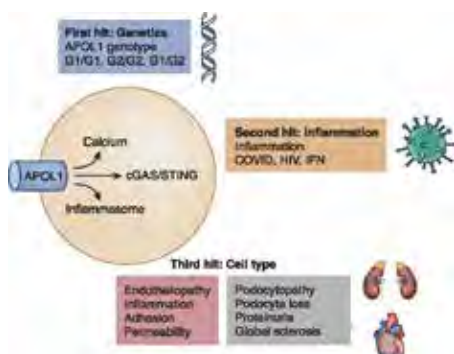
N Engl J Med. 2023;388(11):1045-1049.

APOL-1 mediated kidney diseases (AMKD)



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- However, not everyone with the genes will develop kidney failure
- Need additional exacerbating factors serving as a “second hit”



Am J Kidney Dis. 2024;84(1):102-110.



APOL-1 mediated kidney diseases (AMKD)



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> *Kidney Int Rep.* 2021 Oct 12;7(3):474-482. doi: 10.1016/j.ekir.2021.09.018. eCollection 2022 Mar.

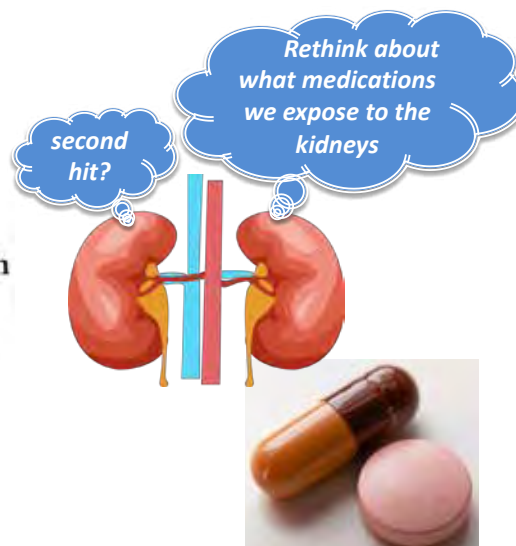
APOL1 Renal Risk Variants and Sickle Cell Trait Associations With Reduced Kidney Function in a Large Congolese Population-Based Study

> *JAMA Intern Med.* 2022 Apr 1;182(4):386-395. doi: 10.1001/jamainternmed.2021.8538.

APOL1 Risk Variants, Acute Kidney Injury, and Death in Participants With African Ancestry Hospitalized With COVID-19 From the Million Veteran Program

> *Kidney Int Rep.* 2021 Oct 16;7(3):483-493. doi: 10.1016/j.ekir.2021.10.009. eCollection 2022 Mar.

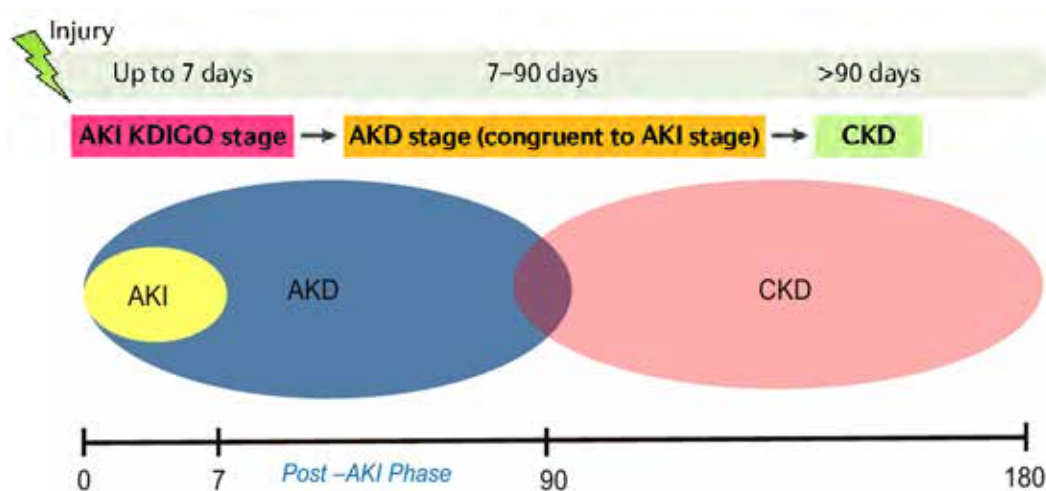
APOL1 Renal Risk Variants and Kidney Function in HIV-1-Infected People From Sub-Saharan Africa



Trajectory of kidney disease: AKI-AKD-CKD



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Nat Rev Nephrol 13, 241–257 (2017).

