

# The Transformation of Nephrology Practice to Improve Care

Annual Dialysis Conference  
Kansas City 2023

*Leslie P. Wong, MD, MBA, FACP, FASN  
Chief Kidney Health Officer  
Senior Medical Director, Kidney Services  
Intermountain Health*



# Disclosures

- Consultant, Fresenius Medical Care
- Consultant, Baxter Healthcare
- I am not a Yankees fan, but I do like Derek Jeter



10<sup>th</sup> Annual CEO CFO Roundtable, Chicago, IL 2022

# Derek Jeter's Keys to Success as a World Champion

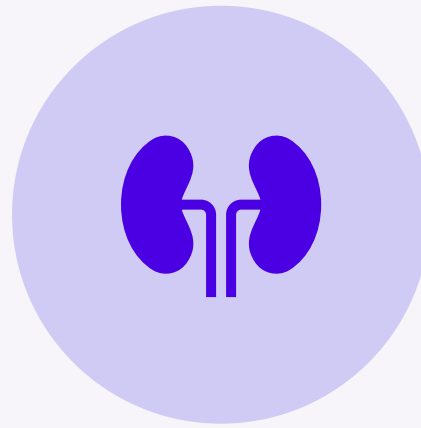
Baseball	Nephrology
Be consistent	
Don't be afraid to fail	
Learn from mistakes	



# Learning Objectives



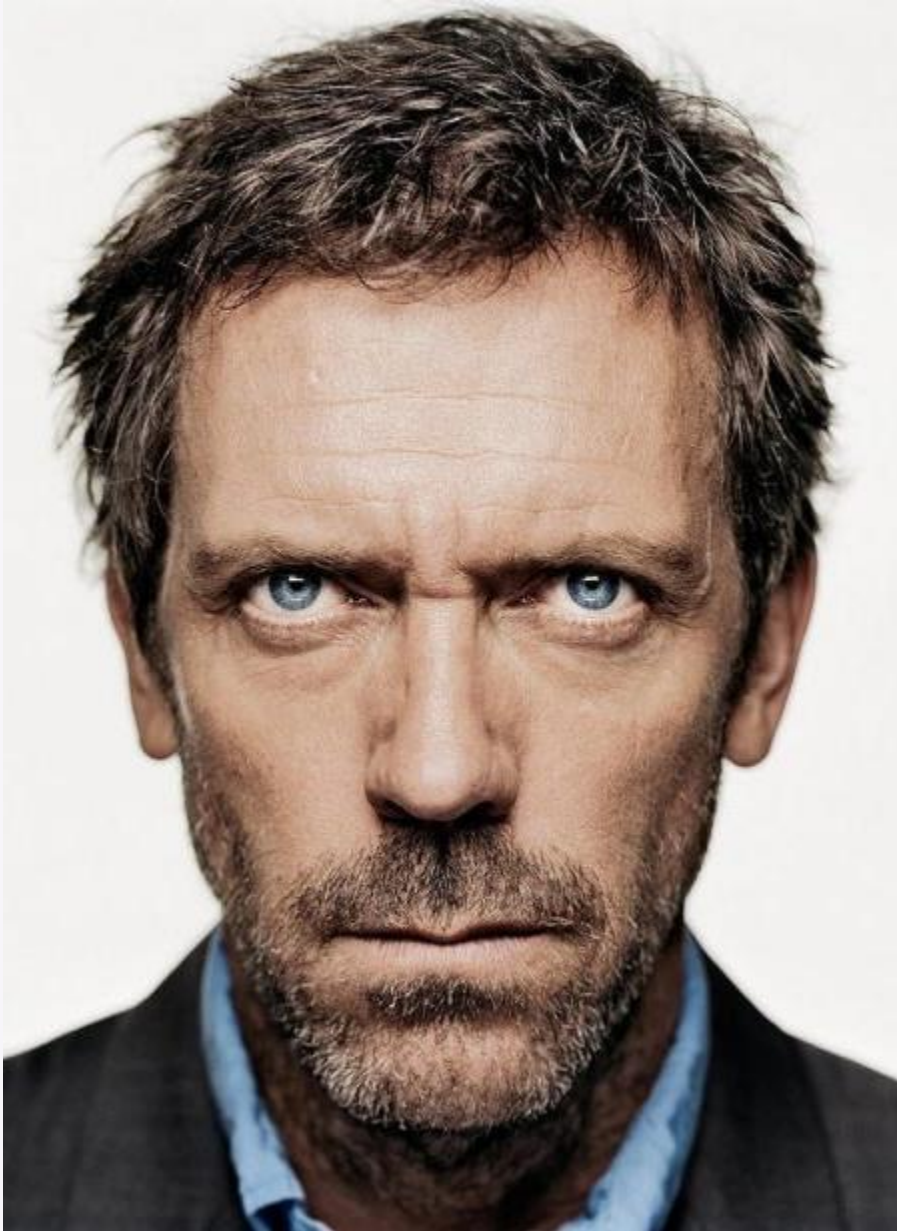
EXAMINE TRADITIONAL  
NEPHROLOGY PRACTICE



ANALYZE IMPLICATIONS OF  
VALUE-BASED KIDNEY CARE



UNDERSTAND KEY DRIVERS  
OF TRANSFORMATION



# The Traditional Nephrologist

- Rugged, but irritable
- Smart, but too tired to think
- Vitamin D, undetectable
- Accountant, sympathetic
- Spouse, deserving multiple awards

# The Traditional Practice



Hospital



Office

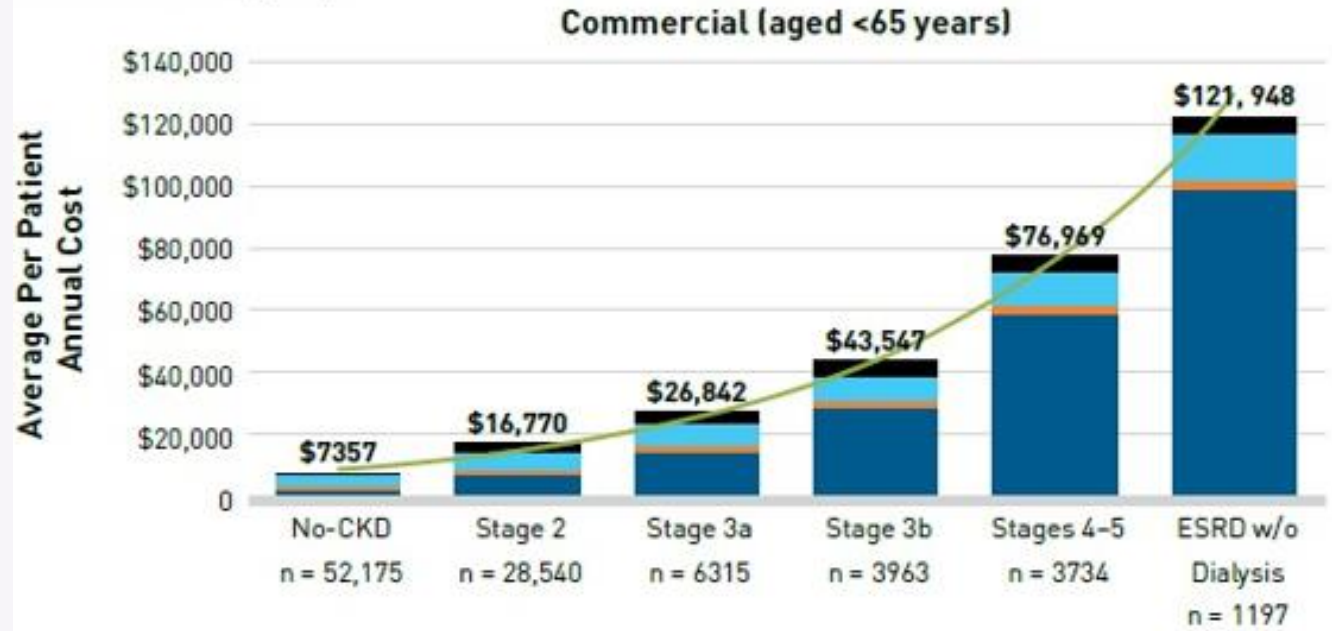
Dialysis

# All-Cause Costs Increase Exponentially with Increased Chronic Kidney Disease Stage

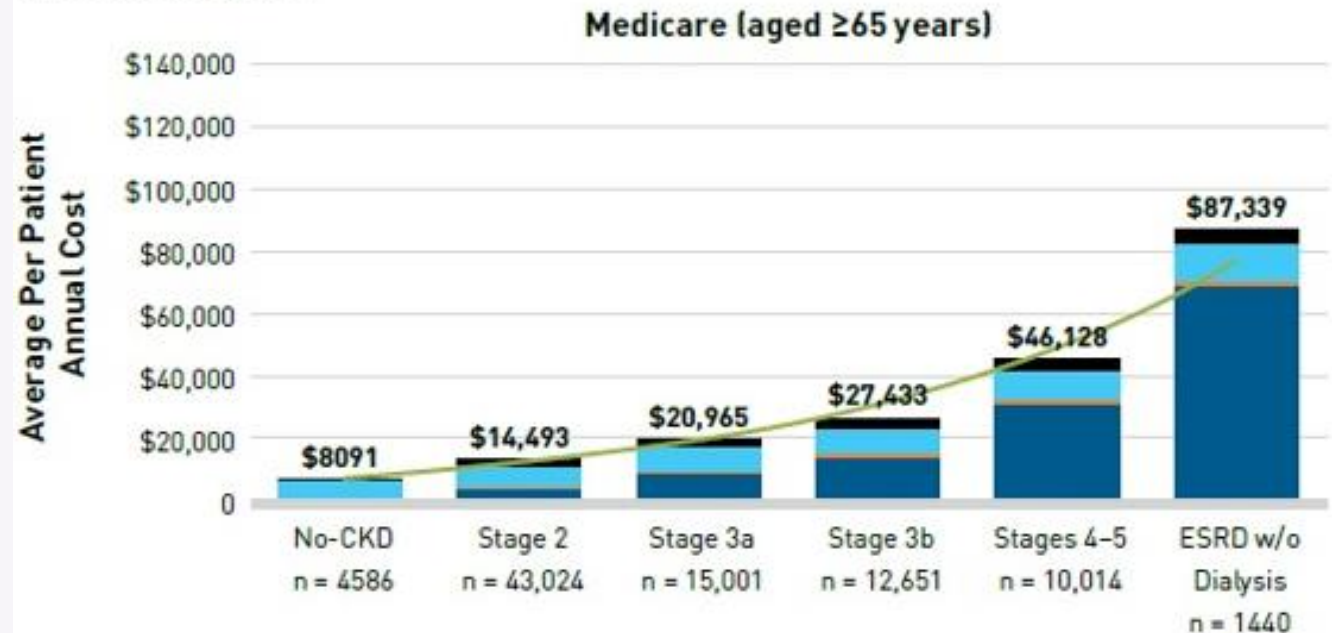


“Dr. House, when will you be by to sign your care plans?”

