

# Kidney Health Evaluation HEDIS Measure

## Improving CKD Recognition in Primary Care

Elizabeth Montgomery, VP, Learning Strategies & Primary Care Programs

Annual Dialysis Conference - March 5, 2021

# Disclosures

Elizabeth Montgomery has no financial relationships to disclose.



Under-recognition of CKD in primary care is common.

## Prevalence:

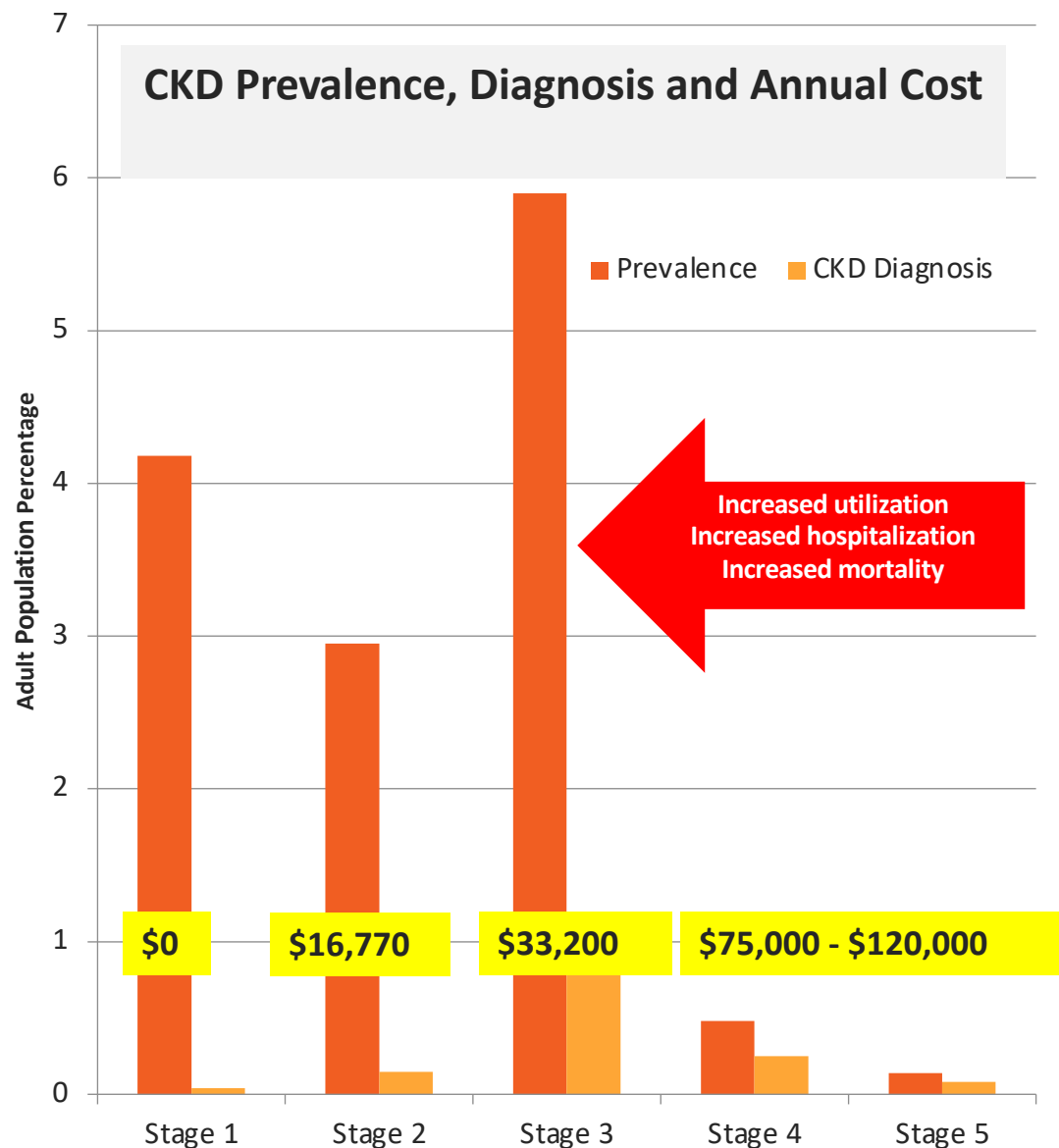
United States Renal Data System. 2015 USRDS annual data report: Epidemiology of Kidney Disease in the United States. National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD, 2015.

## Cost per stage:

Ladan Golestaneh, et al, *All-cause costs increase exponentially with increased chronic kidney disease stage*. American Journal of Managed Care, 2017. 23(10): p. S161.

## CKD Diagnosis:

Szczzech, 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.



- Patient Journey
- Research
- Laboratory Interventions
- Improve engagement channels
- Tools to improve communication



Consumers/  
Patients

IMPROVED  
AWARENESS



Medical Societies/  
Healthcare Providers

- Laboratory Profiling
- New approaches to CME
- Quality Improvement & Maintenance of Certification CME
- Research
- New tools
- Process changes (CPT Codes)

- Performance Measures
- Pay for performance
- Population Health Interventions
- Disease Management/Wellness Programs



Insurers  
(Payers and  
Malpractice)

Patient

Clinician

System



Academia

- Med School Training
- Residency curriculum
- Research

- Medical Home
- Laboratory Innovations
- Novel approaches to testing



Industry  
(Laboratory, Diagnostic,  
& EMR)



Government

- Pay for Performance
- Performance measures
- Research
- Population Health Interventions

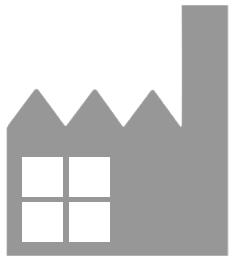


Hospitals &  
Health  
Networks

- Improved communication
- Quality Improvement activities
- Developing performance measures
- Process changes (CPT codes)