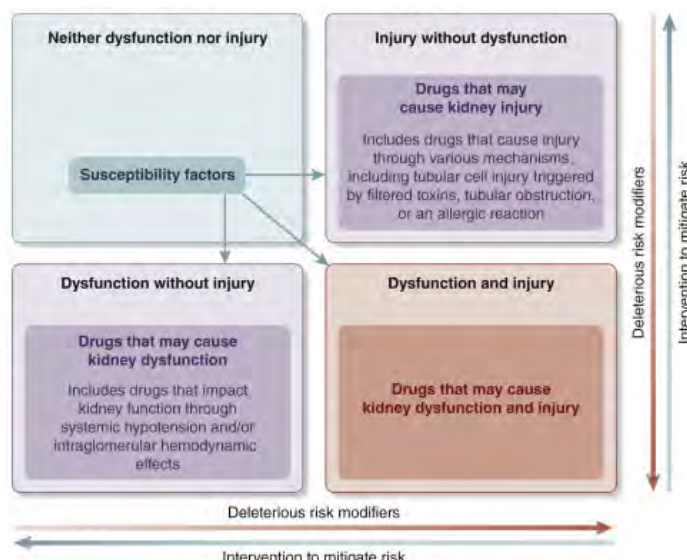


Drug associated AKI (D-AKI)



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- **New(er) system**
 - Nephrotoxins can cause AKI by more than one mechanisms
 - NSAIDs/Furosemide- pre-renal, ATN, AIN



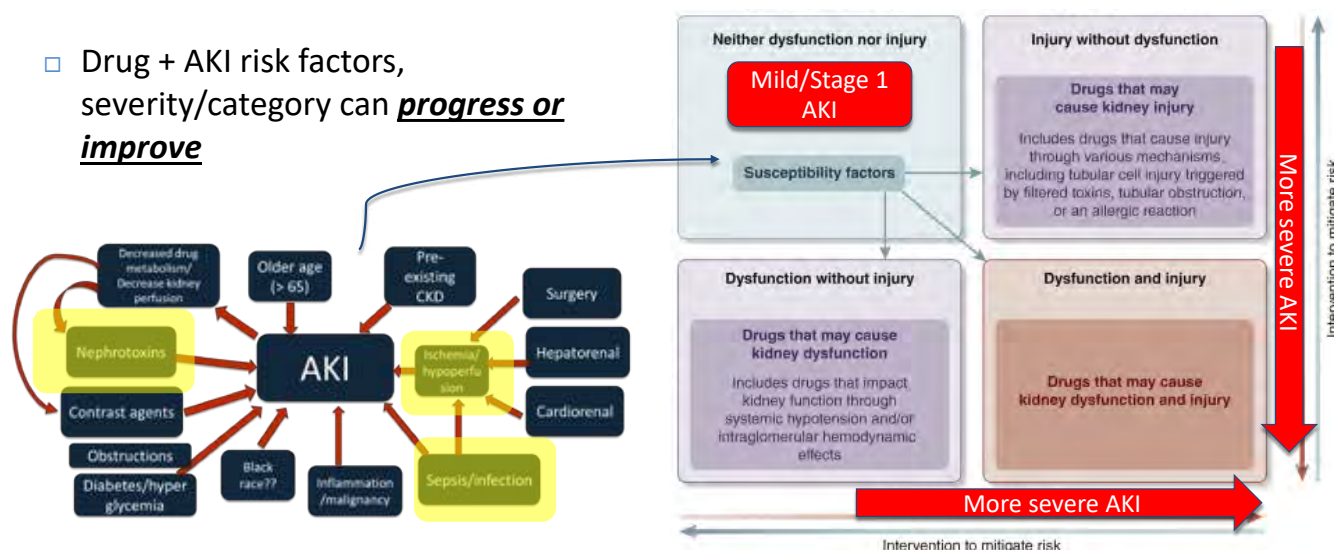
Crit Care. 2023;27(1):435.

Rethinking D-AKI classification: Movements between categories and preventions



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- Drug + AKI risk factors, severity/category can **progress or improve**





Not just agent. Duration also matters!



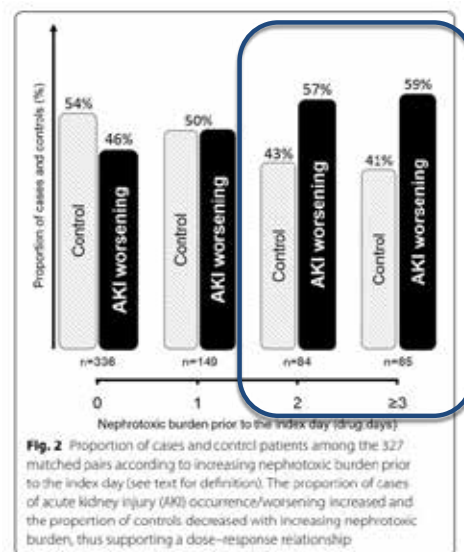
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Multicenter,
multinational
study

617 ICU patients

- Incidence of AKI and nephrotoxin burden
- Nephrotoxin burden = drug x days of therapy

High nephrotoxin
burden was
associated with
incidence of AKI



- Nephrotoxin burden= drug x day of exposure
- Duration- contributed to overall burden- influence risk of AKI

Ann Intensive Care. 2019;9(1):106.