## A. Commercial group.



## B. Medicare group.



# Derek Jeter Key #1 Be Consistent = High Reliability



A screenshot of a Google search page. The search bar contains the text "high reliability kidney care". Below the search bar are navigation tabs for "All", "Shopping", "Images", "Videos", "News", and "More". The search results show "About 47,200,000 results (0.44 seconds)". The first result is a link to "https://innovation.cms.gov &gt; innovation-models &gt; kidne..." with a title "Kidney Care Choices (KCC) Model - CMS Innovation Center". The snippet below the title reads: "Through offering higher quality kidney care, the model aims to reduce the number of patients developing kidney failure, have fewer patients receive dialysis ...". Below the search results is a section titled "People also search for" with a list of related search terms: "esco kidney", "esrd treatment options", "what does ckcc stand for", "ckcc webinar", "ckd qcp", and "comprehensive esrd care model".



# The Medicare CEC Model: Using Lessons Learned To Improve Value-Based Kidney Care

HealthAffairs

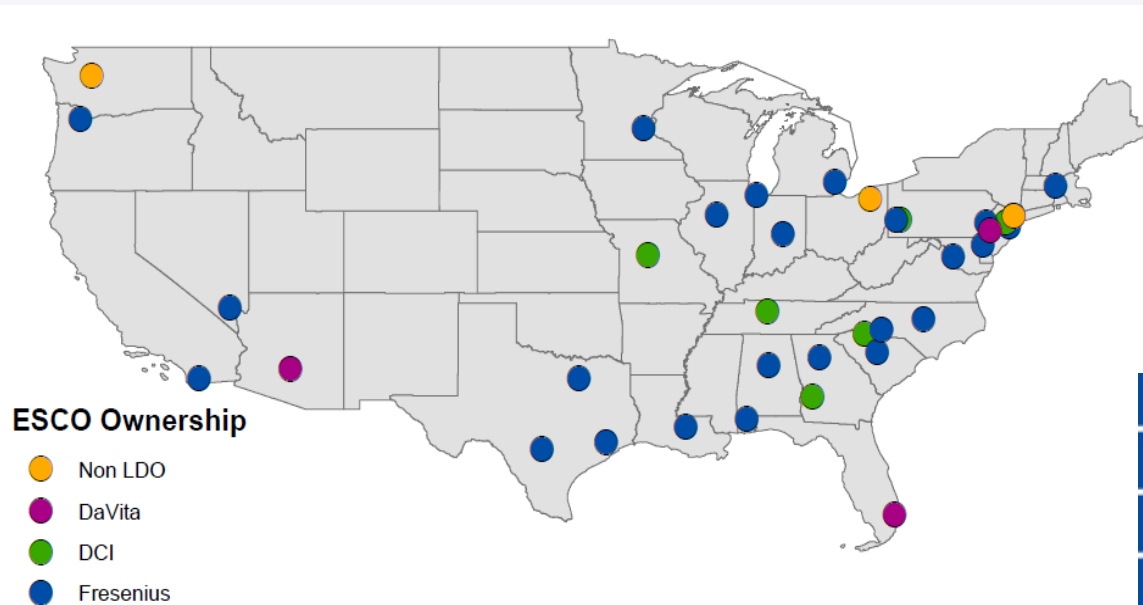
[Gregory J. Boyer](#), [Tom Duvall](#), [Carrie Wells](#)

## Medicare Spending and Utilization

- \$85 per beneficiary per month decrease
- 3% decrease in hospitalizations

## Dialysis Care

- 6% decrease in long-term catheter use
- 0.4% increase in dialysis sessions



33 ESRD Seamless Care Organizations (ESCOs)

<b>7</b>	Total dialysis organizations participated in CEC during PY5
<b>1,290</b>	Dialysis facilities participated in the model in PY5
<b>17%</b>	of all dialysis facilities in the United States (US) were in the model in PY5
<b>35</b>	Average number of dialysis facilities included in each ESCO
<b>62,501</b>	Approximate number of Medicare beneficiaries with ESRD who participated of the CEC Model
<b>13%</b>	of Medicare beneficiaries with ESRD were in the model in PY5

# Implications of Value-Based Kidney Care

Kidney Health and Kidney Care Choices

New market entrants and kidney care models

Nephrology practices needing to make some serious choices for the future



# Overview of the KCC Model

## Payment Options

**CMS Kidney Care First (KCF) Option**

Practice-based or bonus p

**Comprehensive Kidney Care Contracting (CKCC) Graduated Option**

ACO-based optio  
sided model an

**CKCC Professional Option**

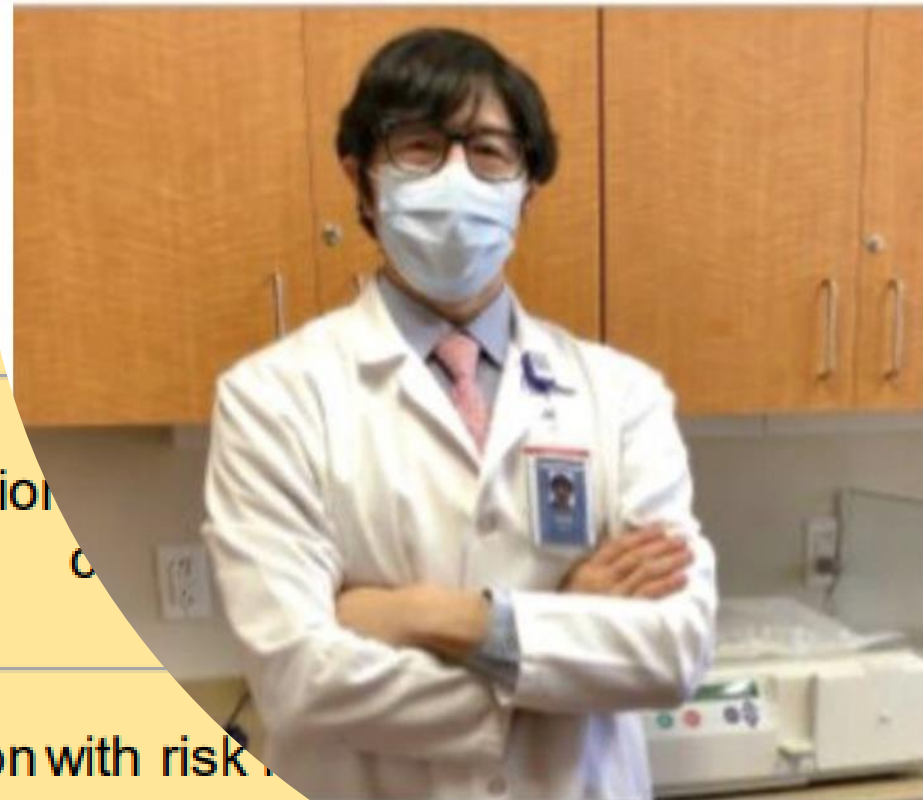
ACO-based optio

**CKCC Global Option**

ACO-based option with risk  
B services

# NEPHROLOGY

## NEWS & ISSUES



COVER STORY ▶

### CMS MODELS FOCUS ON CKD

Payments aimed at earlier diagnosis

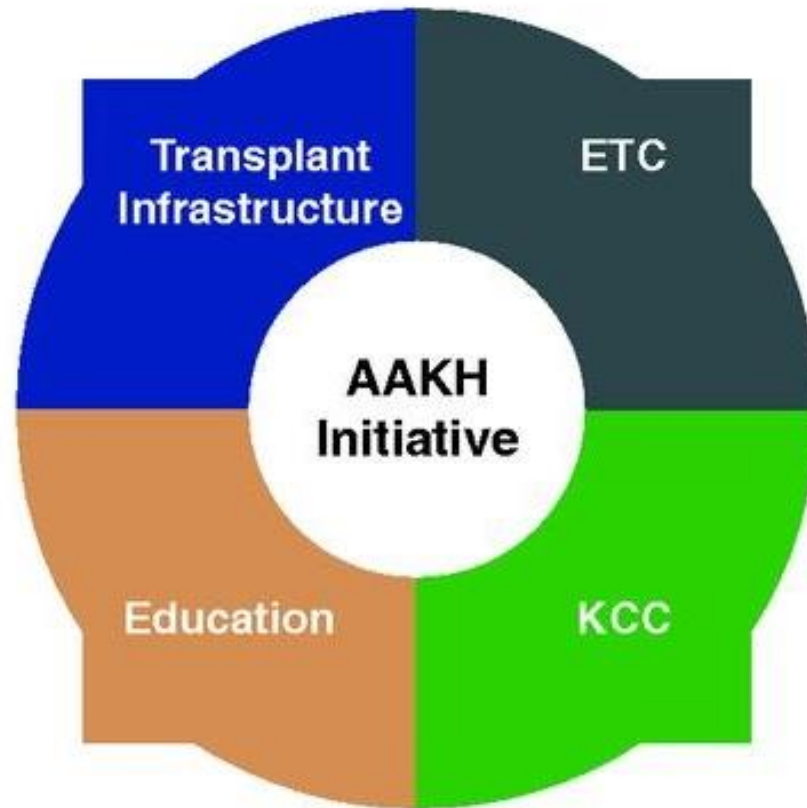
Leslie Wong, MD, chief medical officer of Nephrology Care Alliance, said nephrologists should be directly involved in chronic kidney disease care.  
Source: Dallas Inc.

Part A and

# Value-Based Care in Nephrology: The Kidney Care Choices Model and Other Reforms

Jain, Gaurav<sup>1</sup>; Weiner, Daniel E.<sup>2</sup>

*Kidney360* 2(10):p 1677-1683, October 2021.