**What role does the “system” play in contributing to breakdowns in CKD testing, recognition, and management?**



**Industry**  
(Laboratory, Diagnostic, &  
EMR)



**Insurers**  
(Payers and  
Malpractice)



**Government**

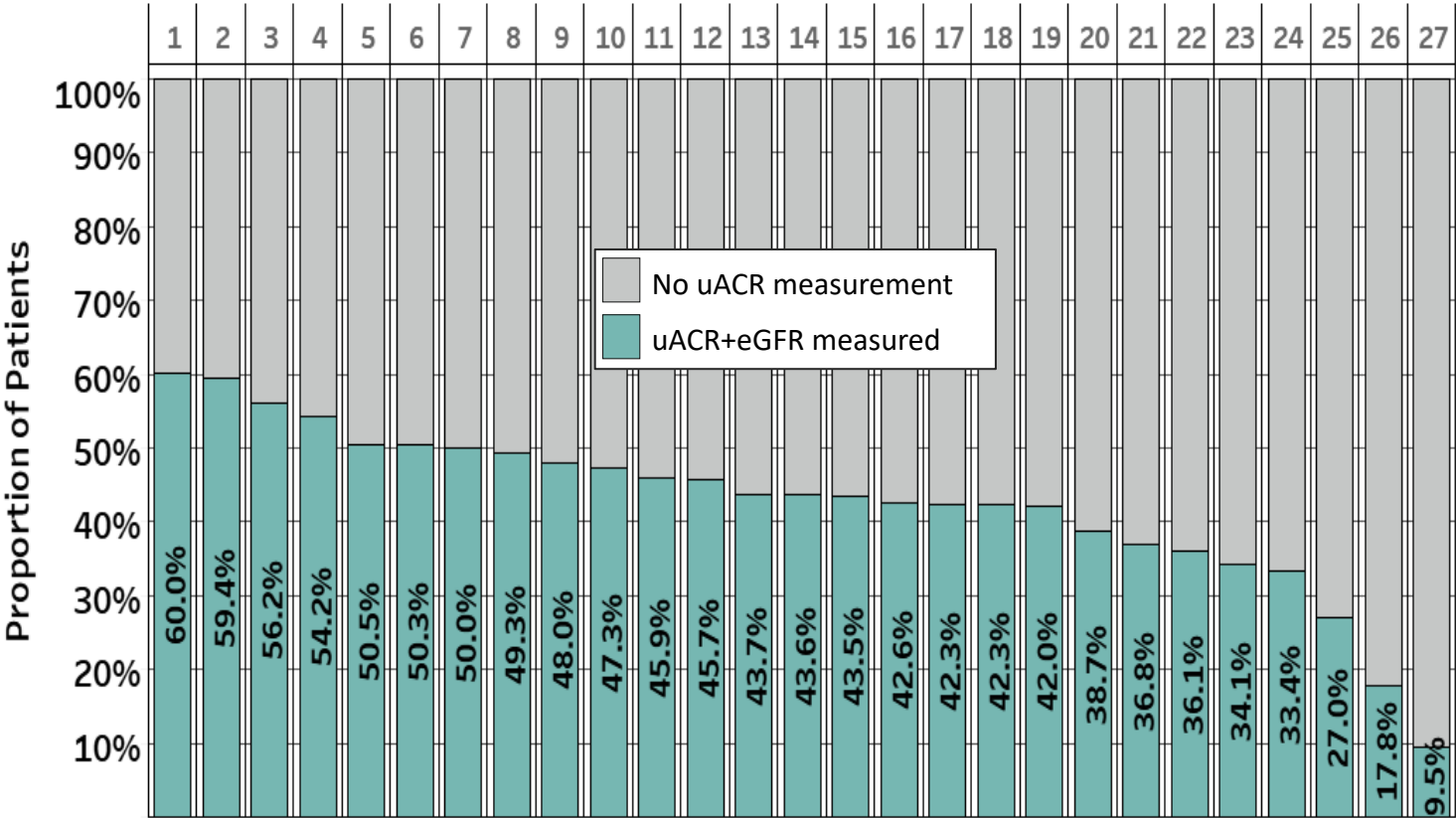
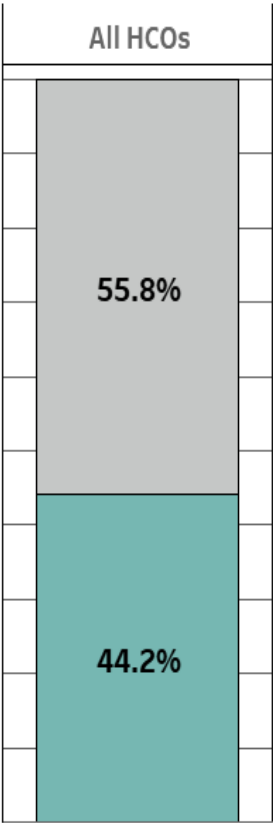


**Hospitals &  
Health  
Networks**

# Remove Laboratory Barriers to CKD Care

## Population with uACR + eGFR – by health system

Medical Attention for Nephropathy Measure:  
high performance uACR: low testing



# National Committee on Quality Assurance HEDIS Measures

**HEDIS** is a comprehensive set of standardized performance **measures** designed to provide purchasers and consumers with the information they need for reliable comparison of health plan performance. **HEDIS Measures** relate to many significant public health issues, such as cancer, heart disease, smoking, asthma, and diabetes.

Comprehensive Diabetes Care —  
Medical Attention for Nephropathy

★ Star Measure 2020

# Medical Attention to Diabetic Nephropathy

## Composite Measure Design

Topic	Explanation
<b>Compliant Member</b>	<p>Diabetic members are considered to be compliant with this measure if there is:</p> <ul style="list-style-type: none"><li>• Evidence of nephropathy in the measurement year:<ul style="list-style-type: none"><li>- A claim/encounter with a code to indicate evidence of treatment for nephropathy.</li><li>- A nephrologist visit during the measurement year identified by Highmark specialty provider codes (no restriction on the diagnosis or procedure code submitted).</li><li>- Diagnosis of end-stage renal disease.</li><li>- Evidence of renal transplant.</li></ul></li></ul> <p><b>OR</b></p> <ul style="list-style-type: none"><li>• Evidence of ACE inhibitor or ARB therapy in the measurement year.<ul style="list-style-type: none"><li>- Pharmacy claim as evidence of a dispensed ambulatory prescription for ACE or ARB therapy.</li><li>- Documentation in medical record of ACE or ARB therapy during the measurement year (Submit 4010F via claims).</li><li>- For a complete list of National Drug Codes that will meet compliance please visit: <a href="https://www.ncqa.org/hedis/measures">https://www.ncqa.org/hedis/measures</a></li></ul></li></ul> <p><b>OR</b></p> <ul style="list-style-type: none"><li>• A nephropathy screening or monitoring test during the measurement year.</li></ul>