Black vs non-Black hospitalized patients



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Black patient



Diabetes,
Hypertension,
Heart failure

Nephrotoxic



Pneumonia

Nephrotoxic

Non-Black patient



Pneumonia

Nephrotoxic

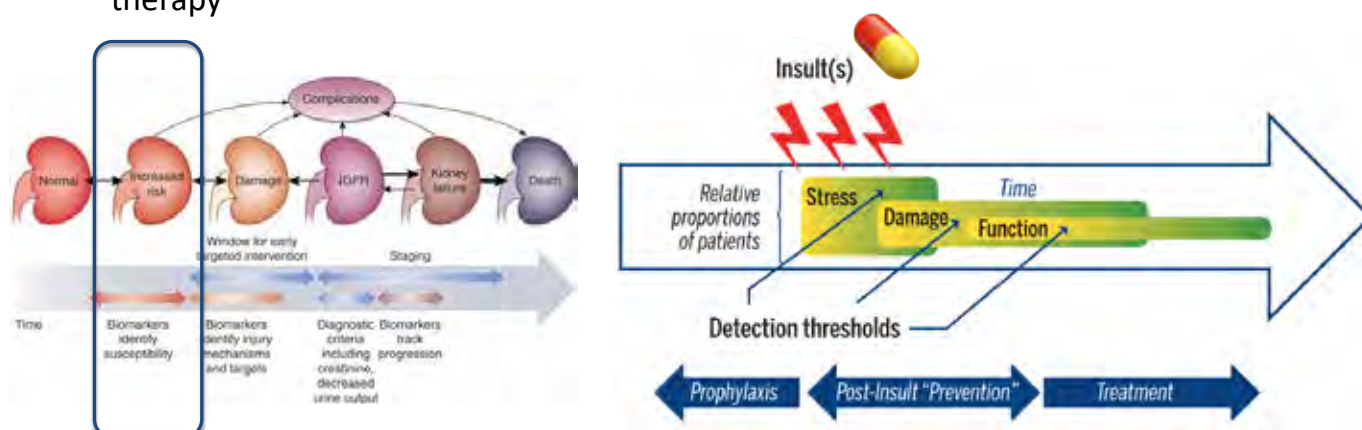
Nephrotoxin burden among Black patients is higher



Strategies to reduce nephrotoxin burden:

1. The use of novel stress biomarker

- Early detection of kidney damage prior to Scr change allows clinicians to modify therapy

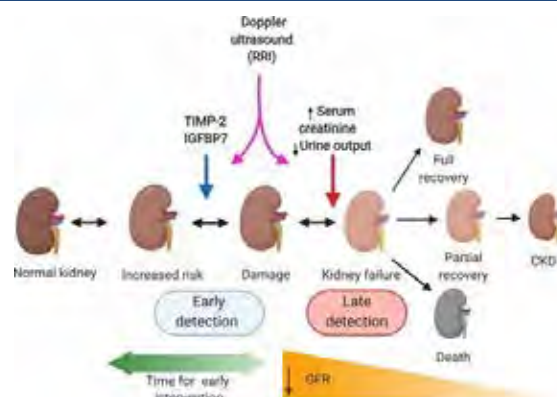
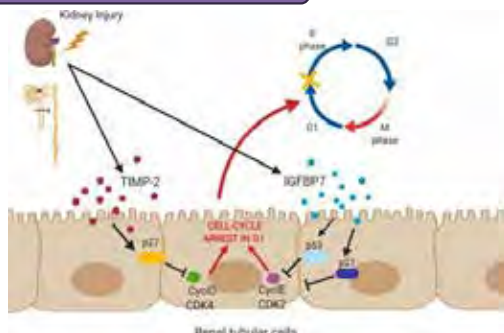


Kidney Int. 2014;85(3):513-521.

Strategies to reduce nephrotoxin burden:

1. The use of novel stress biomarker

Nephrotoxin exposure/stress



Biomarker	Predominant Nephron target site	FDA approval or qualified use in preclinical trials
Urine TIMP2-IGFBP7	TIMP2: Mostly distal tubule IGFBP7: Mostly proximal tubule	Approved by FDA as NephroCheck® test for critically ill, hospitalized patients aged 21 years or older to assess the risk of moderate-to-severe AKI within 12 hours of assessment

J Am Coll Clin Pharm. 2024; 7(8): 832-844.



