

# Nephrology Fellowship Training in Home Dialysis

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- **NO DISCLOSURES**

# OVERVIEW

**Status of Home Dialysis in US.**

**Stakeholder perspectives: Program directors, Fellows, ASN,  
ABIM, ACGME**

**Barriers of Teaching Home dialysis**

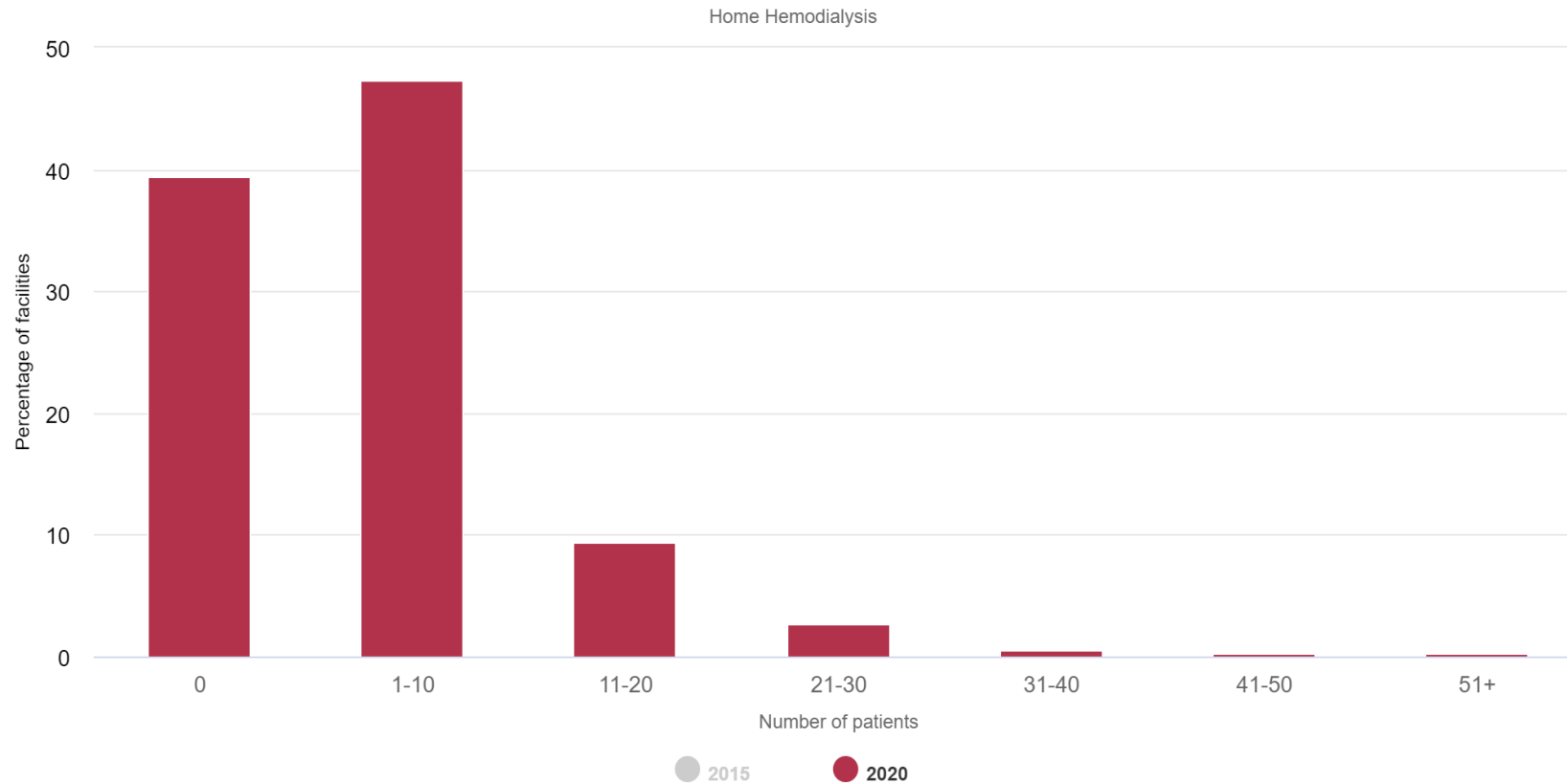
**Proposed Solutions**

**Our Curriculum**

**Educational Resources**

# Status of Home Dialysis in US

Figure 2.5 Number of home dialysis patients per certified facility, by modality, 2015 and 2020

