Targeted Intervention: Indian Health Service – Effective Population Health on a Limited Budget

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CONVERGENCE

of Laboratory Diagnostics and Population Health

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Audience Questions

1. Provide a word to describe how laboratory professionals could drive public health and health equity.

2. Provide a word to describe the role of the clinical laboratory as diagnostic stewards.

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Objectives

Discuss the Implementation of a Targeted Intervention for the Detection and Monitoring of Chronic Kidney Disease (CKD)

Implementation in:

-Indian Health Service

-Local Clinical Laboratories

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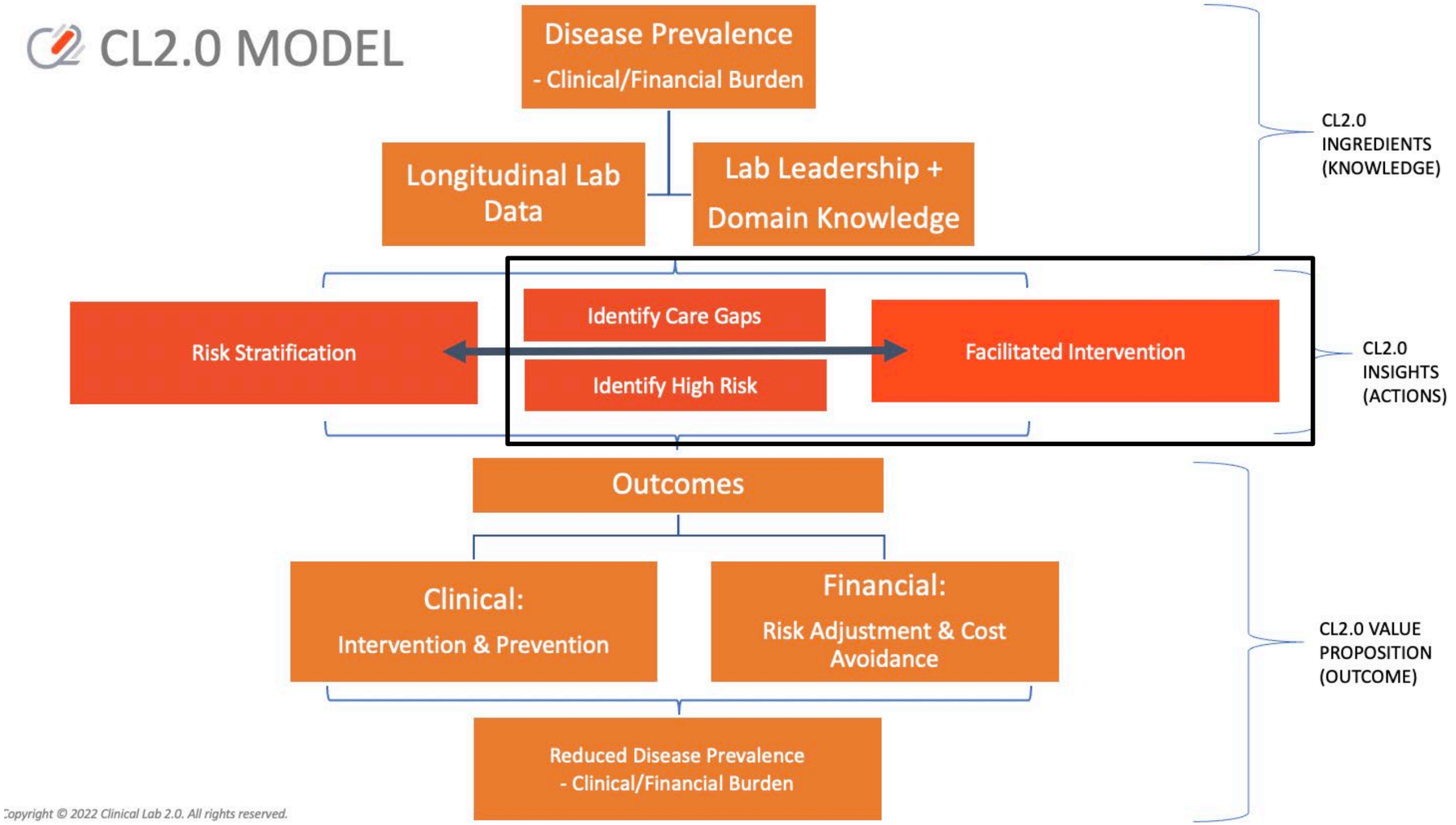
Lab's Role in Improved Outcomes Applying the CL 2.0 Model