Uptake of kidney stress biomarkers in medical literature



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Cardiac surgery

Abdominal surgery

Perioperative

Critical care

Sepsis

Pediatric population

Very limited amount of patient population are identified as Black or African American

Increase awareness and uptake of stress biomarkers

Strategies to reduce nephrotoxin burden: 2. Nephrotoxin Stewardship service



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- 2024 KDIGO guidelines define drug stewardship as:

"the effective, safe, and sustainable use of medications by all staff and physicians, encompassing the whole cycle of medication use."



Goal:





Strategies to reduce nephrotoxin burden: 2. Nephrotoxin Stewardship service



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Service's responsibilities

Review patient's
history,
nephrotoxin
exposure , AKI
risk factors

Estimate
accurate kidney
function
assessment

Utilize novel
kidney stress
biomarkers for
early detection
and early
intervention

Modify therapy
to change the
trajectory

J Am Coll Clin Pharm. 2024; 7(8): 832-844.

Strategies to reduce nephrotoxin burden: 3. Appreciate the ?effect? of APOL-1 mutation



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Identify patients
at risk

Genetic
screening

Control/limit
"second hit"

Modify therapy
to change
trajectory of
kidney disease



Summary



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- Black patients are at risk of acute kidney injury from multiple etiologies
 - ▣ Baseline pre-hospitalization risk factors
 - ▣ Higher medication burden that are nephrotoxic
 - ▣ Genetic component –APOL-1 mutation
- Strategies that can improve the care of Black patients
 - ▣ Recognize overall nephrotoxin burden
 - ▣ Utilize novel kidney stress biomarker
 - ▣ Utilize nephrotoxin stewardship

Thank you



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Contact: Jesse Rung PharmD BCPS FNKF

Department of Clinical and Administrative Pharmacy Sciences

Howard University College of Pharmacy

Email: dhakrit.rungkitwatt@howard.edu



Bridging the Gap: Addressing Disparities in Access to Kidney Transplantation

8th Annual World Health CME Health Disparities
Impacting Global and Local Populations

June 6, 2025

Anthony Watkins, MD, FACS

Objectives

- Overview of chronic kidney disease (CKD) and end stage renal disease (ESRD)
- Review disparities in ESRD
- Evaluate barriers to kidney transplantation
- Review initiatives aimed at improving equity in transplant access

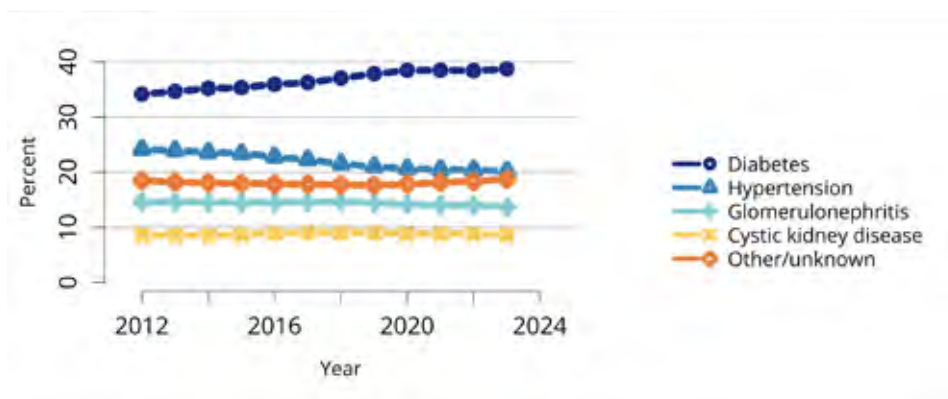


Stages of Chronic Kidney Disease

Stage of CKD	STAGE 1	STAGE 2	STAGE 3A	STAGE 3B	STAGE 4	STAGE 5
eGFR	90 or greater	Between 60 and 89	Between 45 and 59	Between 30 and 44	Between 15 and 29	Less than 15
Level of kidney damage	 Mild kidney damage	 Mild kidney damage	 Mild to moderate kidney damage	 Mild to moderate kidney damage	 Moderate to severe kidney damage	 End stage kidney disease. Kidneys are close to failure or have completely failed. You will need to start dialysis or have a kidney transplant.