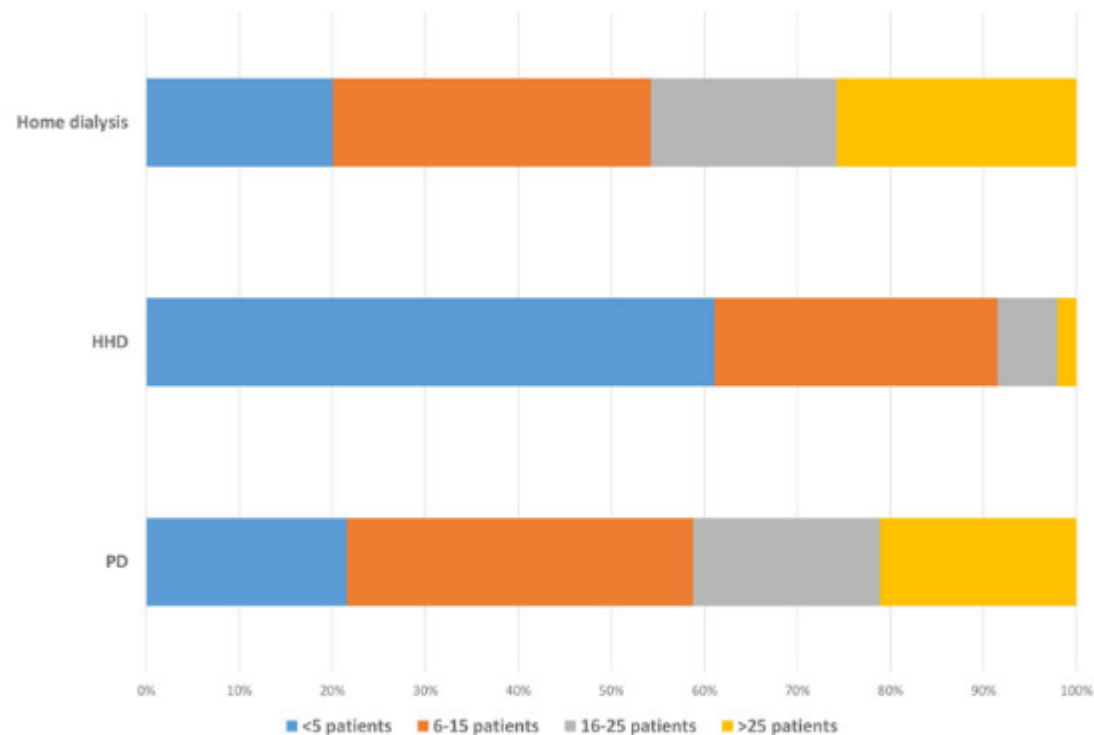


Data Source: 2022 United States Renal Data System Annual Data Report

March 16, 2022 | 5 min read

## US Renal Data System report offers fresh look at home dialysis

Patient counts in home therapy programs, overall and by modality, 2019



Graph shows that PD has seen higher growth among dialysis programs vs. HHD.

Source: Eric Weimhandl, PhD, MS

Table. Growth in PD and HHD among the 10 largest providers: 2013-2019

Year	PD	HHD
2013	34,067	5,783
2014	38,424	6,098
2015	39,817	6,558
2016	41,624	6,932
2017	43,714	7,004
2018	46,474	7,808
2019	50,397	8,807
<b>Growth from 2013-2019</b>	<b>16,330</b>	<b>3,024</b>

Source: *Nephrology News & Issues*

# Benefits of Home Dialysis



Improved 5-yr **Survival**<sup>1,2</sup>



Greater **Quality of Life**<sup>3</sup>



More Likely to  
**Receive a Transplant**<sup>4,5</sup>



**Schedule Flexibility**



**Ability to Work  
or Attend School**<sup>6,7</sup>



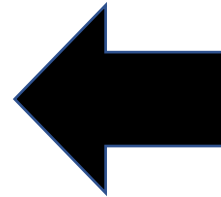
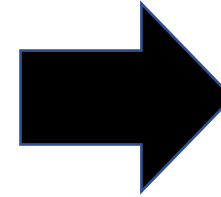
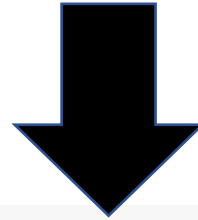
**Portability for Travel**