- Increase utilization of home dialysis and kidney transplantation

- Reduce Total cost of care
- Increase utilization of home dialysis and kidney transplantation
- Improve CKD stage 4-5D care
- Emphasis on
  - Mental health and patient activation
  - Optimal dialysis starts
  - Delayed progression to KRT

# Regional Maps of PY2022 KCC Entities

WEST REGION



MIDWEST REGION



NORTHEAST REGION



SOUTH REGION



★ CMS Kidney Care First (KCF) Option: KCF Practice(s)  
 ■ Comprehensive Kidney Care Choices (CKCC) Option: Kidney Contracting Entity(ies)

AK and HI



## Kidney Care Choices (PY 1 cohort)

30 KCF entities  
 55 CKCC entities  
 69,080 CKD 4-5 beneficiaries  
 59,061 ESKD beneficiaries  
 2694 nephrologists  
 1982 dialysis facilities  
 197 transplant providers

## PY2 Cohort

4 KCF entities  
 50 CKCC entities  
 xxxxx CKD 4-5 beneficiaries  
 Xxxxx ESKD beneficiaries  
 xxxx nephrologists  
 xxxx dialysis facilities  
 xxxx transplant providers

# Derek Jeter Key #2: Don't Be Afraid to Fail = Take Downside Risk

27 of the PY2 KCEs  
have selected the  
Global Option  
100% risk

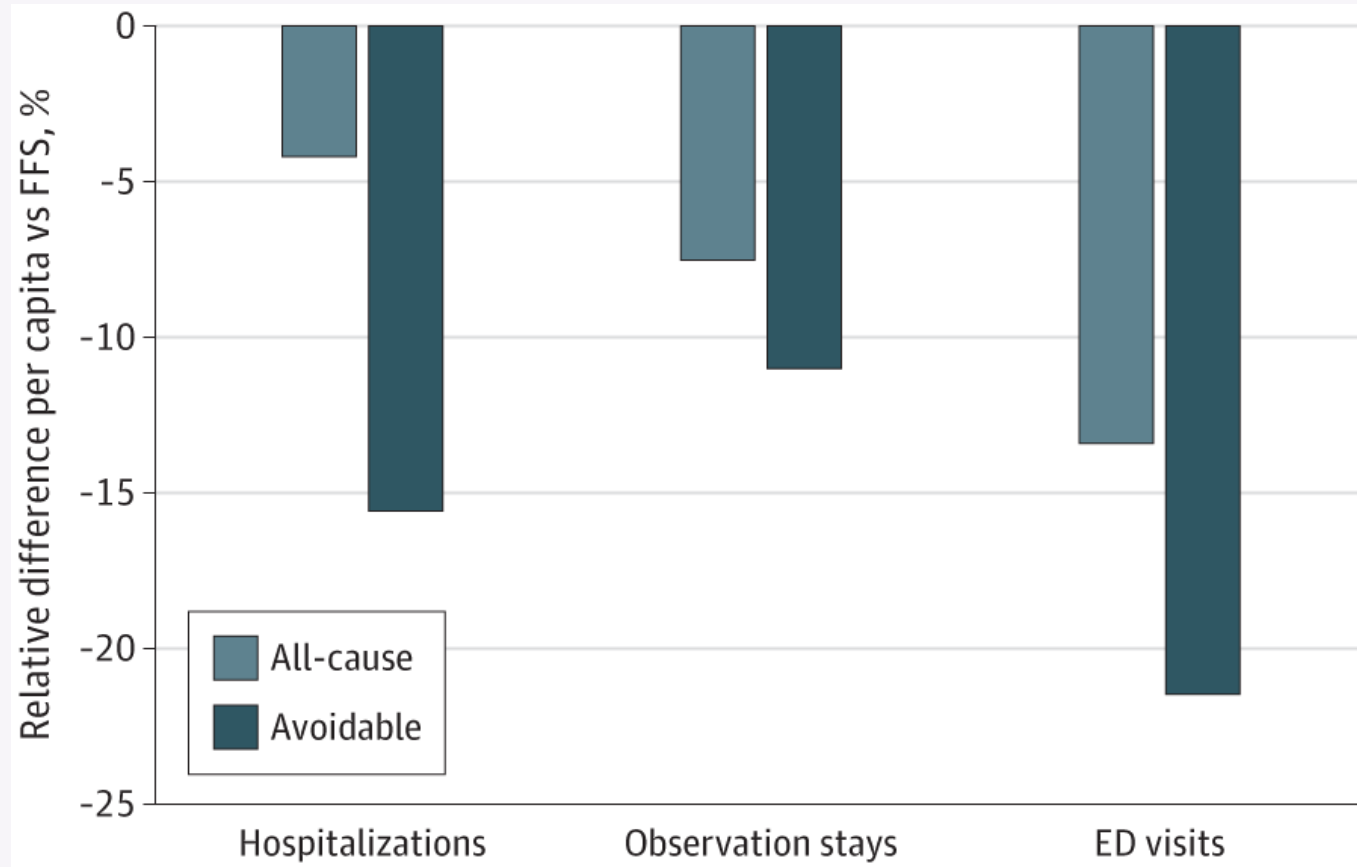
14 have selected the  
Professional Option  
50% risk

9 have selected the  
Graduated Option  
(Level 1 or Level 2)



From: **Analysis of Value-Based Payment and Acute Care Use Among Medicare Advantage Beneficiaries**

JAMA Netw Open. 2022;5(3):e222916. doi:10.1001/jamanetworkopen.2022.2916



You Have Less Hospital Use (\$\$\$) When Downside Risk is Present

Original Investigation

## Financial Incentives to Facilities and Clinicians Treating Patients With End-stage Kidney Disease and Use of Home Dialysis A Randomized Clinical Trial

Yunan Ji, PhD; Liran Einav, PhD; Neale Mahoney, PhD; Amy Finkelstein, PhD



3,641

Managing Clinicians

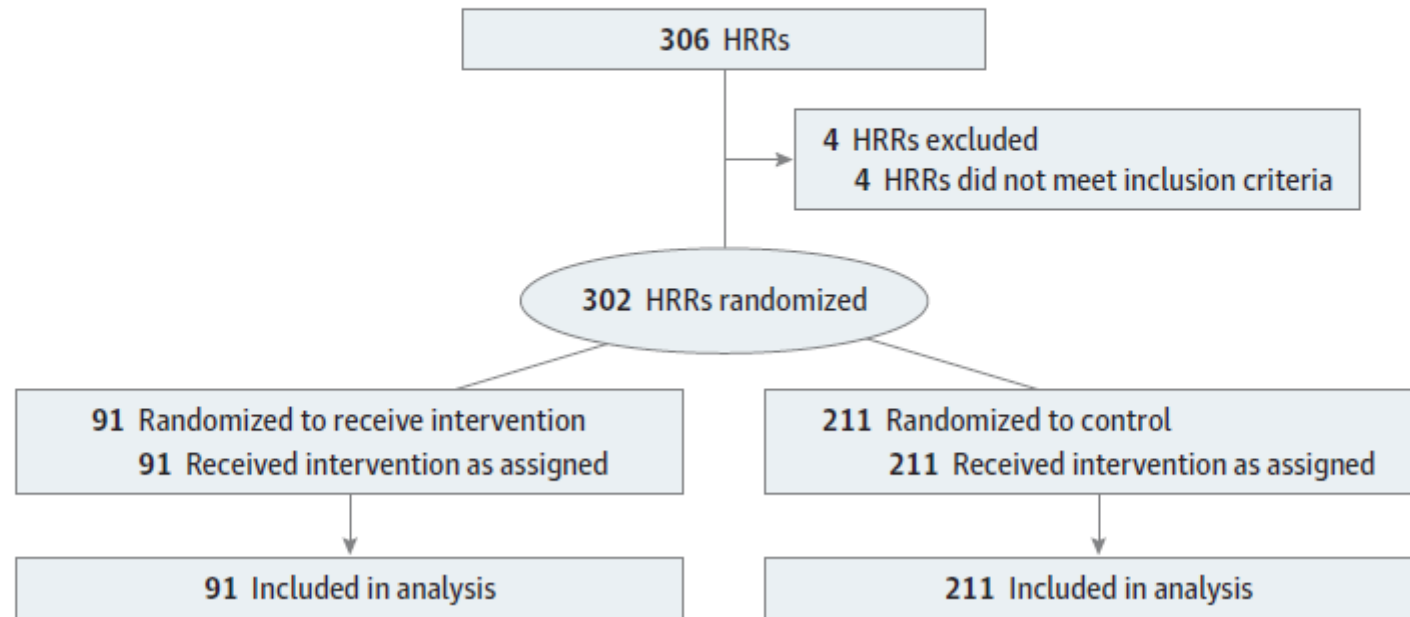


97,875

Beneficiaries attributed to Managing Clinicians

<https://innovation.cms.gov>

Figure. CONSORT Diagram of Hospital Referral Region (HRR) Eligibility and Randomization in End-Stage Renal Disease Treatment Choice (ETC)





# End-Stage Treatment Choices and Home...Meh

Table 3. Effect of ETC During First Year of the Program in 2021<sup>a</sup>

Characteristic	Value in control HRRs, mean (SD)	Between treatment and control HRRs, mean difference (95% CI)	P value
<b>Treatment modality</b>			
Any home dialysis in first 90 d, %	20.60 (7.77)	0.12 (-1.42 to 1.65)	.89
Weeks receiving any home dialysis in first 90 d, %	16.67 (6.77)	0.17 (-1.24 to 1.58)	.82
Dialysis sessions at home in first 90 d, %	17.23 (6.81)	0.22 (-1.14 to 1.57)	.76
<b>Patient characteristics and extensive margin outcomes</b>			
Dialysis rate per capita <sup>b</sup>	0.01 (0.005)	-0.0001 (-0.0003 to 0.0002)	.44
Total No. of dialysis patients <sup>c</sup>	2388 (2521)	37.04 (-8.41 to 82.50)	.11
Predialysis Elixhauser index score	5.96 (0.75)	-0.02 (-0.18 to 0.13)	.77
<b>Anticipatory effect</b>			
Any home dialysis in first 90 d in 2020, %	20.00 (8.55)	-1.20 (-2.75 to 0.3382)	.13

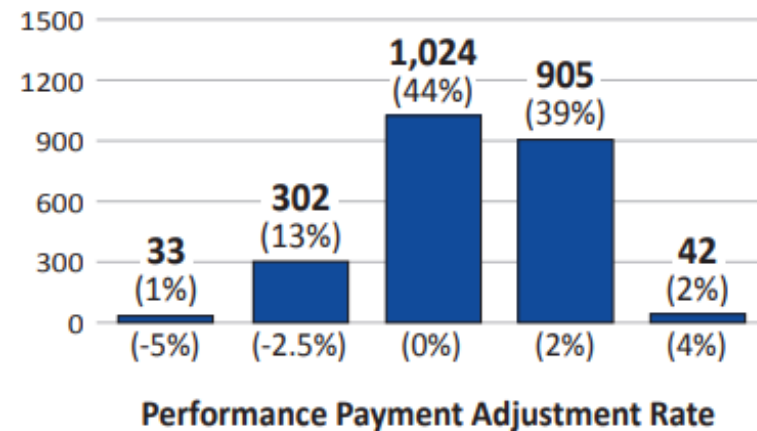
Abbreviations: ETC, End-Stage Renal Disease Treatment Choice; HRRs, hospital referral regions.