*Referral to Transplant Center GFR ≤ 20 *

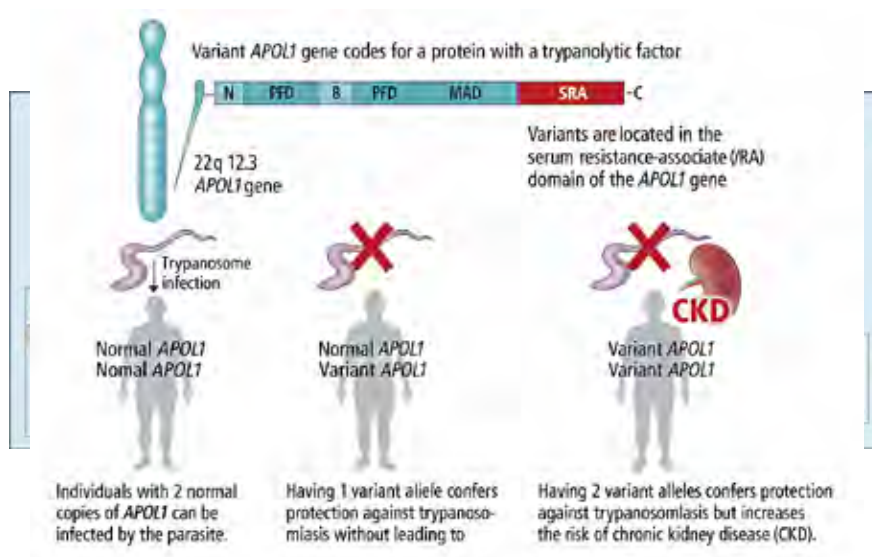
Primary Etiology of ESRD



OPTN/SRTR 2023 Annual Data Report

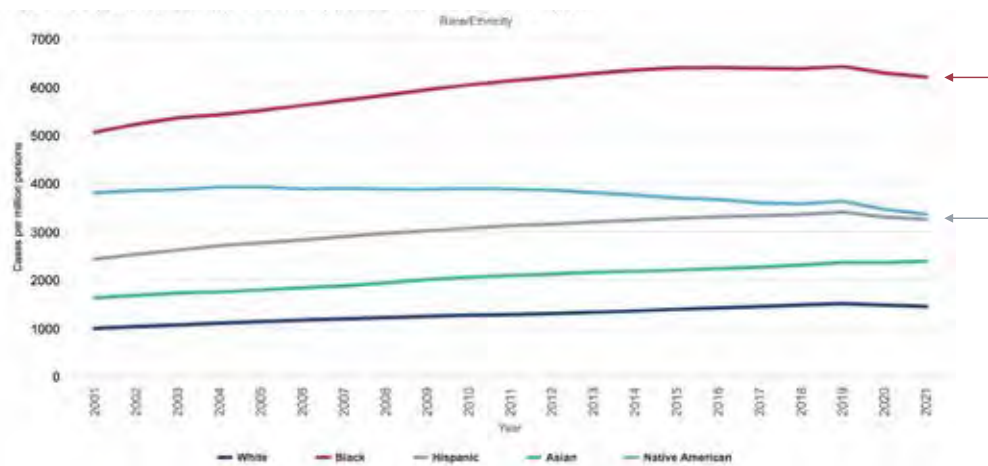


Apolipoprotein L1 (APO11) Gene



Nat Rev Nephrol. 2018;14(11):759-773.
N Engl J Med 2018;379:2571-2572.

Disparities in ESRD Prevalence



USRD Annual Data Report. 2023



Global Variation of ESRD



USRD Annual Data Report, 2022

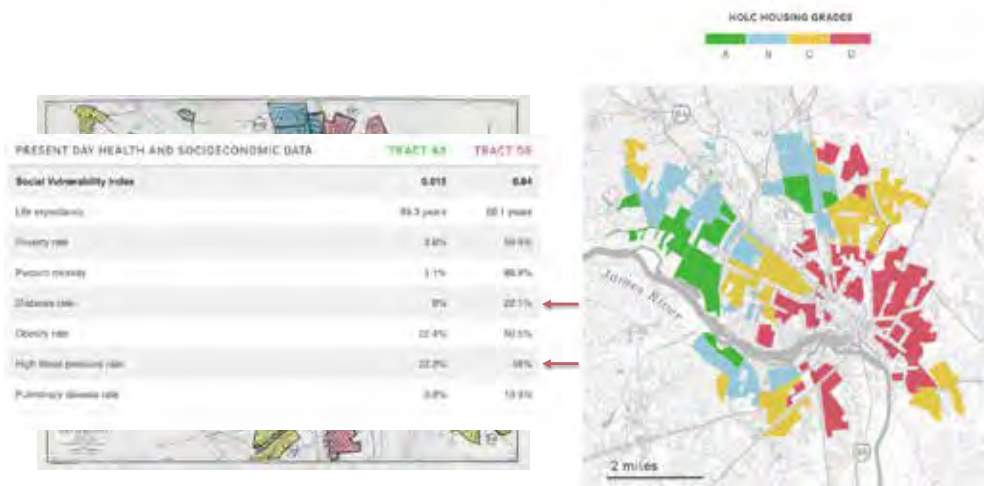
Social Determinants of Health (SDOH)

Economic Stability	Neighborhood and Physical Environment	Education	Food	Community and Social Context	Health Care System
Employment	Housing	Literacy	Hunger	Social integration	Health coverage
Income	Transportation	Language	Access to healthy options	Support systems	Provider availability
Expenses	Safety	Early childhood education		Community engagement	Provider linguistic and cultural competency
Debt	Parks	Vocational training		Discrimination	Quality of care
Medical bills	Playgrounds	Higher education		Stress	
Support	Walkability				
	Zip code / geography				
Health Outcomes Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations					

<https://www.kff.org>



In U.S. Cities, The Health Effects Of Past Housing Discrimination Are Plain To See



<https://www.npr.org/911909187>

Which demographic and social factors predict the likelihood of receiving a kidney transplant?