- High prevalence conditions
- Laboratory Leadership
- Key Partnerships
  - Physician, Administrative, Payer champion
- Clinical Protocols
  - Testing cascade; diagnostic pathway
- Workflow & facilitated interventions
- Shared accountability
- Measurable and attributable outcomes
- Policy impacting clinical protocols & workflow

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Audience Questions

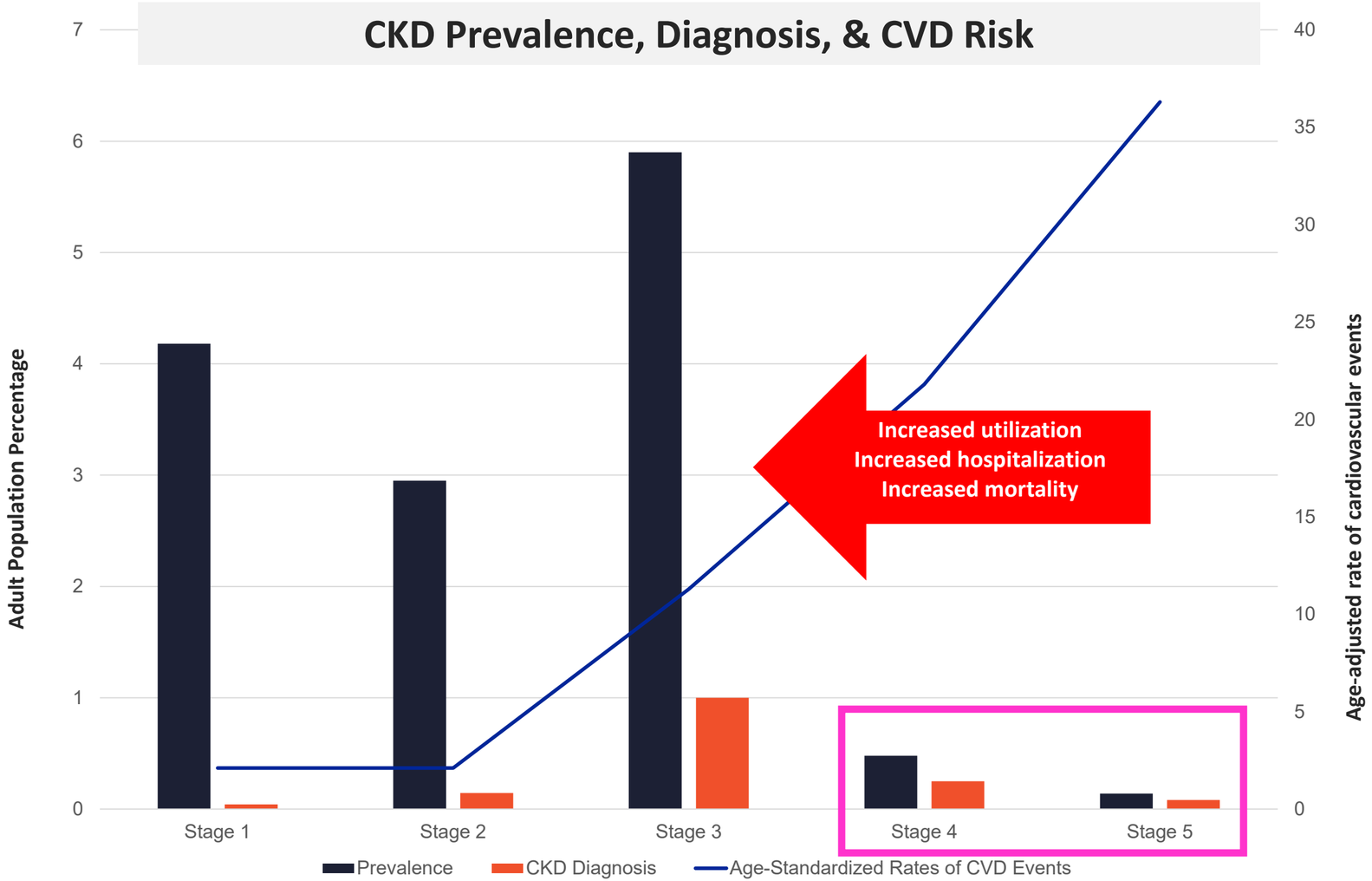
Poll question:

Are you aware of your:

- Blood pressure?
- Cholesterol levels?
- eGFR and/or uACR levels?

Chronic Kidney Disease (CKD)

- Affects 15% of adult population
  - 37 Million Americans
- Represents 15% of Medicare population but represents 25% of the spend
- 90% remain undetected in primary care
  - Including almost 40% of people in ESRD
- 80% of undiagnosed patients already have diagnostic information in their medical record



United States Renal Data System. 2015 USRDS annual data report: Epidemiology of Kidney Disease in the United States. National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD, 2015.