# End-Stage Treatment Choices (ETC) Microeconomics

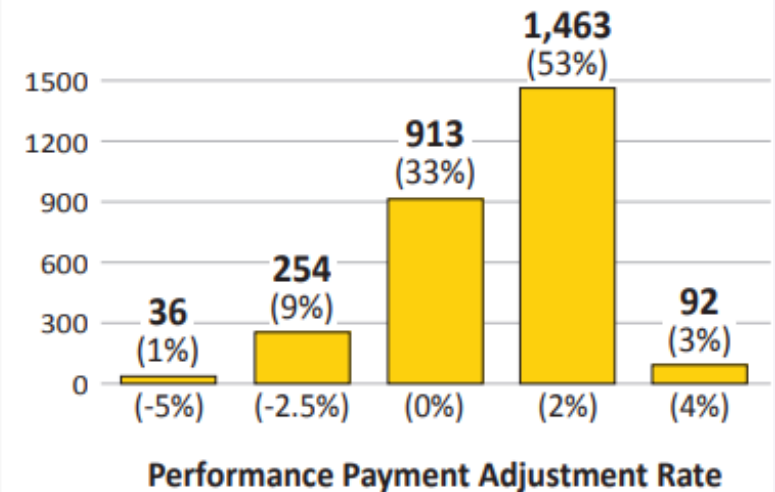
## MY1 PERFORMANCE PAYMENT ADJUSTMENT

41% of ESRD facilities and  
56% of Managing Clinicians  
received a positive PPA.

PPA for ESRD Facilities



PPA for Managing Clinicians



50 Medicare HD patients x \$353 per month x 12 months = \$211,800 per year

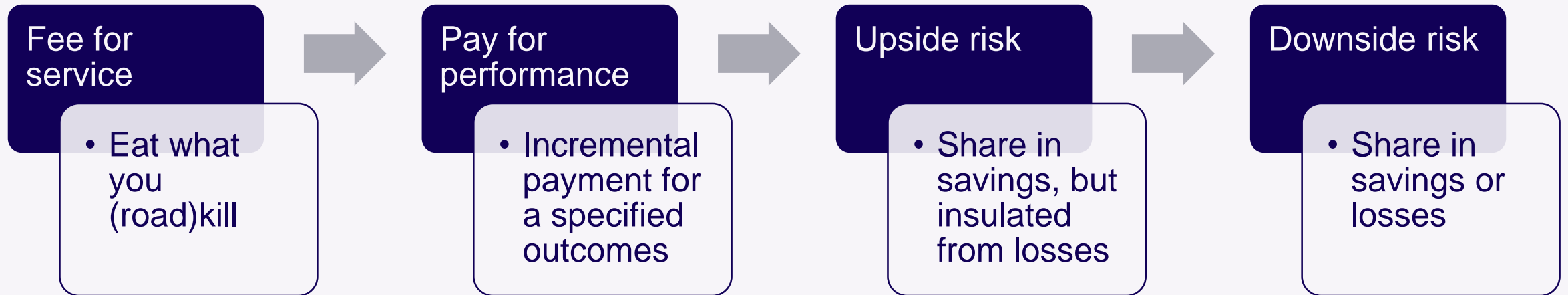
(-5% PPA) x \$211,800 = - **\$10,590 per year**

But if I grow my HD census by 10 patients (Crashers)

(-5% PPA) x 10 new Medicare HD patients x \$353 per month x 12 months = **\$40,242**

**\$40,242 - \$10,590 = \$29,652 per year net gain even for lowest performing nephrologist**

# Payer Risk Continuum



Many nephrologists are sensitive to changes in income and risk-averse to making investments in something they don't understand

# Medicare's aggressive approach to CKD attracts providers, value-based care groups

NEPHROLOGY  
NEWS & ISSUES™



The People Who Created The Policies are Now Involved in The Transformation  
New Entrants are Eager to Assume Risk (For Nephrologists)

# Finding the Right Partner or Practice Solution



**RPA**  
Renal Physicians Association

POSITION PAPER

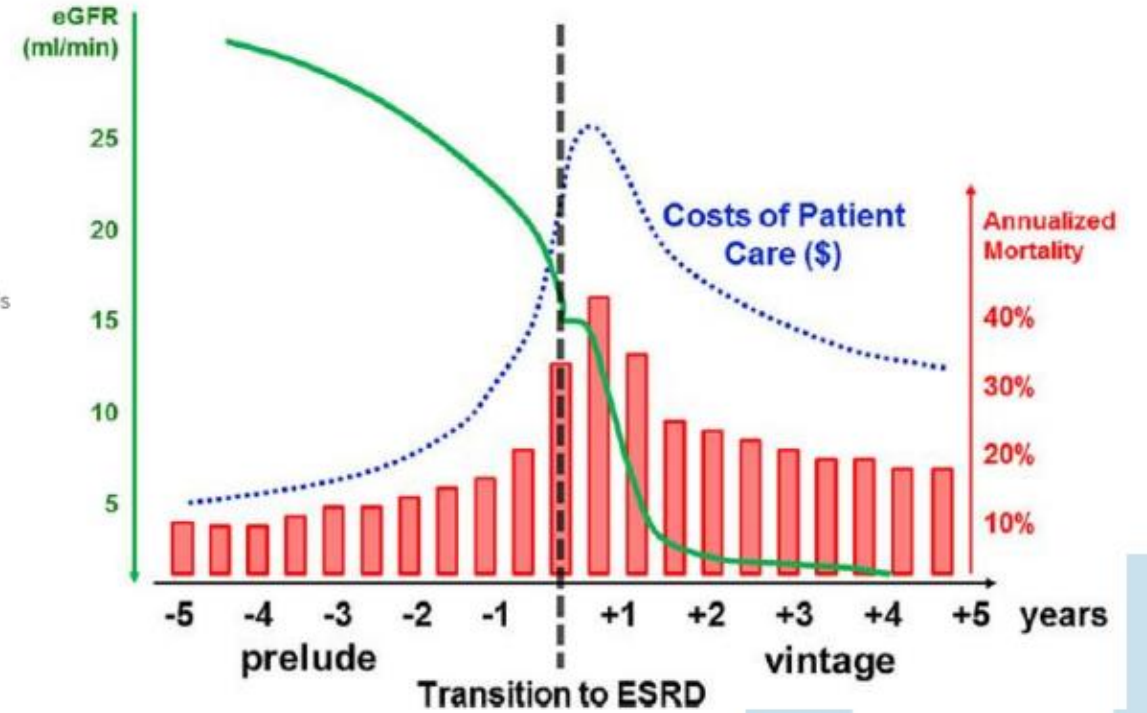
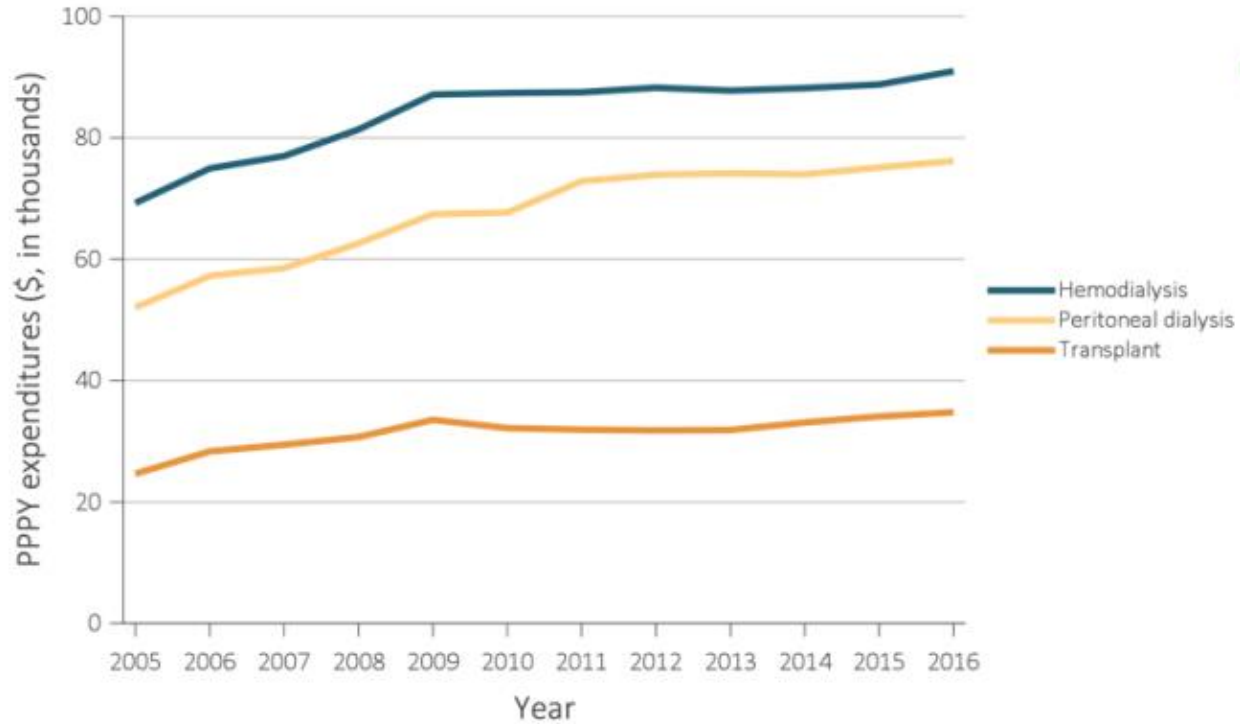
Approved by  
RPA Board 11.23.21

**RPA Guidance on Nephrologists' Relationships with  
Value-Based Commercial Coordinated Care Entities**

**Questions to Ask**

- How will partnership provide a competitive advantage?
- Are practice partners willing to change our care and processes?
- What capabilities do we need that the company has to offer?
- Have we explored our own gaps and ability to address them?
- How much data and practice information are we willing to share?
- How will the company demonstrate it values our relationship?
- Will we be protected from financial risk and loss of autonomy?