## HEDIS Measures are publicly reported on the NCQA website

### Monitoring Nephropathy

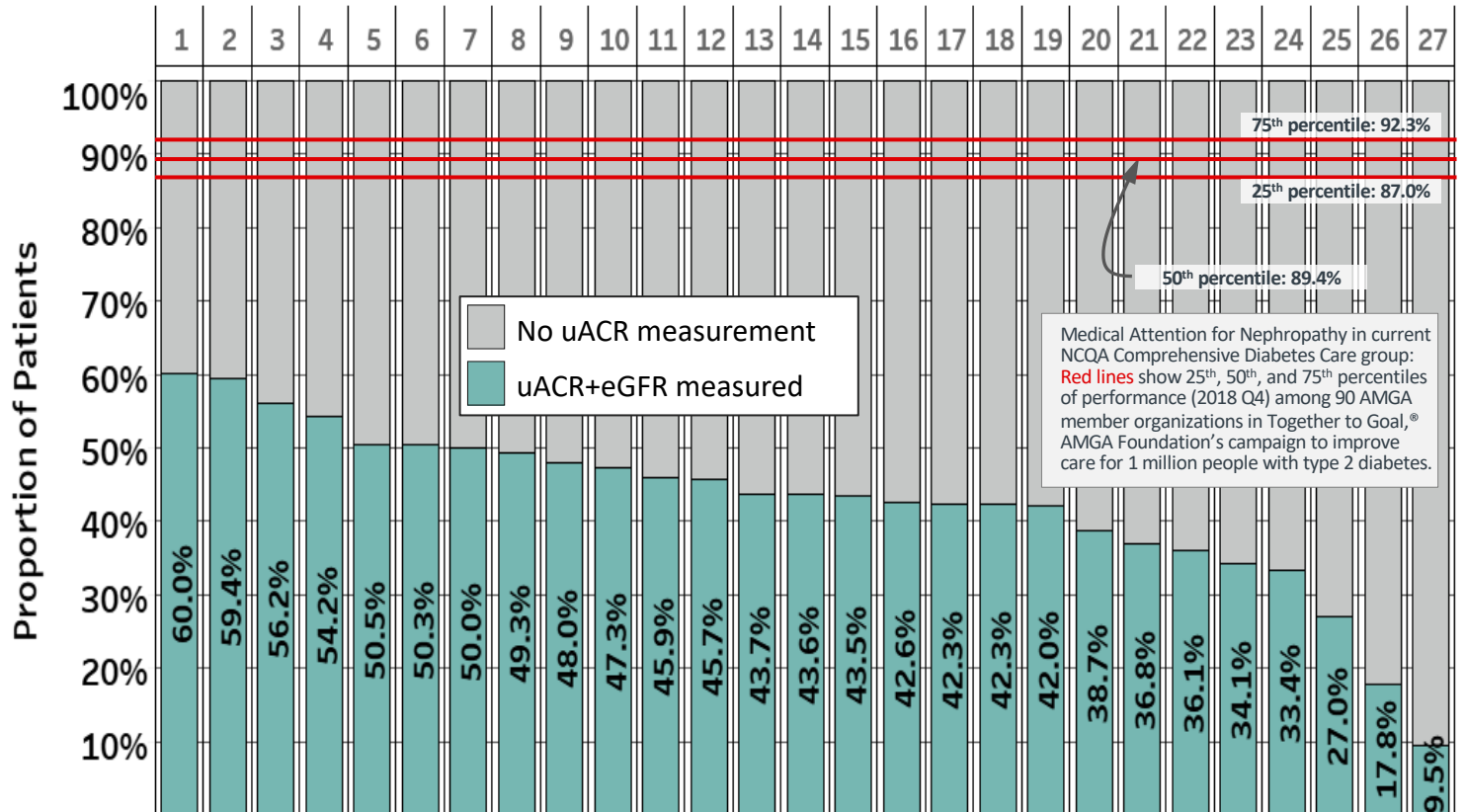
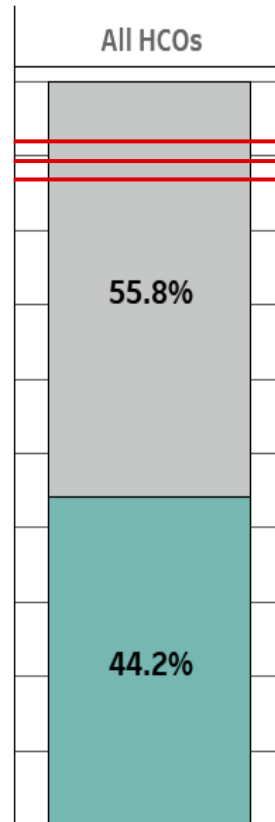
Measure Year	Commerical HMO	Commercial PPO	Medicaid HMO	Medicare HMO	Medicare PPO
2019	90.1	88.7	89.7	§	§
2018	90.3	88.6	89.9	95.5	94.9
2017	90.4	88.2	90.1	95.7	95.1
2016	90.2	88.1	89.9	95.6	95.3

# Population with uACR + eGFR – by health system

Medical Attention for Nephropathy Measure:  
high performance uACR: low testing



What is the source of this disconnect?



618,000 patients aged 18-89, with ≥ 1 visit with a PCP in 2018, and a Dx for DM (type-1 or type-2)

# Medical Attention to Diabetic Nephropathy

Note that ACE/ARB  
Explanation **DOES NOT**  
require evidence of  
albuminuria or CKD

Topic	Explanation
Compliant Member	<p>Diabetic members are considered to be compliant with this measure if there is:</p> <ul style="list-style-type: none"><li>• Evidence of nephropathy in the measurement year:<ul style="list-style-type: none"><li>- A claim/encounter with a code to indicate evidence of treatment for nephropathy.</li><li>- A nephrologist visit during the measurement year identified by Highmark specialty provider codes (no restriction on the diagnosis or procedure code submitted).</li><li>- Diagnosis of end-stage renal disease.</li><li>- Evidence of renal transplant.</li></ul></li></ul> <p><b>OR</b></p> <ul style="list-style-type: none"><li>• Evidence of ACE inhibitor or ARB therapy in the measurement year.<ul style="list-style-type: none"><li>- Pharmacy claim as evidence of a dispensed ambulatory prescription for ACE or ARB therapy.</li><li>- Documentation in medical record of ACE or ARB therapy during the measurement year (Submit 4010F via claims).</li><li>- For a complete list of National Drug Codes that will meet compliance please visit: <a href="https://www.ncqa.org/hedis/measures">https://www.ncqa.org/hedis/measures</a></li></ul></li></ul> <p><b>OR</b></p> <ul style="list-style-type: none"><li>• A nephropathy screening or monitoring test during the measurement year.</li></ul>

# Kidney Health Evaluation for Patients with Diabetes

HEDIS Measure  
released July 2020

Patients who received a kidney profile evaluation defined by an estimated Glomerular Filtration Rate (eGFR) AND urine Albumin-Creatinine Ratio (uACR) within a 12-month period

Patients aged 18-75 years with a diagnosis of diabetes with at least one outpatient visit within a 12-month period