Szczech, L.A., et al., *Primary care detection of chronic kidney disease in adults with type-2 diabetes: the ADD-CKD Study (awareness, detection and drug therapy in type 2 diabetes and chronic kidney disease).* PloS one, 2014. 9(11): p. e110535.

Go AS, Chertow GM, Fan D, McCulloch CE, Hsu C-y. Chronic Kidney Disease and the Risks of Death, Cardiovascular Events, and Hospitalization. *New England Journal of Medicine*. 2004;351(13):1296-1305.

Missouri Population Data: https://www.census.gov/quickfacts/fact/table/MO/PST0452

So how's CKD care in America?

CJASN
Clinical Journal of American Society of Nephrology

186,961,565 weighted **visits 2006-2014**

2.7%
for patients with CKD

	BP checked?	BP > 130/80?	A1c > 7%	ACEi or ARB	Statin in Age > 50
2006-2008	89%	46%	N/A	45%	29%
2012-2014	93%	48%	40%	36%	31%
	P=0.025	p=0.50		p=0.072	p=0.92

Conclusions Patients with diagnosed CKD had a high prevalence of uncontrolled hypertension and diabetes. ACE and ARB use decreased and statin use was low and did not improve over time.

Sri Lekha Tummalapalli, Neil Powe, and Salomeh Keyhani. ***Trends in Quality of Care for Patients with CKD in the United States.*** CJASN doi: 10.2215/CJN.00060119. **Visual Abstract by Joel Topf, MD, FACP**

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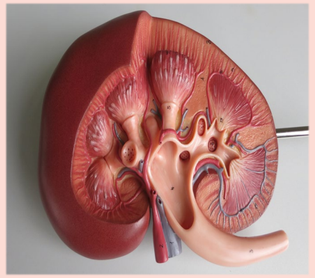
Lab's Role in Improving Process Measures with Chronic Kidney Disease from PSFF 3 Site Study

Clinical Process Measures

Early Recognition of Kidney Disease



CKD Screening in Diabetics

90%	73%
Avg % of CKD patients identified in Stage 3 by lab data alone/no ICD10	Avg % of diabetics not screened for kidney disease

Gaps in CKD care identified by PSFF CKD study

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ESTIMATED FINANCIAL IMPACT
ACROSS 3 STUDY LOCATIONS in 2021

3,937 patients identified using lab data alone at risk of end stage renal disease

$ 3.33 MILLION DOLLARS not reimbursed through risk adjustment (RAF) scores/HCCs

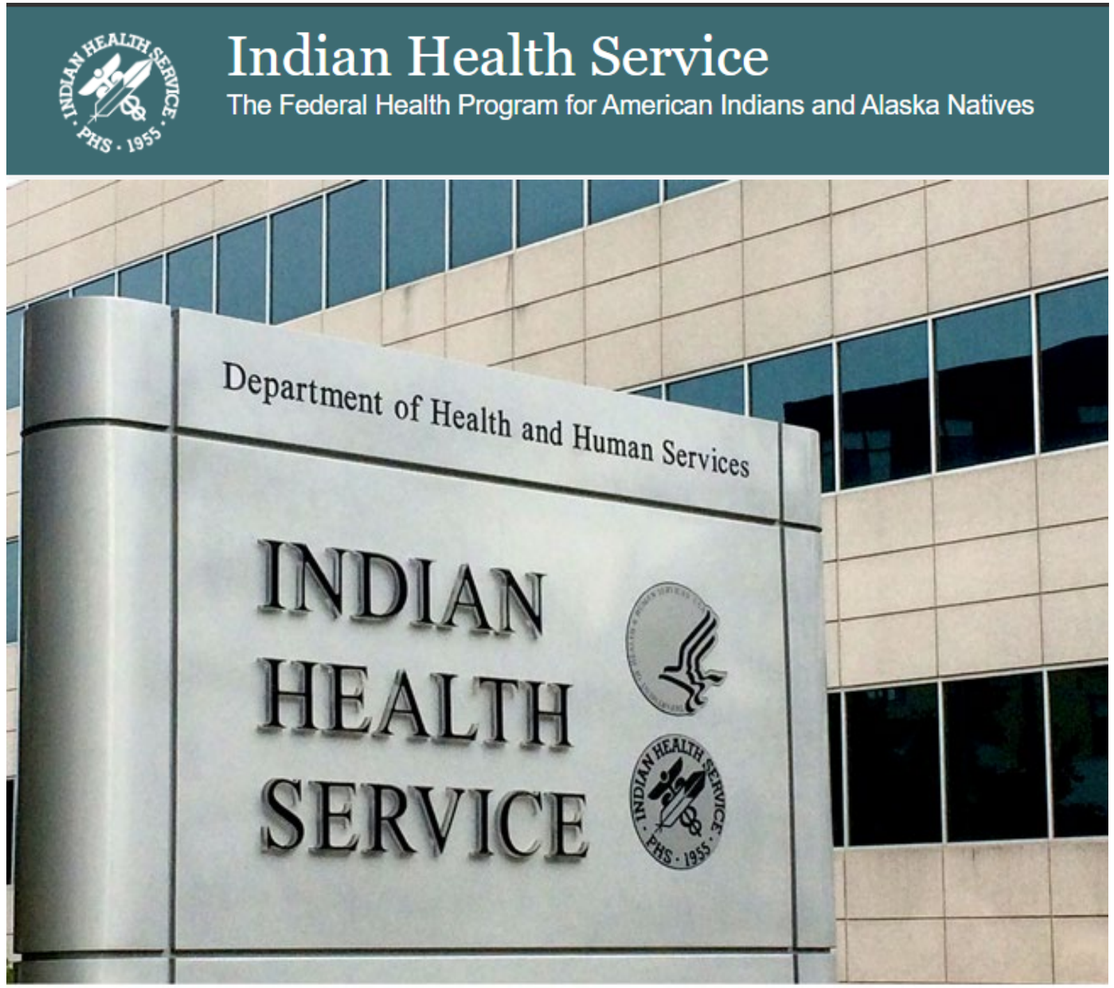
Assumptions:

- Gaps in CKD identification from PSFF CKD study final results
- 2021 annual enrollments for Medicare Advantage/ACA as % of 2020 population
- 2021 reimbursement rates for Medicare Advantage/ACA

KFF - Health Policy Analysis, Polling, Journalism and Social Impact Media
Accessed March 1, 2023

LOST REIMBUSEMENT as a result of unrecognized Risk Adjustment Factors (RAF)

	Unrealized Risk Adjustment Reimbursement	# Patients at risk of disease progression
Medicare Stage 3	**$2,051,511**	**3531**
Medicare Stage 4	**$659,684**	**332**
ACA Stage 4	**$619,898**	**74**



Source: GAO File Photo.

- Supports members of 567 federally recognized American Indian and Alaska Native Tribes and their descendants.
- Department within the Department of Health and Human Services that provides a comprehensive health service delivery system for approximately 2.56 million of the nation's estimated 5.2 million American Indians and Alaska Natives.
- Indigenous peoples in the US have long experienced lower health status when compared with other Americans. Lower life expectancy and the disproportionate disease burden are the reflection of persistent structural barriers that contribute to inadequate education, disproportionate poverty, discrimination in the delivery of health services, and cultural differences.
- Indigenous peoples have the highest diabetes prevalence among any population subgroup in the US. **Diabetes accounts for almost 70% of new end-stage kidney disease (ESKD) cases among indigenous peoples.**