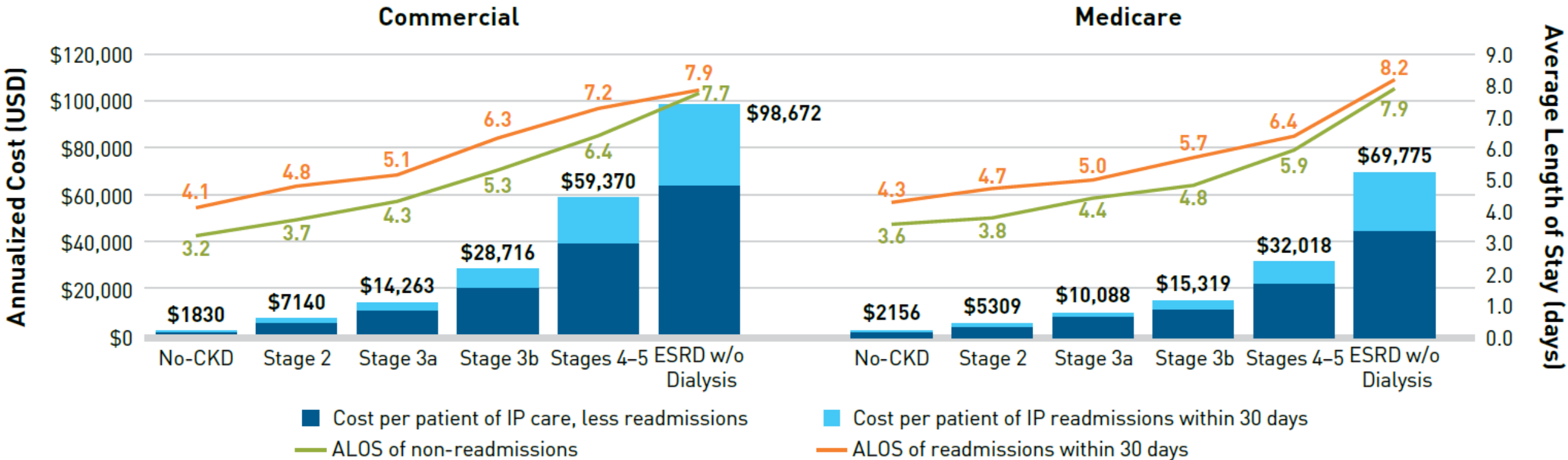
# Costs and Waste – Key Drivers of Transformation



USRDS 2018

K Kalantar-Zadeh, Nephrol Dial Trans 2017

# IP admits and readmits drive kidney spending



# KCC Quality Metrics

Figure 1. KCC Model Benchmark Data Sources for PY2023

Measure Number	Measure Name	Steward	P4P or P4R Status	KCF Option Measure Type	KCF Benchmark Data Source	CKCC Options Measure Type	CKCC External Benchmark Data Source
National Quality Forum (NQF) #2483	Gains in Patient Activation (PAM® [Patient Activation Measure®]) Scores at 12 Months	Insignia Health	P4P	Quality Gateway	Insignia Health Data 2011–2021	Quality Measure	Insignia Health Data 2011–2021
NQF #1885	Depression Response at Twelve Months – Progress Towards Remission	Minnesota Community Measurement (MNCM)	P4P for Cohort 1; P4R for Cohort 2	Quality Gateway	MNCM 2020 Data	Quality Measure	MNCM 2020 Data
NQF #2594	Optimal ESRD Starts	The Permanente Federation	P4P	Utilization	ESRD Quality Reporting System (EQRS) 2023 Data	Quality Measure	EQRS 2021 Data
TBD	Cost of Care Composite measure: <ul style="list-style-type: none"> <li>CKD Cost of Care measure</li> <li>ESRD Cost of Care measure</li> </ul>	CMS	P4P	Utilization	Medicare Claims 2023 Data	N/A	N/A





# Clinical Outcomes and Healthcare Use Associated With Optimal ESRD Starts

*Peter W. Crooks, MD; Christopher O. Thomas, MD; Amy Compton-Phillips, MD; Wendy Leith, MS, MPH; Alvina Sundang, MBA; Yi Yvonne Zhou, PhD; and Linda Radler, MBA*

**TABLE 3.** Healthcare Utilization in the Year After Starting Renal Replacement Therapy

	Annual Utilization <sup>a</sup>		Rate Ratio (95% CI)	P
	Optimal Start	Nonoptimal Start		
Inpatient stays	1.5	2.7	0.54 [0.50-0.59]	<.001
Total inpatient days	9.4	27.5	0.45 [0.38-0.52]	<.001
ED visits	2.4	3.5	0.68 [0.63-0.74]	<.001
Outpatient office visits				
Primary care	4.0	4.4	0.88 [0.79-0.97]	.02
Specialty care <sup>b</sup>	12.5	18.0	0.62 [0.53-0.74]	<.001
Nephrology	5.1	4.7	0.88 [0.74-1.05]	.15
Vascular surgery	1.3	3.6	0.31 [0.29-0.34]	<.001

## TAKEAWAY POINTS

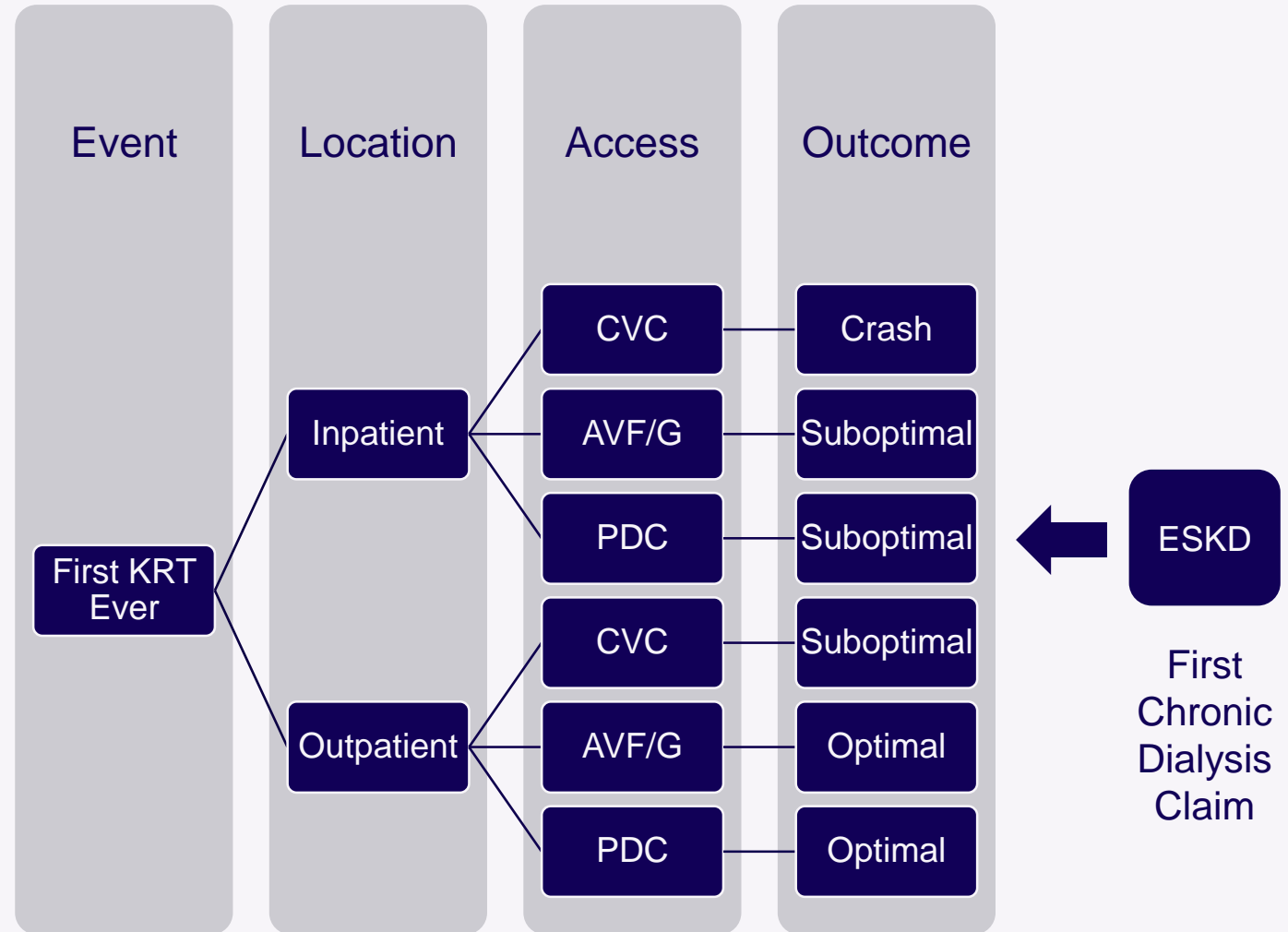
In an integrated healthcare delivery system, compared with patients with end-stage renal disease with nonoptimal starts of renal replacement therapy by hemodialysis via a central venous catheter, patients with optimal starts by hemodialysis via arteriovenous fistula/graft, peritoneal dialysis, or pre-emptive transplant had:

- ▶ Reduced morbidity
- ▶ Less inpatient utilization
- ▶ Annual event rates for all-cause mortality lower than those reported in the largest systematic review to date
- ▶ Fewer primary and specialty care outpatient visits, except for nephrology visits, which did not differ between those with optimal and nonoptimal starts

# Not all Dialysis Starts are Crashes or Optimal

## Suboptimal Start

- Outpatient CVC
- Inpatient AVF/G
- Inpatient PDC “urgent”



# ESKD Costs as Function of Dialysis Start Type

Avoiding crash start (inpatient dialysis initiation) **saves an average of \$28K PMPY** in first year of dialysis

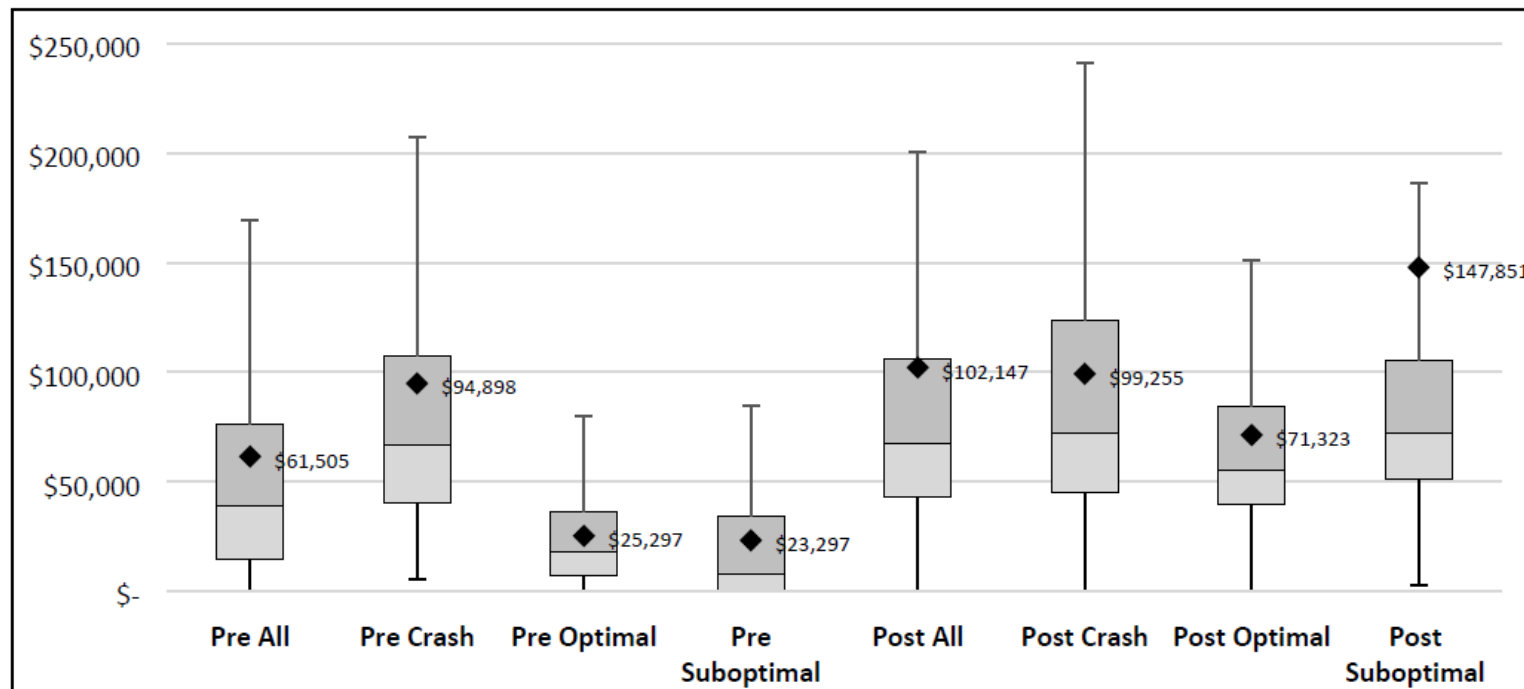
Crash starts increase costs **\$69K in year preceding ESKD** including initial dialysis event