CJASN
Clinical Journal of the American Society of Nephrology



Race and social determinants of health are associated with the likelihood of undergoing kidney

CJASN. 2021; 16(2): 262-274



DIALYSIS



Dialysis kidneys perform at only 10% of a kidney's function



Dialysis patients have 3-4 treatment sessions a week



More setbacks for dialysis patients



Dialysis patients have a lower survival rate

Negative impacts of dialysis:



Heart disease



Bone disease



High blood pressure



Nerve damage



Decreased lifespan of a future transplanted kidney



Infections setting in



Cholesterol problems



Poor nutrition



Depression

<https://ncsmgp.blogspot.com/2021/03/kidney-transplant.html>

TRANSPLANT



A transplanted kidney performs at 100% of a kidney's function



Post-surgery patients are able to return to their normal schedule and activities



Transplant patients experience fewer setbacks



Transplant recipients have a significantly greater chance of survival compared to dialysis patients

Benefits of pre-emptive kidney transplant



Enhanced overall health



Improved life expectancy



Better quality of life



Fewer complications



Less time in the hospital

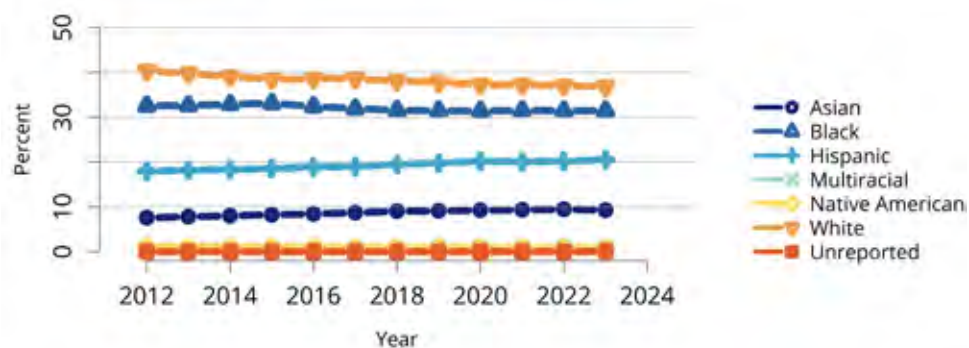


Better function of the new kidney

<https://ncsmgp.blogspot.com/2021/03/kidney-transplant.html>

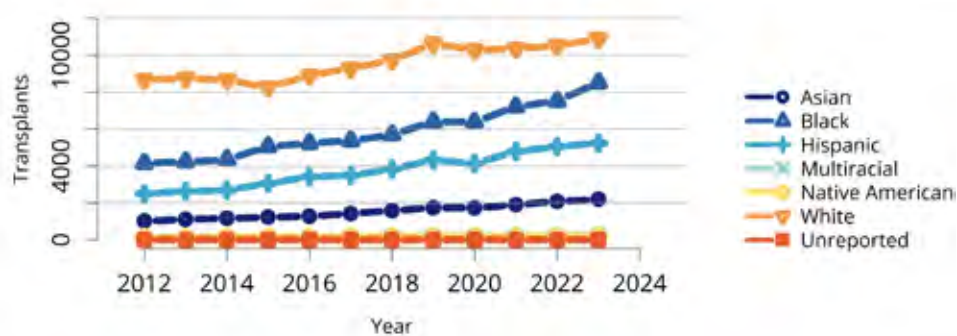


Waiting List, by Race



OPTN/SRTR 2023 Annual Data Report

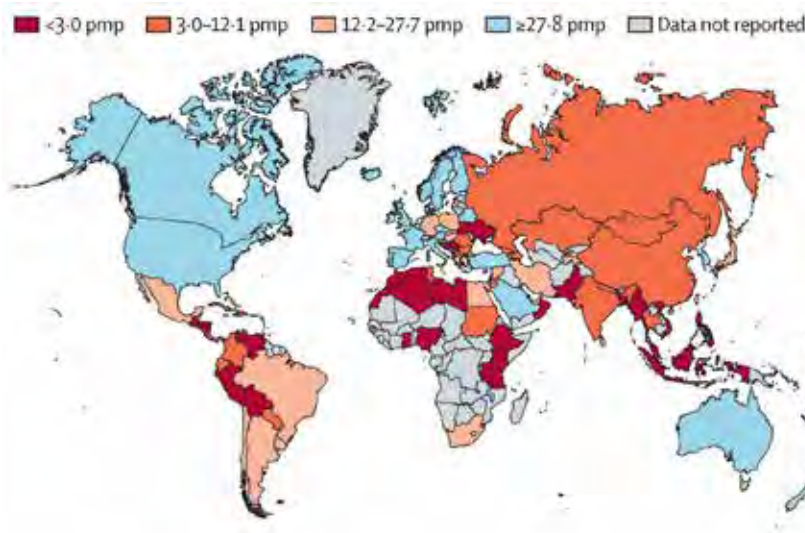
Kidney Transplants, by Race



OPTN/SRTR 2023 Annual Data Report

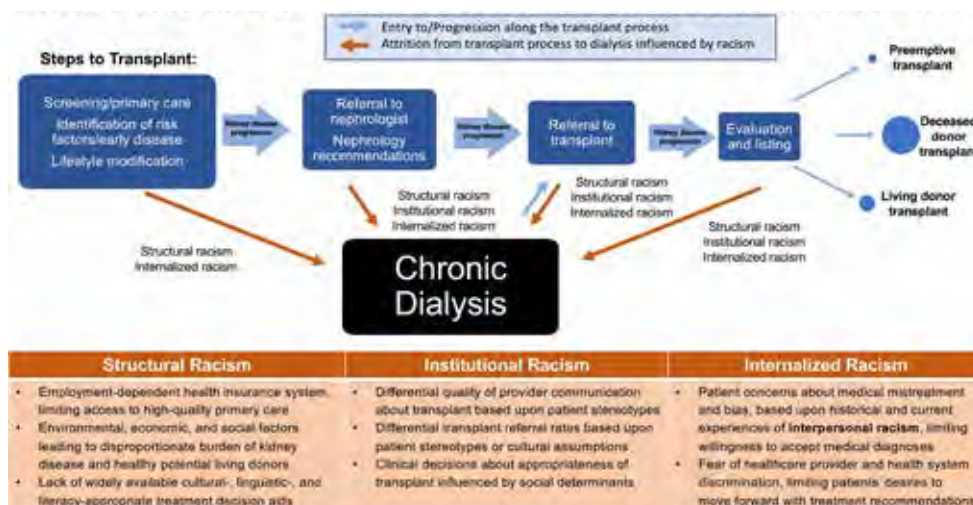


Global Incidence of Kidney Transplant



Bello AK et al. Lancet Glob Health. 2024;12(3):e382–e395.

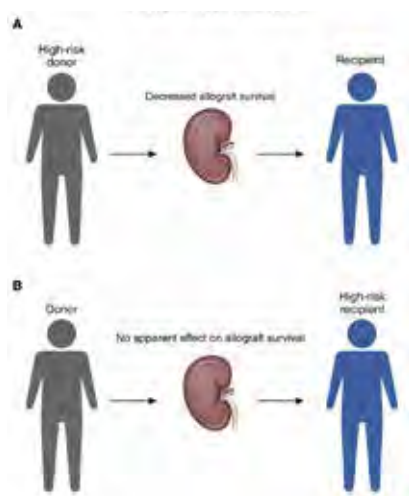
Barriers to Kidney Transplantation



Am J Transplant. 2021;00:1–6.



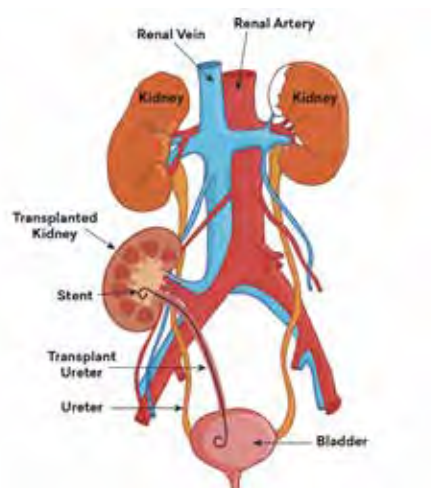
APOL1 in Kidney Transplant



CJASN. 2021 16:294–303.