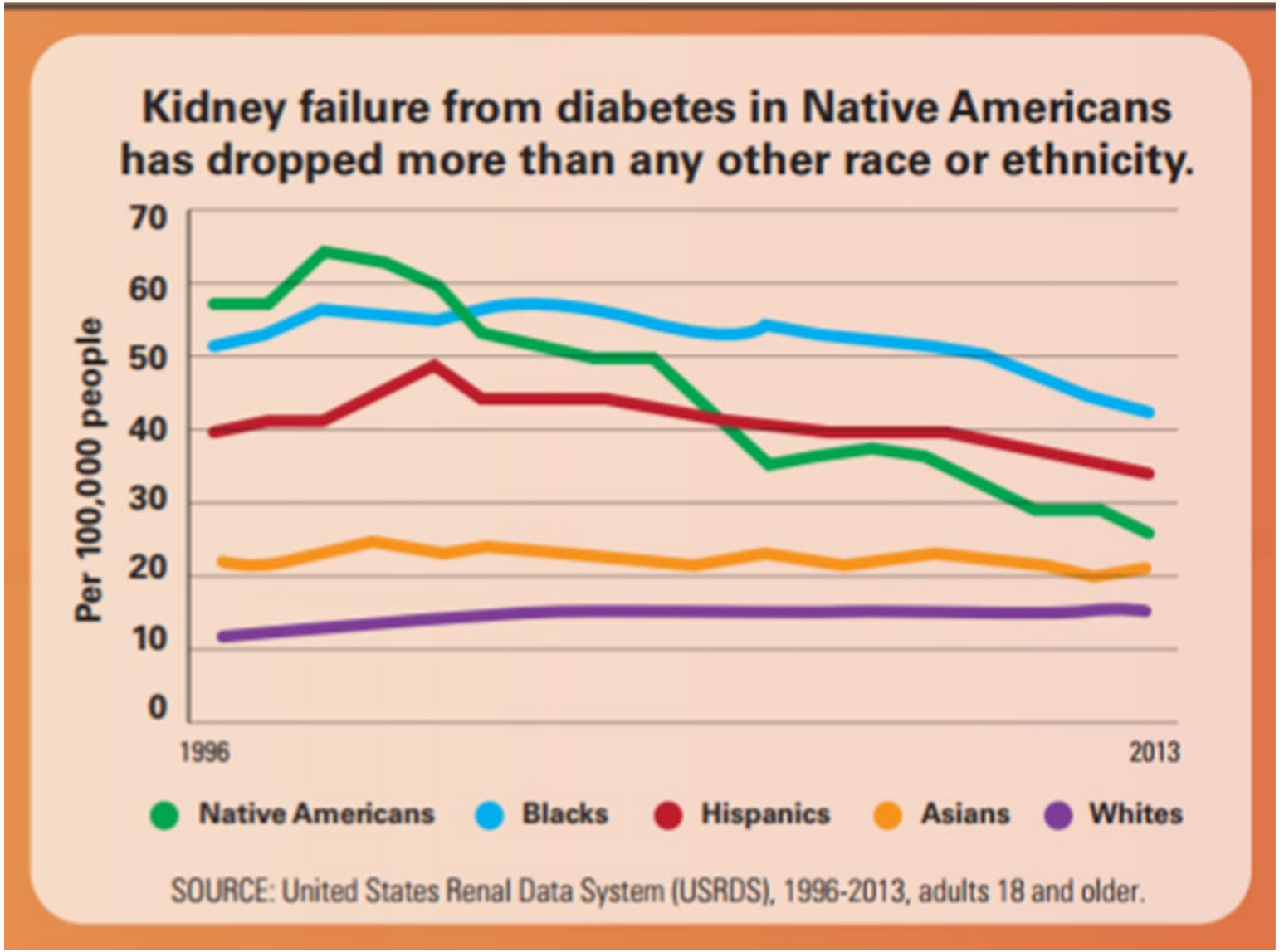
https://www.ihs.gov/newsroom/factsheets/disparities/ accessed February 16, 2024

Bullock A, Burrows NR, Narva AS, et al. *Vital Signs: Decrease in Incidence of Diabetes-Related End-Stage Renal Disease among American Indians/Alaska Natives — United States, 1996–2013*. Vol. 66(01). 2017:26-32. *Morbidity and Mortality Weekly Report*.

Morbidity, Mortality, Weekly Report (MMWR 2017)

Vital Signs: Decrease in Incidence of Diabetes-Related End-Stage Renal Disease among American Indians/Alaska Natives Service

Age adjusted diabetes-related end stage kidney disease rates per 100,000 population **decreased by 54%.**



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Bullock A, Burrows NR, Narva AS, et al. Vital Signs: Decrease in Incidence of Diabetes-Related End-Stage Renal Disease among American Indians/Alaska Natives — United States, 1996–2013. MMWR Morb Mortal Wkly Rep 2017;66:26-32. DOI: http://dx.doi.org/10.15585/mmwr.mm6601e1

Population Health for CKD and Diabetes: Lessons from the Indian Health Service

"The 54% reduction in incidence occurred in this population during a 20-year period despite per capita health expenditures equaling only ~40% of that spent in the US civilian population. Although one might expect such a dramatic decrease in disease in this high-risk disadvantaged population to be associated with novel and costly new therapies, the medical interventions implemented by the IHS were routine: glucose control, blood pressure control, and use of renin-angiotensin-aldosterone system (RAAS) antagonists in appropriate patients. However a systematic population-based approach was instituted to implement this evidence-based care."

Measures for CKD Care included in IHS Diabetes Care & Outcomes Audit Intervention

Measure	Baseline	Impact
Improve average Hemoglobin A1C among people with DM	10%	8.1%
Continue blood pressure control among people with DM and CKD	133/76 mmHg	133/76 mmHg
Increase Urine Albumin-Creatinine Ratio Testing for early detection	50%	62%
Increase use of Ace Inhibitors (ACE) and Angiotensin Receptor Blockers (ARB)	42%	73%