Total potential 2-year savings of **~\$97K** around dialysis transition period

THE AMERICAN JOURNAL OF  
MANAGED CARE



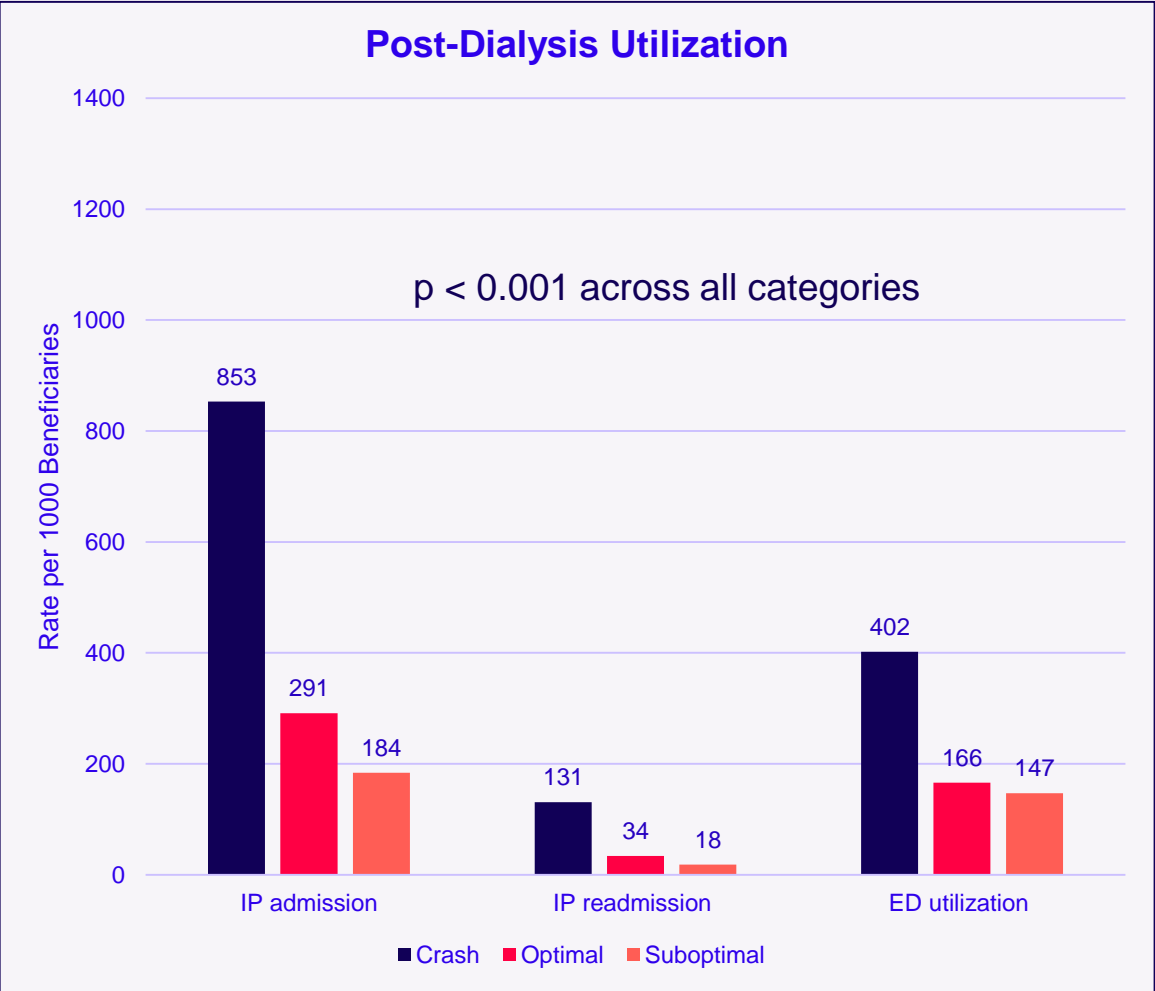
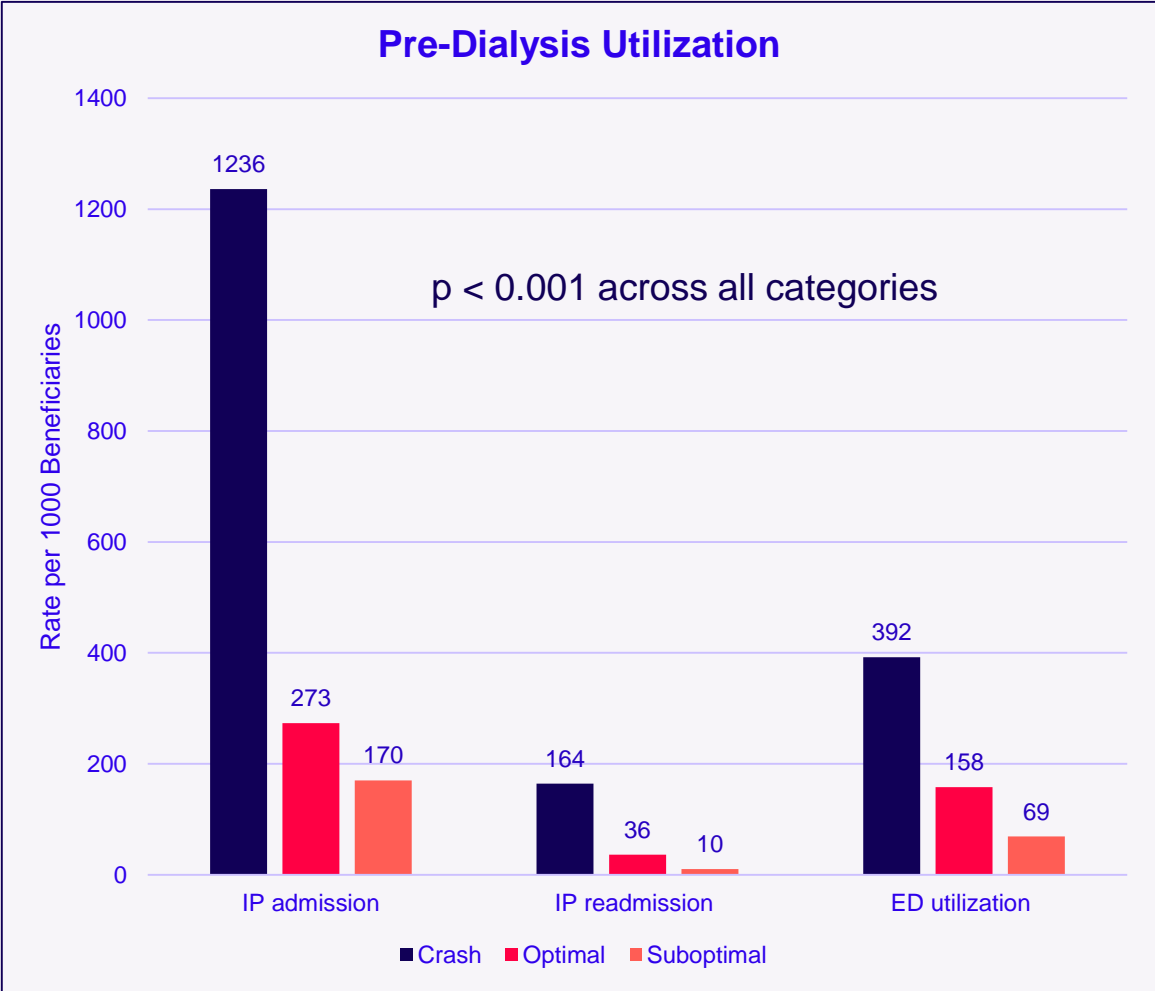
Figure 1A. Total cost of care (TCOC) in 12 months before and after first outpatient dialysis treatment. All values in \$U.S. dollars.



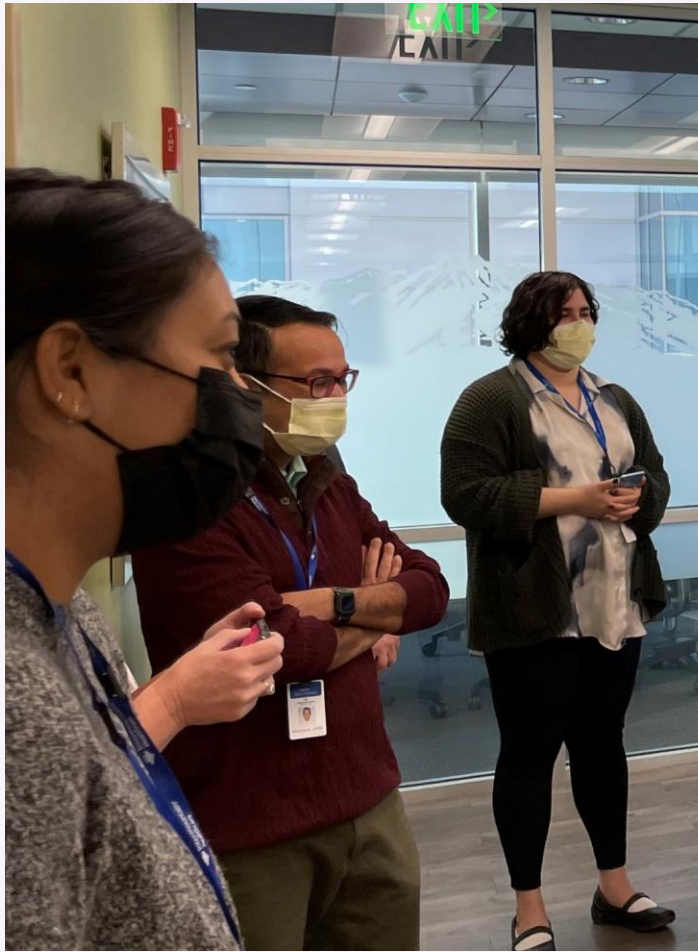
	Pre All	Pre Crash	Pre Optimal	Pre Suboptimal	Post All	Post Crash	Post Optimal	Post Suboptimal
Min	\$ -	\$ 5,178	\$ -	\$ -	\$ (812)	\$ 98	\$ (812)	\$ 2,942
Q1	\$ 14,432	\$ 40,397	\$ 7,296	\$ 317	\$ 42,950	\$ 45,377	\$ 39,685	\$ 51,026
Median	\$ 39,132	\$ 67,059	\$ 17,891	\$ 7,633	\$ 67,407	\$ 71,992	\$ 55,427	\$ 72,032
Q3	\$ 76,332	\$ 107,284	\$ 36,334	\$ 34,088	\$ 106,086	\$ 123,802	\$ 84,132	\$ 105,174
Max	\$ 76,332	\$ 107,284	\$ 36,334	\$ 34,088	\$ 106,086	\$ 123,802	\$ 84,132	\$ 105,174

Notes: Outliers are not shown on box plots to optimize visual scale. Lower box plot whiskers are truncated at zero value bound. ◊ indicates mean values. Pre- 12 months before first outpatient dialysis treatment, Post- 12 months after first outpatient dialysis treatment. p <0.001 for comparison of mean and median values between all Pre groups. p=0.01 for comparison of mean values between all Post groups. p=0.001 for comparison of median values between all Post groups.