# Kidney Health Evaluation for Adults with Diabetes HEDIS Measure

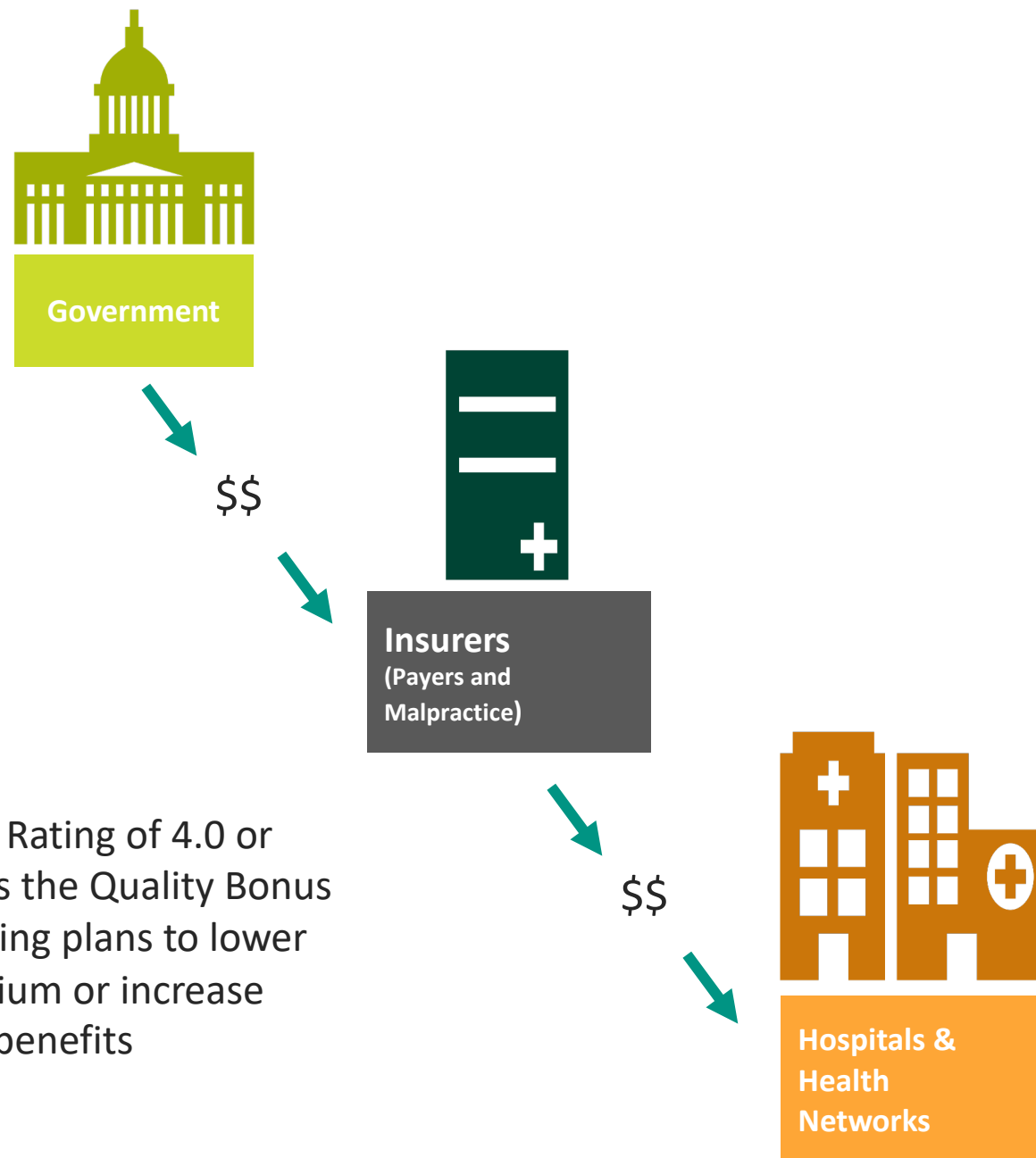
## A Star Rating Measure

CMS uses a five-star quality rating system to measure the experiences Medicare beneficiaries have with their health plan and their health system. Health plans are scored on a scale of 1 to 5 stars.

Health plan's Star Rating also has a direct impact on their QUALITY BONUS PAYMENT each year.

.

An overall Star Rating of 4.0 or greater triggers the Quality Bonus Payment allowing plans to lower member premium or increase supplemental benefits





# **How Can Your Team Prepare for the Kidney Health Evaluation HEDIS Measure?**



NATIONAL KIDNEY  
FOUNDATION®

# Remove Laboratory Barriers to CKD Care



*An initiative of the ABIM Foundation*

Don't request just a serum creatinine to test adult patients with diabetes and/or hypertension for CKD; **use the Kidney Profile** (serum Creatinine with eGFR and urinary albumin-creatinine ratio.)

# Laboratory Engagement Initiative

## Working collaboratively:

- Standardize use of CKD EPI equation for eGFR
- Rename “microalbumin” test to “albumin-creatinine ratio, urine”
- Standardize uACR reporting to mg/g
- Create laboratory specific “**Kidney Profile**” combining eGFR and uACR into one ordering unit



- **Choosing Wisely** awareness and education program regarding CKD with all ordering clinicians

## Pathology Societies



## Commercial Laboratories



## Health System Laboratories




# Build a Business Case for CKD Intervention

Primary Care and Population Health teams may be conditioned by old measure performance to believe that people with CKD are receiving high levels of care.

## Monitoring Nephropathy

Measure Year	Commerical HMO	Commercial PPO	Medicaid HMO	Medicare HMO	Medicare PPO
2019	90.1	88.7	89.7	\$	\$
2018	90.3	88.6	89.9	95.5	94.9
2017	90.4	88.2	90.1	95.7	95.1



A photograph of a server room with rows of server racks on both sides of a central aisle. The racks are dark, and the floor is light-colored. The perspective is looking down the aisle towards the end. Overlaid on the image is a quote in white text.

**In God we trust; all  
others bring data.**

W. Edwards Deming

# NKF Data Recommendations

<https://www.kidney.org/sites/default/files/CKDintercept-Practice-Assessment.pdf>



## A framework for CKD-related data analysis

### To assess exposure rising from undiagnosed CKD:

- Identify the density of **diagnosed** CKD among your population:
  - Include any records reflecting the following ICD-9/10 codes:

CKD Stage	ICD-9 Codes	ICD-10 Codes
Stage 1	585.1	N18.1
Stage 2	585.2	N18.2
Stage 3	585.3	N18.3
Stage 4	585.4	N18.4
Stage 5	585.5	N18.5
CKD unspecified	585.9	N18.9

- At minimum, 10% of the adult population should have a diagnosis of CKD.
- Identify undiagnosed CKD utilizing available laboratory data:
  - Query those records with laboratory data to identify the percentage of this population with abnormal serum creatinine values ( $> 1.5$ ) that were not reassessed within 120 days, **or**, with estimated glomerular filtration rates (eGFR) of less than 60 mL/min/1.73 m<sup>2</sup>
    - This data can be extracted using CPT or LOINC codes:

CPT Code	LOINC Code
80047 - Basic Metabolic Panel	<ul style="list-style-type: none"><li>50210-4</li><li>76633-7</li><li>77147-7</li></ul>
80048 - Comprehensive Metabolic Panel	<ul style="list-style-type: none"><li>33914-3</li><li>69405-9</li><li>62238-1</li></ul>
82565 - Creatinine with eGFR	

- Exclude any records with a diagnosis reflecting the ICD-9/10 codes outlined above.
  - Query the percentage of patients with diabetes or hypertension that have received an annual assessment for albuminuria.
    - This data can be extracted using CPT code: 82043

# Don't Boil the Ocean



Improving CKD care requires a quality initiative, not just CME or grand rounds as it involves many interventions.