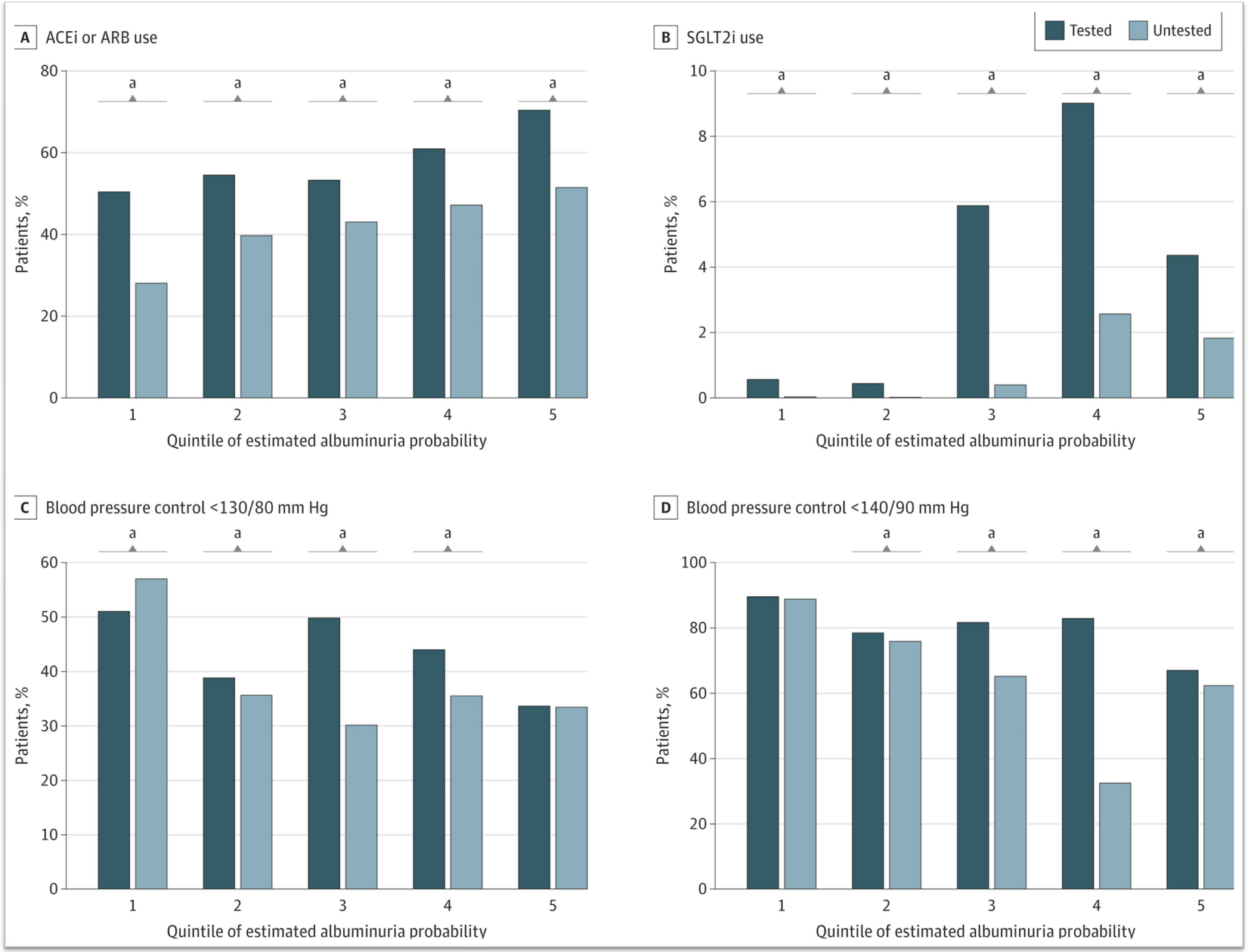
Intensive focus on mitigating SDOH and lifestyle impacts included in this intervention

Narva A. Population Health for CKD and Diabetes: Lessons From the Indian Health Service. *American Journal of Kidney Diseases*. 2018;71(3):407-411.

Albuminuria testing and use of CKD therapies

In multivariable adjusted analyses, **having UACR testing was associated with an**:

- approximate **2.4-fold** odds of receiving ACEi or ARB treatment (odds ratio [OR], 2.39 [95% CI, 2.32-2.46]),
- **8.2-fold** odds of receiving SGLT2i therapy (OR, 8.22 [95% CI, 7.56-8.94]),
- **1.2-fold** odds of BP control to less than 140/90 mm Hg (OR, 1.20 [95%



Chu, C.D., et al, **Estimated Prevalence and Testing for Albuminuria in US Adults at Risk for Chronic Kidney Disease, J**AMA Netw Open. 2023;6(7):e2326230. doi:10.1001/jamanetworkopen.2023.26230

Evaluate feasibility, scalability, & impact

- Could NKF replicate the success of a CKD Population Health model in other populations or safety-net systems?
- What new challenges would be encountered in this migration?.
- Is the timeline for achieving improvements in CKD testing and diagnosis similar?
- Can patient education be seamlessly integrated into the program workflow?