# Differences Persist in Chronic Dialysis Period



# Derek Jeter Key #3 Learn From Mistakes = Continuous Improvement



## THE 8 WASTES OF HEALTHCARE

<b>TRANSPORTATION</b> Unnecessarily moving patients, specimens or materials throughout a system. <ul style="list-style-type: none"><li>Moving lab specimens across campus</li><li>Moving patients from department to department</li><li>Moving supplies from storage to patients room</li></ul>	<b>INVENTORY</b> Storing more than the customers demand, resulting in storage costs, potential damage, expiration, obsolescence, and taking up space. <ul style="list-style-type: none"><li>A surgical unit has enough low-use surgical drapes to last for several years</li><li>Excess bedside equipment</li><li>Expired supplies that must be disposed of, such as out-of-date medications</li></ul>
<b>MOTION</b> Unnecessary movement of people within a unit, facility or campus. <ul style="list-style-type: none"><li>HUC walks across the unit to the copy machine each time it is needed</li><li>A nurse hunting for supplies or equipment</li><li>Staff travel to an out-of-the-way storage room to retrieve supplies</li></ul>	<b>WAITING</b> Waiting for the next step in a work or care process. <ul style="list-style-type: none"><li>Patients in waiting rooms (or exam rooms)</li><li>Staff members with uneven workloads waiting for their next task or patient</li><li>Waiting for meetings to begin</li></ul>
<b>OVER-PRODUCTION</b> Doing more than what is needed by the patient or doing it sooner than needed. <ul style="list-style-type: none"><li>Delayed discharges</li><li>Urinary catheter staying in too long</li><li>Ordering medications the patient doesn't need</li></ul>	<b>OVER-PROCESSING</b> Doing more work, making it more complex or more expensive than is necessary. <ul style="list-style-type: none"><li>Ordering and completing unnecessary tests, diagnostics and therapies</li><li>Performing surgery instead of an equally effective medical alternative</li><li>Doing more paperwork than necessary</li></ul>
<b>DEFECTS</b> Time and material spent doing something incorrectly and fixing errors. Also includes inspection. <ul style="list-style-type: none"><li>Time spent looking for an item missing from a surgical case cart</li><li>Hospital acquired conditions</li><li>Misdiagnosis</li></ul>	<b>SKILLS/POTENTIAL</b> An employee working below his/her licensure. Also employees that are not engaged, heard or supported. <ul style="list-style-type: none"><li>A nurse is frequently used to discharge or transport a patient</li><li>Employees are burnt out and cease sharing improvement ideas</li><li>Employees are not given opportunities to carry out improvement ideas</li></ul>



# Kidney Medicine Is A Team Sport

By Susan E. Quaggin

! We are excited to embark  
#valuebasedcare

#kidneydisease #kidneyhealth



**Prayus Tailor, MD, FASN** (He/Him) • 1st • •••

Nephrologist & Managing Partner -  
Nephrology Associates & Medical Director -...

9h • Edited • 🌐

interdisciplinary team! 2 weeks in. First patient already transplanted! Let's roll!

The “Not-So Secret”  
sauce for nephrology  
practices is team-based  
care with dedicated  
nephrologist leadership



# Intermountain Kidney Health Model



Early identification, diagnosis, and intervention of CKD

Extend outreach and access to patients through Telehealth services

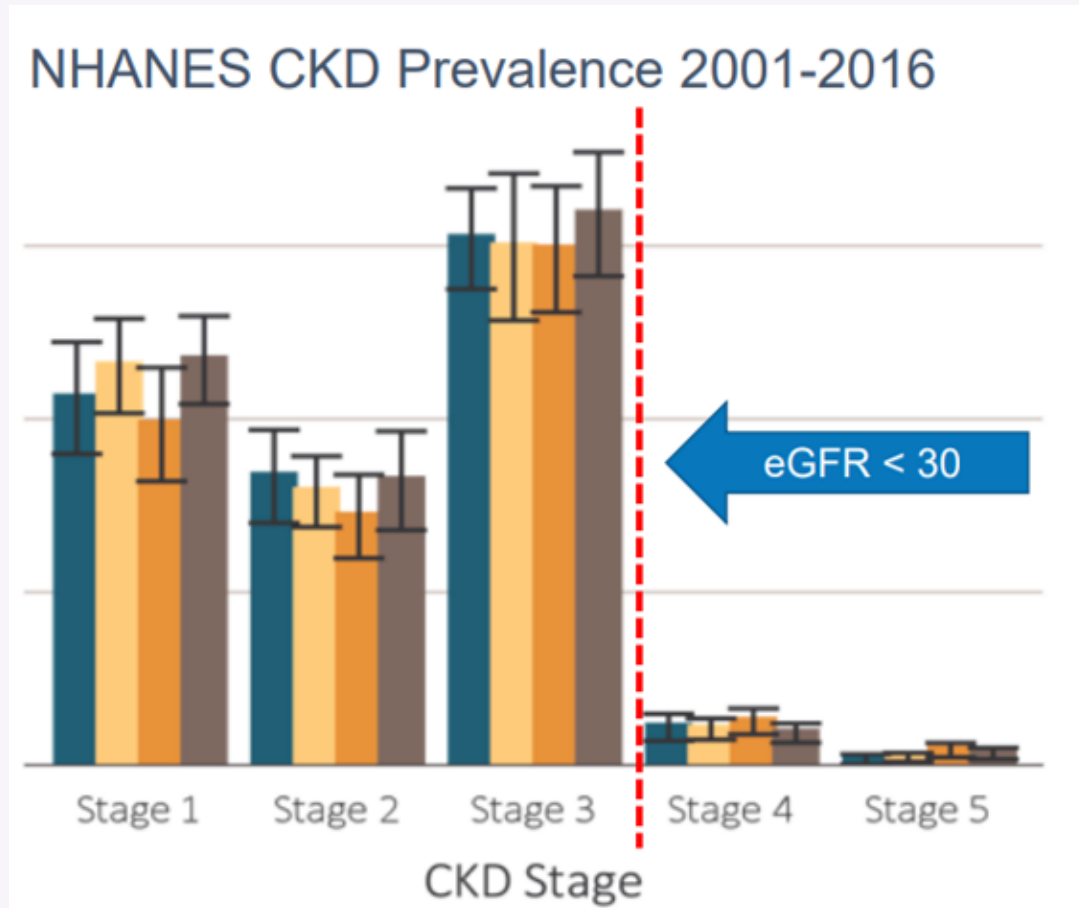
Clinical care pathway adherence through Kidney Care Navigators and iCentra

Pre-emptive transplant and home dialysis first policy

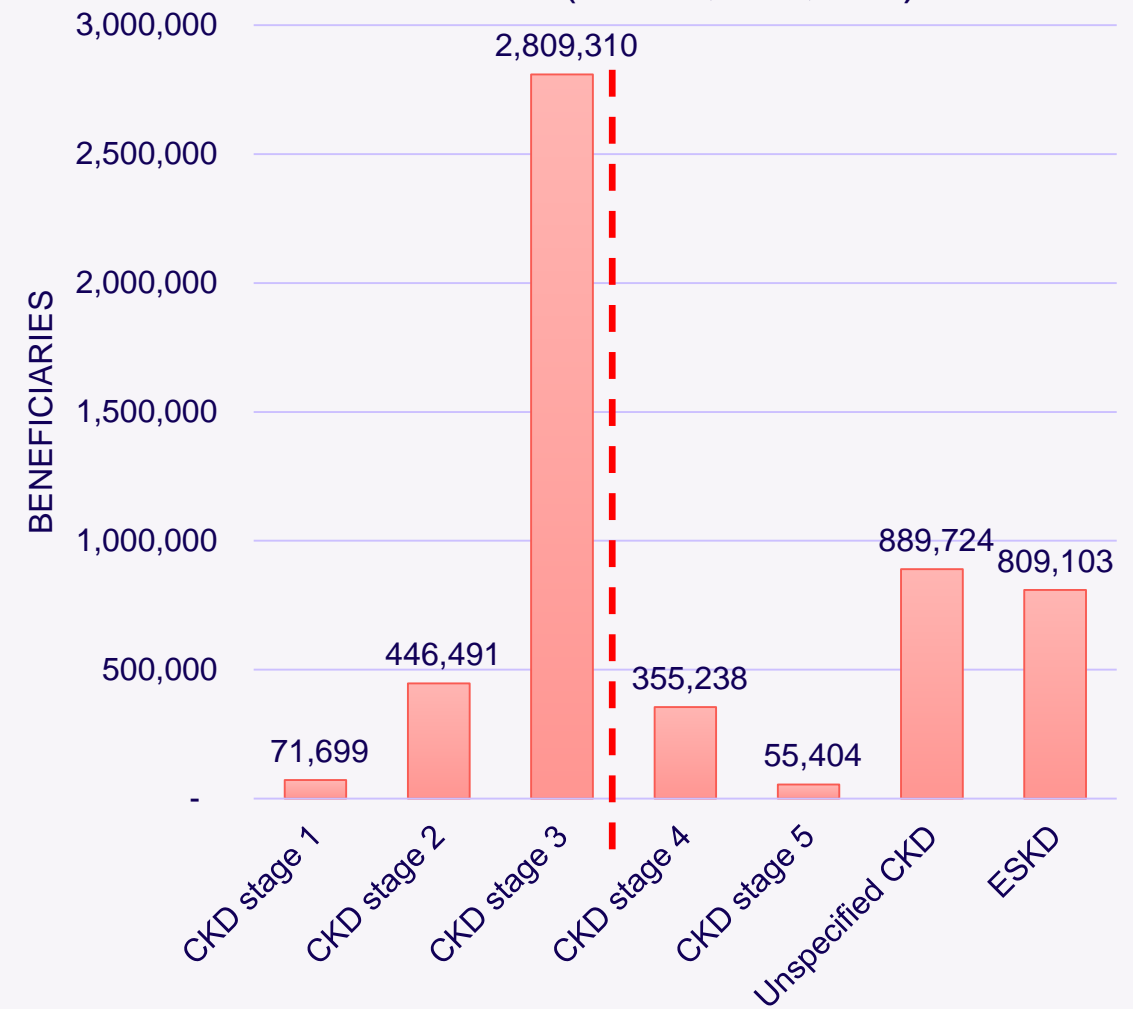
Home training centers and satellite clinics