Use data to stratify and prioritize patient population to be strategic in improvements.

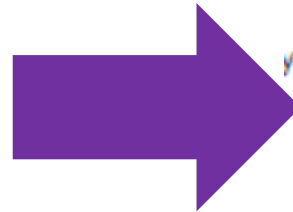
Improving CKD care is a team sport so ensure that the multi-disciplinary team is at the table for planning and education .



# Keep It Simple



<https://www.kidney.org/contents/chronic-kidney-disease-change-package>



The NKF recommends the following activities be implemented for CKD care in primary care:

- Annual CKD testing and risk stratification in at-risk populations (eGFR and ACR)<sup>7,30,27</sup>
- Blood pressure control<sup>11-14</sup>
- A1c control<sup>19,20</sup>
- Use of ACE Inhibitor or Angiotensin Receptor Blocker<sup>15-18</sup>
- Use of Statins<sup>28</sup>
- Medical Nutrition Therapy Referral<sup>21,22,29</sup>
- NSAIDs Avoidance counseling<sup>23-25,30</sup>
- Appropriate collaboration with nephrology (see below)<sup>26</sup>
- Use of a risk prediction model (i.e., the Kidney Failure Risk Equation)<sup>31</sup>

# We'd Love to Help!

- Facilitate data mining discussions
- Support Kidney Profile implementation
- Offer suggestions for building a business case
- Provide recommendations to shape a CKD program
- Provide training to the quality improvement staff





CKD intercept

## For more information:

[Elizabeth.Montgomery@Kidney.org](mailto:Elizabeth.Montgomery@Kidney.org)  
917-756-5845



# Overcoming Barriers to Chronic Kidney Disease Care in Primary Care

**Kevin Schendel, MD**

*Beltway Internal Medicine*

*Clinical Associate Professor, University of Maryland*

*Senior Medical Advisor, CareFirst PCMH Program*

# Disclosures?

# Singing to the choir?







## Chronic Kidney Disease: An enormous public health burden

- US Prevalence: 37 million adults<sup>1</sup>
- In earlier stage CKD: CVD mortality a more likely outcome than kidney failure<sup>2</sup>

1. Centers for Disease Control (CDC). Chronic Kidney Disease in the United States, 2019. [www.cdc.gov](http://www.cdc.gov)

2. Tonelli M, et al. *J Am Soc Nephrol*. 2006;17:2034-2047.

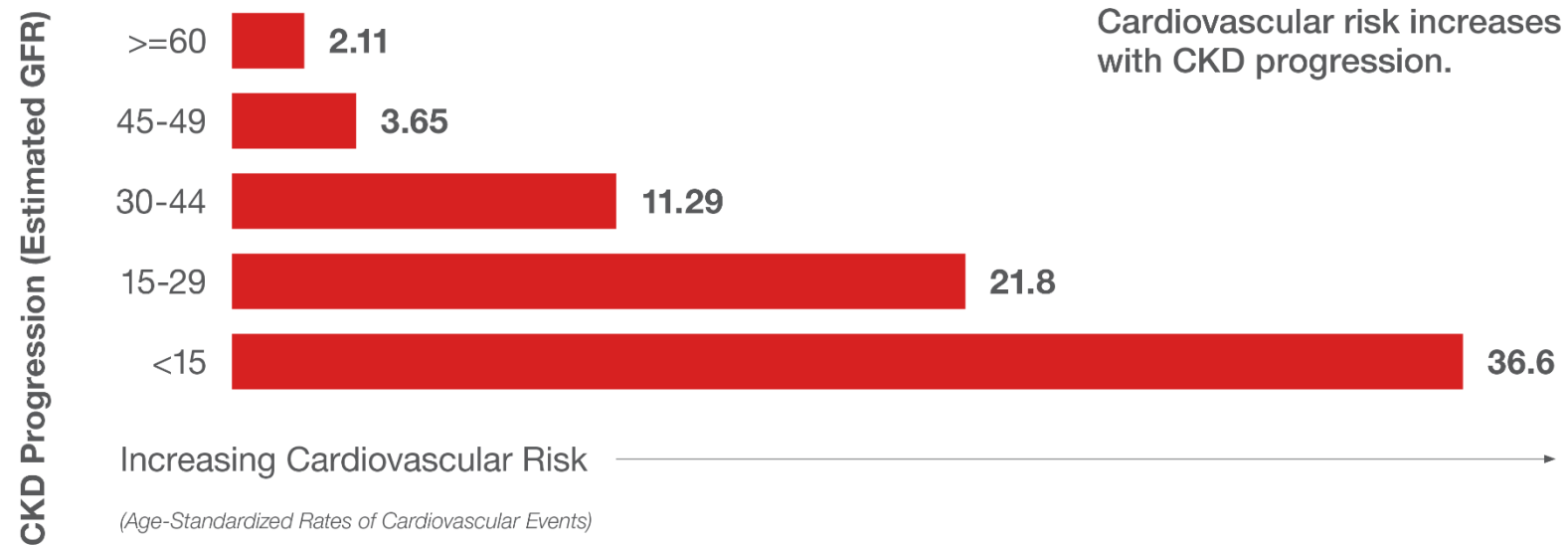
# Primary Care: The First Step in CKD Care

- Most CKD patients are treated in primary care settings:
  - One study estimated 60% of CKD patients are treated in exclusively primary care offices<sup>1</sup>
- Even after a CKD diagnosis has been made, patients are still highly likely to visit a primary care office<sup>2</sup>
- Primary care office referred to as:
  - “First Line of Defense Against CKD”
  - “Gatekeeper in CKD Care”