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Solutions for a healthy community.

JOHNSON HEALTH CENTER

Rockbridge Area Health Center

university health

COMMUNITY HEALTH CENTER Of The New River Valley

CVHS HEALTH SERVICES

MD Value Care
YOUR TRUSTED HEALTH PARTNER

HealthWorks for Northern Virginia
Your Community Health Center

CKD Population Health Model (NKF CKD Learning Collaborative) Implementation Plan	
Intervention	**Activities**
Preliminary Work	1.Assess current levels of CKD testing and diagnosis 2.Determine individual practices/clinicians for participation 3.Identify clinical decision support and workflow related tools
All-Teams Onboarding Webinar	1.Identify onboarding dates and coordinate meetings for an overview of CKD and the project activities and resources
Practice Onboarding Meeting	1.Data regarding CKD testing and diagnosis reviewed with practice leadership/care teams as well as CKD clinical decision support tools
Care Team Data Review:	1.Availability of clinic EHR data for risk stratification to identify the initial patient cohort 2.Existing workflows for wellness, diabetes and hypertension will be reviewed/discussed
Engagement in ongoing education regarding CKD	1.Facilitate ongoing grand rounds to address specific questions/concerns regarding CKD risk stratification and management.
Ongoing Monthly Touchbase	1.Leadership team discussion of current progress and technical assistance
Quarterly All-Teams Meetings	1.Team participation on quarterly meetings to review of CKD-LC objectives, address questions, and share performance data for each engaged clinic
Ongoing Data Analysis	1.Review performance data on an ongoing basis and referral to nephrology as appropriate

Impact of CKD Population Health/Learning Collaborative Model in populations enriched for CKD within 12 months of implementation

30 – 50% Increase in the rate of CKD testing among at-risk populations

- 25% Reduction in people with lab evidence of CKD but no diagnosis

-33% Reduction in people with CKD Dx but no uACR testing

90% Increase in the rate of angiotensin receptor blocker (ARB) use among people with CKD Dx

29% Increase in use of statins among people with CKD Dx

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Data will be published late 2024

Division of Laboratory Systems

Protecting America's Health by Strengthening Clinical Laboratories

Nancy E. Cornish, M.D.
ClinLab 2.0 2024
Quality and Safety Systems Branch

About DLS

Vision

Exemplary laboratory practice and systems strengthen clinical care, public health, emergency response, and health equity.

Mission

Improve public health, patient outcomes, and health equity by advancing laboratory systems.

Clinical Laboratory Improvement Advisory Committee (CLIAC)

CLIAC provides scientific and technical advice and guidance related to improvement in clinical laboratory quality and laboratory medicine practice to the Department of Health and Human Services (HHS).

Next Meeting: April 10, 2024

CLIAC Workgroups:
https://www.cdc.gov/cliac/workgroups/index.html

CLIAC Nomination Information:
https://www.cdc.gov/cliac/nomination.html

www.cdc.gov/cliac/index.html

- CLIAC Recommendation 4/2023 meeting:
  - Recommendation 34: CLIAC recommends that the CDC's Division of Laboratory Systems work with partners, such as professional organizations, community groups, and others, to provide outreach and training related to the CKD-EPI 2021 eGFR race-free equation.
  - CDC has engaged the National Kidney Foundation to explore outreach opportunities
- Laboratory Implementation of the NKF-ASN Task Force Reassessing the Inclusion of Race in Diagnosing Kidney Diseases | National Kidney Foundation

Division of Laboratory Systems

- Clinical Laboratory Partner's Forum Meeting, May 22, 2024
  - 80 Forum members representing laboratory-focused organizations
  - Clinical Laboratory Partners Forum | CDC
- NKF Asks- Laboratory Engagement Initiative
  - Improve Implementation of race-free calculation of eGFR and the Kidney Profile in community labs (CKD EPI equation for eGFR)
  - Rename "microalbumin" test to albumin-creatinine ratio, urine
  - Create laboratory specific Kidney Profile combining eGFR and ACR into one panel

- Total Testing Process animation planned as CKD educational tool for primary care clinicians and patients

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Audience Questions

Poll questions:

Has your organization implemented:

- the 2021 CKD-EPI race-free equation for calculating eGFR?

- the Kidney Profile?