Living vs Deceased Donor Kidney Transplants

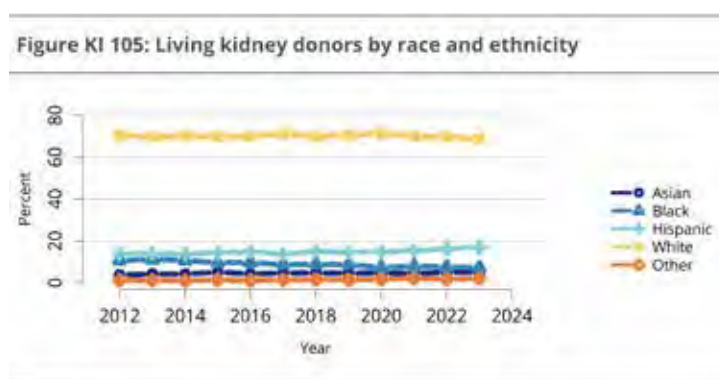
- Superior graft & patient survival
- Reduced waiting times
- Preemptive transplantation
- Better initial function





Living Donation Disparities

- Lower living donation rates in minority communities
- Socioeconomic factors, structural inequities, less social support, medical mistrust



OPTN/SRTR 2023 Annual Data Report
Wesselman et al. CJASN. 2021;16(2):262–274

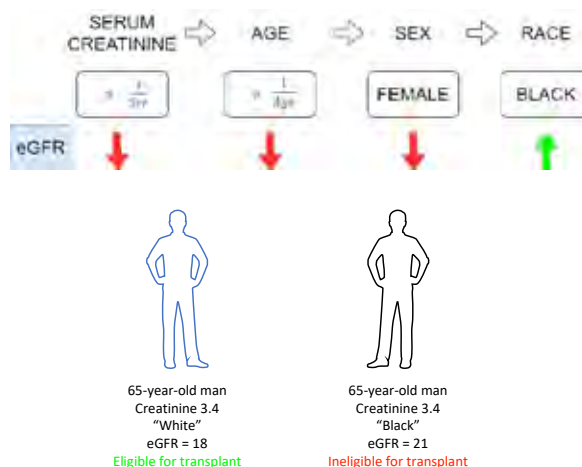
Kidney Allocation System (KAS) Revision 2014

- Backdated wait-time to dialysis start
- Prioritized highly sensitized candidates (cPRA $\geq 98\%$)
- Expanded regional sharing for high-priority candidates
- Narrowed wait-list disparities
 - **Resulted in a 25–30% reduction in Black vs. White wait-time gap

Clin J Am Soc Nephrol. 2018;13(9):1398–1405.



Estimated Glomerular Filtration Rate (eGFR)



eGFR Correction Outcomes

Total patients on waitlist: 839

Black patients: 236



Number of letters sent: 1,535



eGFR adjustments: 138



300 years of waiting time added



619 median days added

8.5 years added for one patient



> 50 transplants from adjustments





National ♥MOTTEP

minority organ tissue transplant
education program

- Community-based education
- Culturally sensitive messaging
- National program
- Healthy lifestyle focus

<https://www.natlmottep.org/>

Culturally Competent Programs



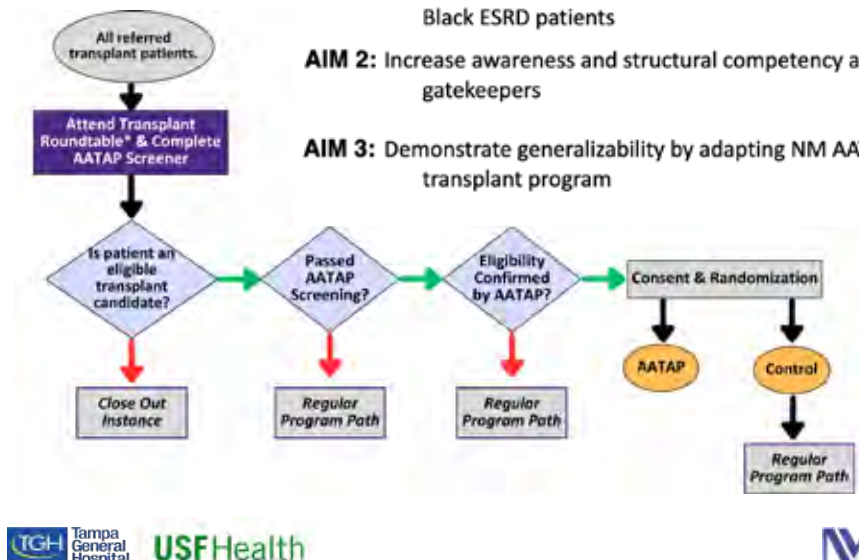


African American Transplant Access Program (AATAP)

AIM 1: Study impact of AATAP designed to mitigate health inequities for Black ESRD patients

AIM 2: Increase awareness and structural competency among transplant gatekeepers

AIM 3: Demonstrate generalizability by adapting NM AATAP to TGH transplant program



Summary

- Significant disparities persist in ESRD and kidney transplant access
- Policy reforms (e.g., race-neutral eGFR), community initiatives, and culturally competent care are advancing equity
- Ongoing collaboration among healthcare providers, policymakers, and communities is vital for equitable transplant access