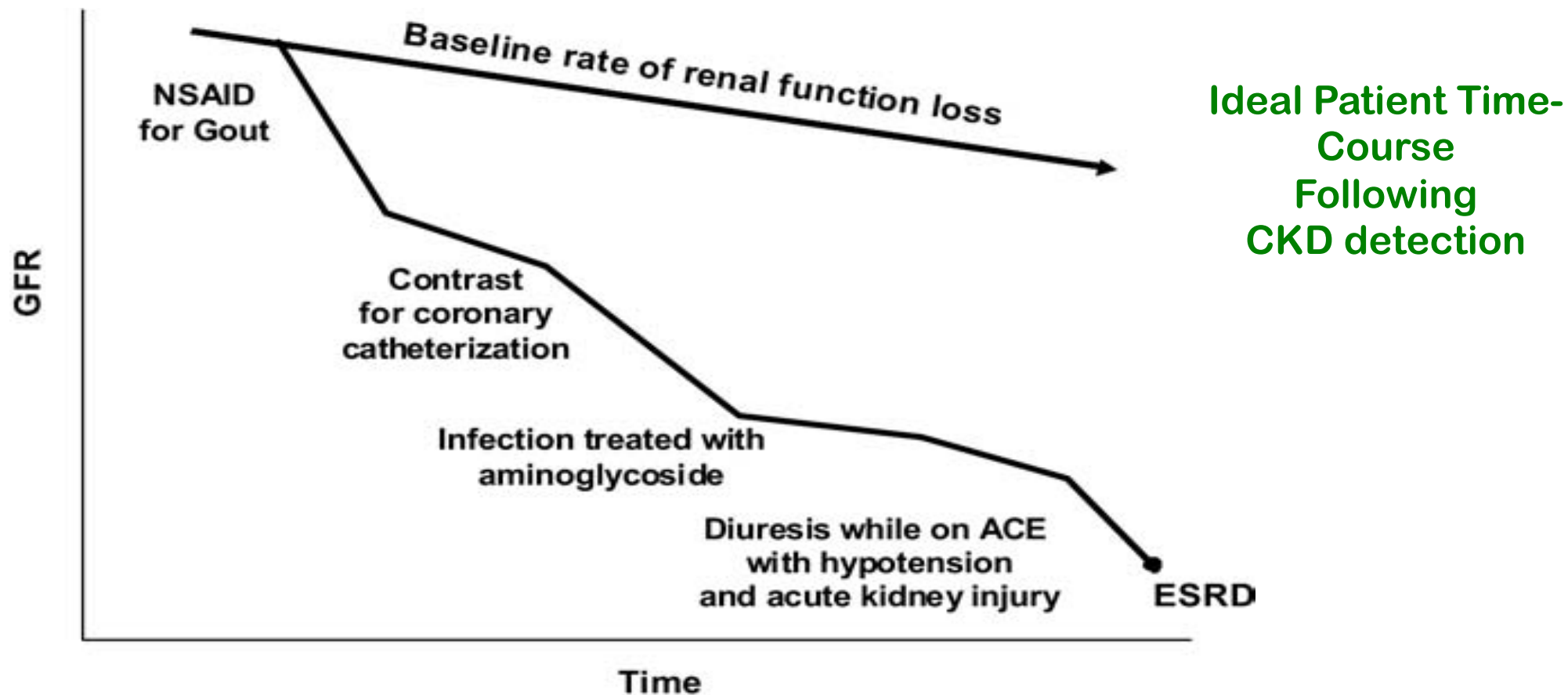


# CKD and Cardiovascular Disease Risk



**SOURCE:** Go , A.S., et al., Chronic kidney disease and the risk of death, cardiovascular events, and hospitalization. *New England Journal of Medicine*, 2004;35(13):1296-1305.

# Click to edit Master title style



# CKD Patient Safety Issues

- **Medication errors**

- Toxicity (nephrologic or other)
- Improper dosing
- Inadequate monitoring

- **Electrolytes**

- Hyperkalemia
- Hypoglycemia
- Hypermagnesemia
- Hyperphosphatemia

- **CVD**

- Missed diagnosis
- Improper management

- **Diagnostic tests**

- Iodinated contrast media: AKI
- Gadolinium-based contrast: NSF
- Sodium Phosphate bowel preparations: AKI, CKD

- **Fluid management**

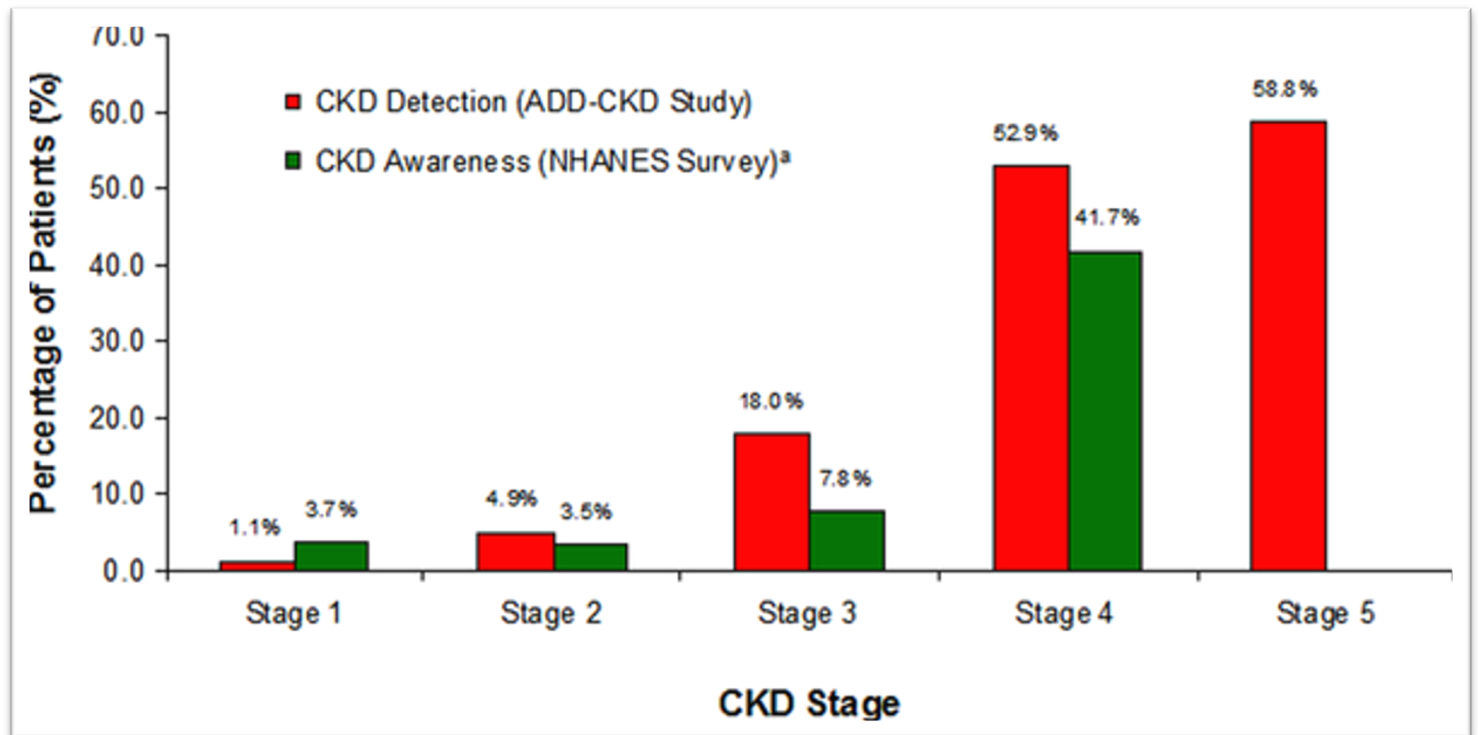
- Hypotension
- AKI
- CHF exacerbation

- **Miscellaneous**

- Multidrug-resistant infections
- Vein and artery preservation for hemodialysis access

# CKD Detection Remains Low in Primary Care Settings

- 15-month medical record review.
- 9339 adults with T2DM
- 466 investigator sites.
- 5036 (54.1%) had Stage 1–5 CKD based on eGFR and albuminuria
- only 607 (12.1%) of those patients were identified as having CKD by their clinicians.