Payer focus, value-based care initiatives

# Too Much CKD, not enough nephrologists...



Prevalence of CKD and ESKD in Medicare Part B 2019 (n= 32,590,606)







# Nephrology APP Residency Program

An Innovative Educational Collaboration by  
Intermountain Kidney Services  
Intermountain Medical Group



# APP Residency Program Description

- **The goal** is to create a residency training program for newly employed Nephrology Advanced Practice Providers (APP) at Intermountain.
- This will be accomplished by building a **foundation of relevant primary care knowledge and skills** through a structured program in partnership with Intermountain primary care networks.
- **The result** of this innovative program will be Nephrology APPs who can manage chronic kidney disease (CKD) patients more proficiently with the referring provider's needs at the forefront.
- With an intentional approach to blend perspectives and foster understanding between primary care and nephrology, this immersive training can **accelerate development of an integrated CKD care model** across Intermountain and foster a great long-term relationship with our primary care partners.

Insert picture of Florin

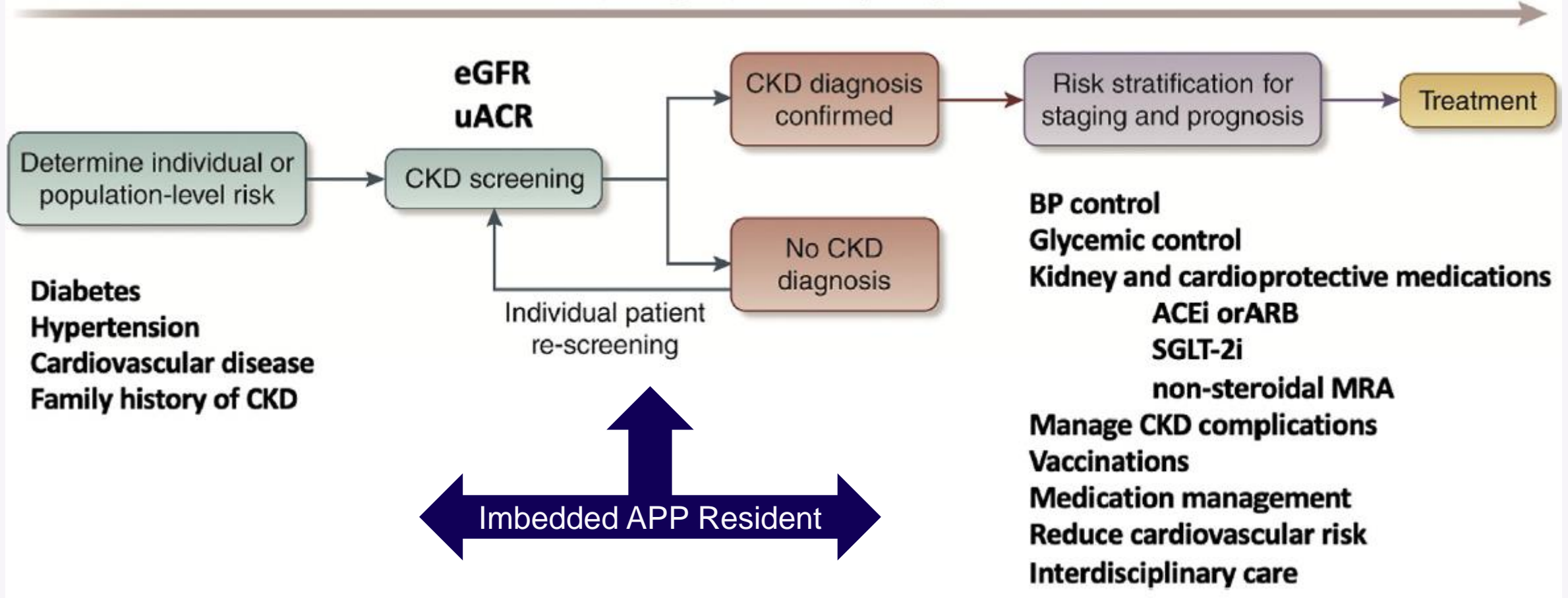
# Residency Details and Timelines

## The First 6 months:

- **Work with Primary Care Provider faculty twice a week.**
- Spend two days per week shadowing IKS providers and **learning clinic day-to-day tasks.**
- Complete supervised and self-directed **curriculum readings** as assigned by IKS faculty.
- **Round in dialysis units** with an IKS APP 1-2 days a month.
- Receive up to **5 hours per week of didactic lectures and case-based learning** with IKS faculty.
- A few days a month spent working with **interdisciplinary care**, including but not limited to: Kidney Transplant, Nurse CKD Navigation, Vascular Access Coordination, and other clinical programs.

# What Should PCPs do for Stages 1-3B CKD?

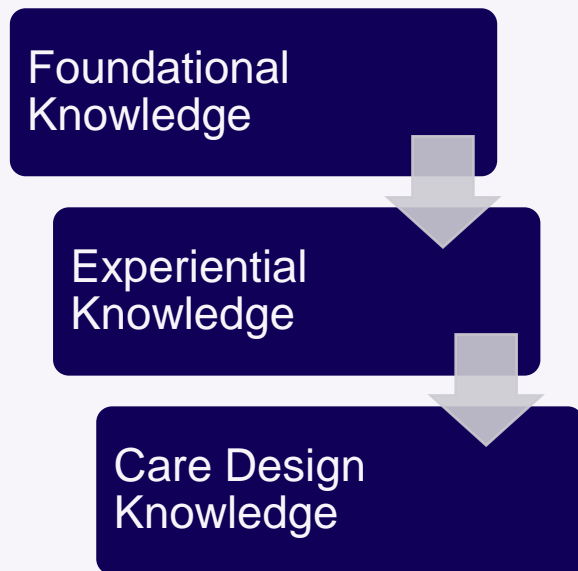
Patient, Caregiver, Interdisciplinary Care Team



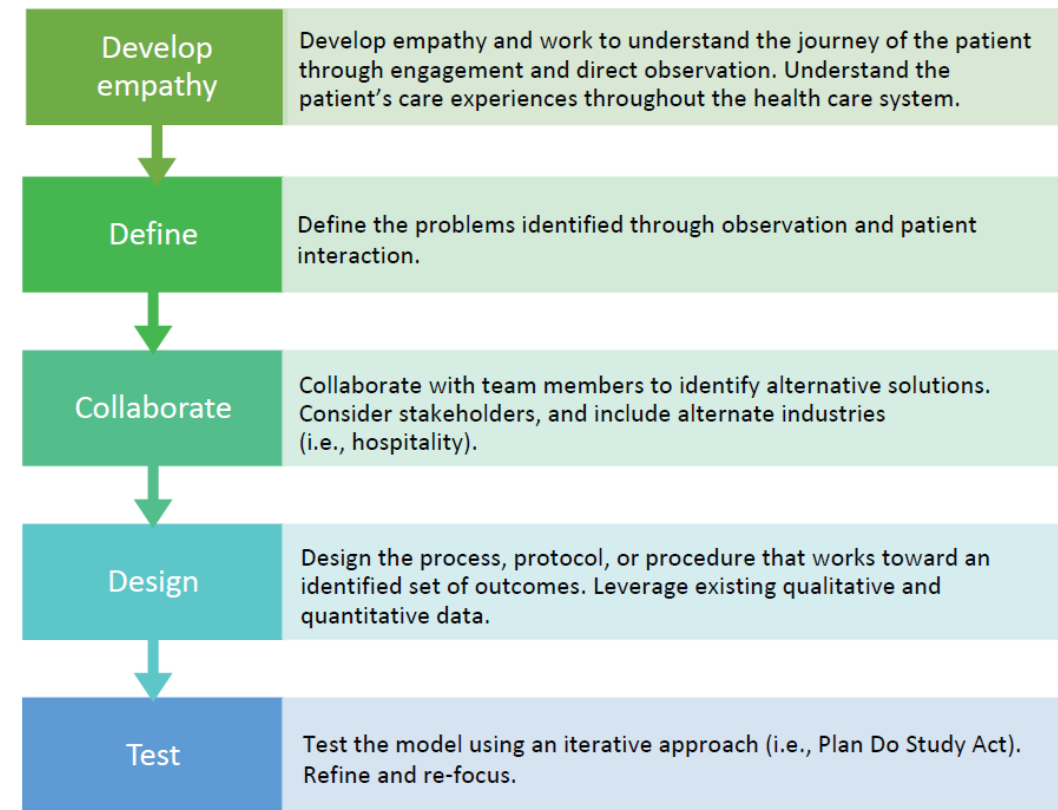
# Driving Change: The Role of Nurse Practitioners in Nephrology Care Delivery Redesign

By Candice Halinski

**NPs can integrate science into practice to design programs that improve clinical outcomes.**



**Figure 1. Design thinking in the creation of kidney-related care delivery models**



# Early Feedback From APP Residency Participants

## **IKS APP Residents:**

“I have been able to do hands-on during my PCP rotation as a part of the residency program. I am seeing patients on my own, making clinical decisions, writing notes, ordering labs etc.”

“Didactics sessions have been really beneficial [for going] over the topics we struggle [with]. They are great opportunity to discuss some basics about the medications, basic physiology we otherwise have no chance to go over.”

“Overall, PCP rotations makes us feel like providers as we are able to use the skills that we already know. Didactics sessions helps us to build more knowledge and better prepare us.”

## **Primary Care Faculty:**

“We are grateful to have you with us in the clinic. We will use every bit of your kidney knowledge to help our patients here.”

# Take Home Points (Derek Jeter's Keys to Success)

## High Reliability + Downside Risk + Continuous Improvement

**ACO**  
At risk  
lives



Kidney health evaluation for people with diabetes (KED)



Testing with kidney function (eGFR) and albuminuria (uACR)

**PCP**  
CKD 1-3B



**Nephrology**  
CKD 4-5  
ESKD



Diagnosis



Patient engagement



Reduce cardiovascular complications



Risk stratification or heat map



Interdisciplinary care



Contain costs



Interventions



Reduce transitions between stages and prevent or delay kidney failure



Review, refine and repeat

# Thank You For Your Attention