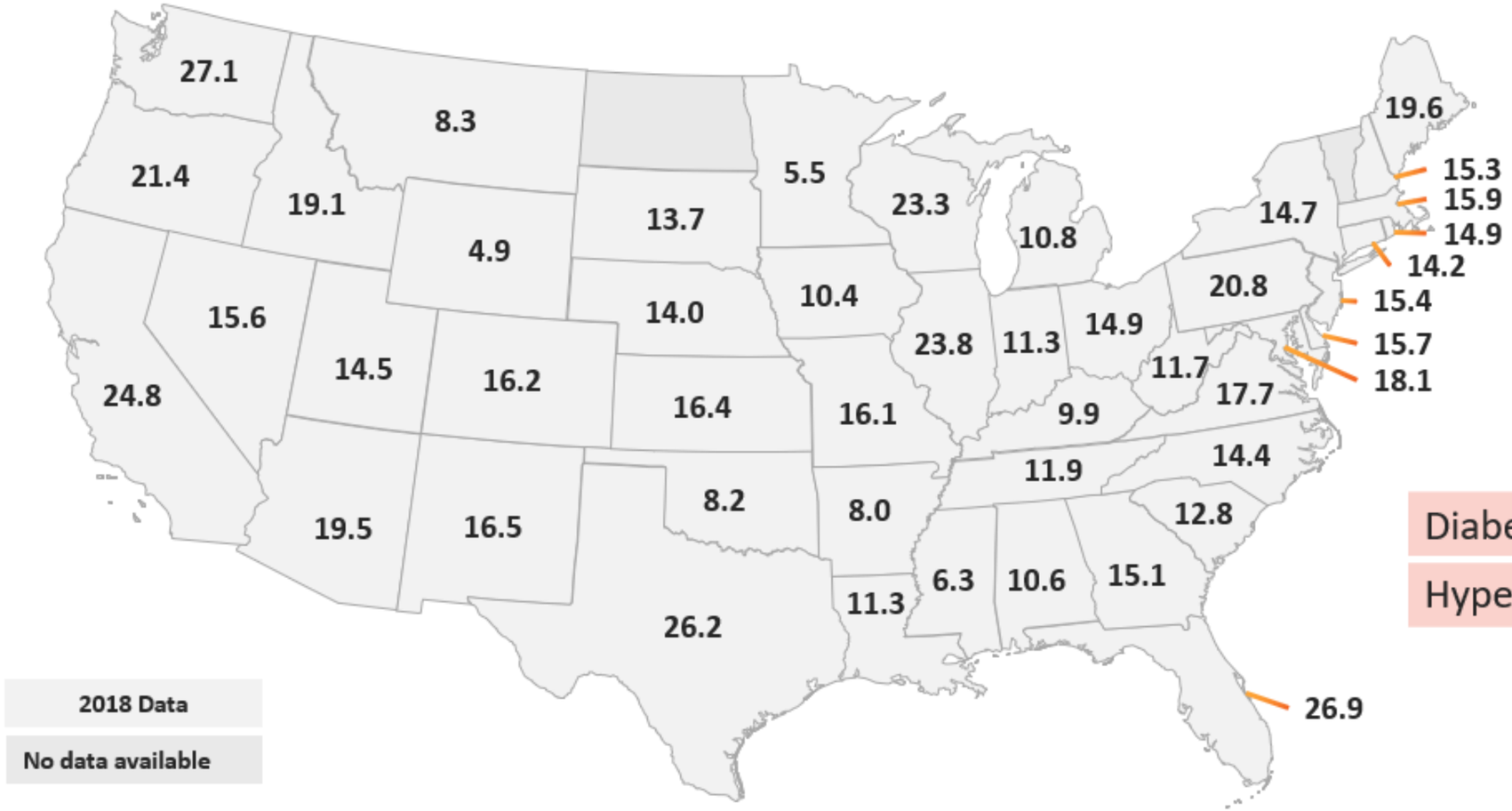
- renamed the microalbumin to albumin-creatinine ratio, urine?

- standardized uACR reporting?

Has your institution implemented a best practice alert in the EHR associated with CKD testing or deployed laboratory driven decision support for CKD?

80.3% of at-risk patients did not receive guideline concordant assessment

28,295,982 at-risk patients (16.2% diabetes/63.8 % hypertension/20.1% diabetes and hypertension)



Diabetes & Hypertension	41.4%
Hypertension	10.5%

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Alfego, D., Ennis, J., Gillespie, B., Lewis, M. J., Montgomery, E., Ferre, S., Vassalotti, J., Letovsky, S. (2021). Chronic kidney disease testing among at-risk adults in the U.S. remains low: Real-world evidence from a national laboratory database. *Diabetes Care*.

Participation is Welcomed

Thank you!

CONTACT:
DLSINQUIRIES@CDC.GOV

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

Feedback and Questions

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