# Clinician Barriers to CKD Care in Primary Care

- CKD is asymptomatic in earliest stages
- Gap in clinician knowledge about CKD guidelines<sup>1</sup>
- Challenges of staying current with evolving or competing guidelines<sup>1</sup>
- Perceptions that intervention will not impact CKD progression<sup>1</sup>
- Perceptions regarding overdiagnosis in older populations<sup>2</sup>

1 Sperati CJ, Soman S, Agrawal V, Liu Y, Abdel-Kader K, Diamantidis CJ, et al. (2019) Primary care physicians' perceptions of barriers and facilitators to management of chronic kidney disease: A mixed methods study. PLoS ONE 14(8): e0221325.

<https://doi.org/10.1371/journal.pone.0221325>

2 Abdel-Kader K, Greer RC, Boulware LE, Unruh ML. Primary care physicians' familiarity, beliefs, and perceived barriers to practice guidelines in non-diabetic CKD: a survey study. BMC Nephrology 2014;15:64-.

# Systems Barriers to CKD Care in Primary Care

- Healthcare system does not allow the time necessary for management of complex patients.
- Complex patients with other issues that are perceived as more pressing in the present moment.
- Limited computerized decision support for CKD
- Lack of available physician extenders to support team-based care for chronic disease patients

## CareFirst's PCMH Program

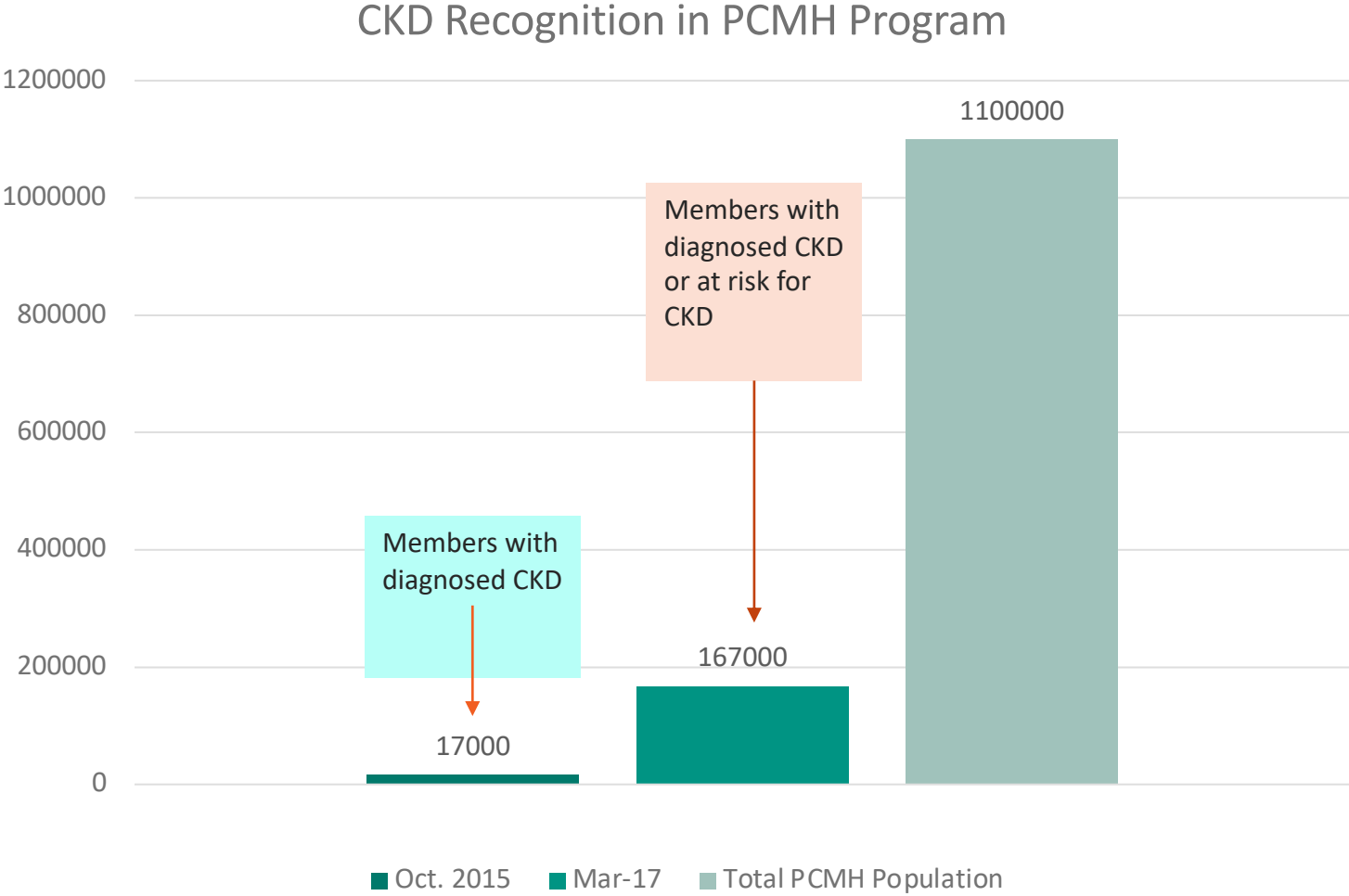
- Operates the largest Patient-Centered Medical Home program of its kind.
- Seventh year of commercial region-wide operation
- Over 4,300 participating Primary Care Practitioners
- Nearly 1.1 million CareFirst Members
- Manages \$5 billion a year in total spending
- \$795 million in Net Savings since 2011 vs. Projected Costs
- Reduced trend for increased annual costs to 5.6% for the attributed population in 2016, compared to the trend of 9.8% for the same cohort in 2015
- 15,000 nurse-prepared care plans per year for high risk/high cost members

# Kidney Function by Serum Creatinine Drives Costs

Additional Abnormal Lab Result	Creatinine Results (2013 Data)											
	Normal < 1.5 mg/dL			Minimally Abnormal ≥ 1.5 < 2.0 mg/dL			Moderately Abnormal ≥ 2.0 < 3.0 mg/dL			Severely Abnormal ≥ 3.0 mg/dL		
	Members	Med PMPM	RX PMPM	Members	Med PMPM	RX PMPM	Members	Med PMPM	RX PMPM	Members	Med PMPM	RX PMPM
None	157,447	\$567	\$216	1,282	\$1,370	\$523	399	\$1,552	\$465	287	\$4,621	\$646
Impaired Glucose	50,123	\$609	\$316	1,010	\$1,283	\$619	354	\$1,719	\$732	191	\$4,523	\$646

- As a standalone marker, abnormal creatinine results are a strong indicator of increased medical costs.
- Members with consecutive creatinine tests in consecutive years incur more cost than a typical member.
- Members with minimally abnormal creatinine incur more than double the costs of members with normal creatinine results. As expected, this trend continues and costs increase as the creatinine levels increases.
- Members with an additional abnormal metabolic result such as impaired glucose result or liver experience *only* slightly increased medical costs.





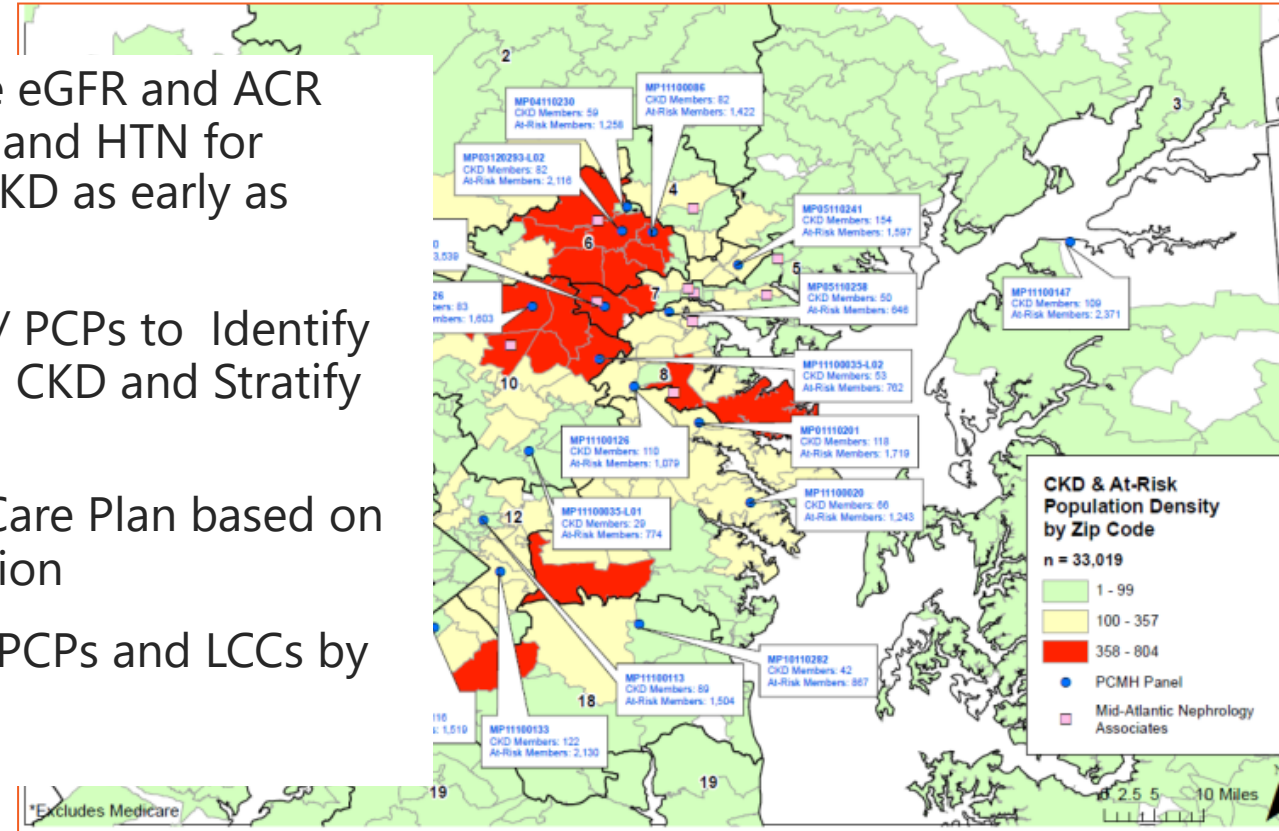
51.6% Evidence of CKD - Risk Stratify  
40.5% At Risk - Recommend Testing eGFR & ACR  
7.9% Not Stratified

# PCMH CKD Distribution of Pilot Panels

21 PCP panels - 128,000 patients - 17% identified with CKD



1. Encourage the eGFR and ACR testing of DM and HTN for diagnosis of CKD as early as possible.
2. Collaborate w/ PCPs to Identify Members with CKD and Stratify Risk
3. Implement a Care Plan based on Risk Stratification
4. Education for PCPs and LCCs by NKF



# CKD Quality Improvement Intervention With PCMH Integration: Health Plan Results

This scalable CKD quality improvement study evaluated a population health intervention based on CKD risk stratification and demonstrated feasibility, decreased hospitalization, and corresponding selected reduced costs.

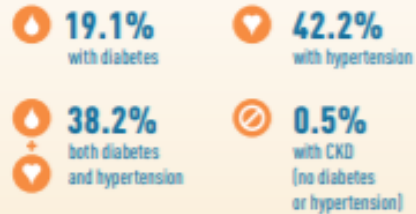
QUALITY IMPROVEMENT STUDY WITH PRE- AND POSTINTERVENTION ASSESSMENT, 7/1/15-6/30/17

## Population

**7420** PCMH outpatients with continuous CareFirst enrollment



### Risk Factors



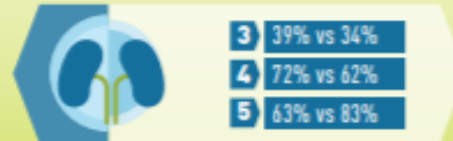
## Intervention

### CKD heat map risk stratification by eGFR and uACR

informs NKF-guided intervention

### Nephrology services

by heat map class, pre- vs post



Mean visits in class 5, pre- vs post: 4.4 vs 12.4

## Results

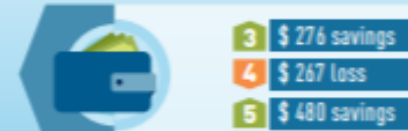
### Hospitalizations

per 1000 members by heat map class, pre- vs post



### Per-member per-month expenditures

by heat map class, pre- vs post



AJMC  
Managed Markets Network

CKD indicates chronic kidney disease; eGFR, estimated glomerular filtration rate; NKF, National Kidney Foundation; PCMH, patient-centered medical home; uACR, urine albumin creatinine ratio. Limitations include incomplete urinary testing, quality improvement design not powered to precisely quantify expenditures, and generalizability may be limited to PCMH models.

Vassalotti JA, DeViney R, Lukasik S, et al. CKD quality improvement intervention with PCMH integration: health plan results. *Am J Manag Care*. 2019;25(11):800-806.