**Increased Control**<sup>8,9</sup>

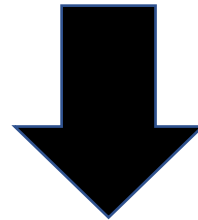


**Reduce Potential  
Exposure & Self-Isolate**<sup>10</sup>



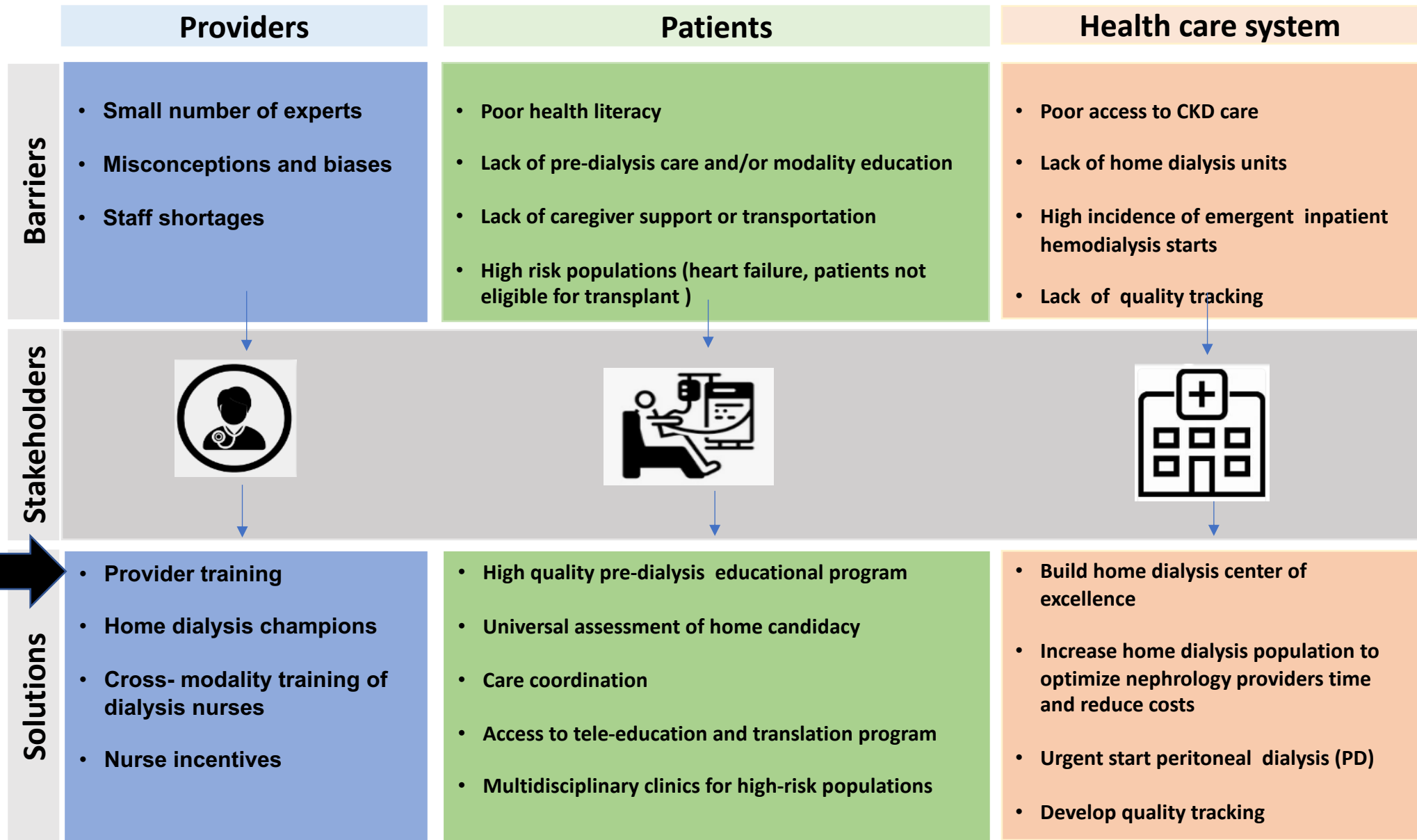
**ESRD Treatment Choices (ETC) Model**

**AHA 2024 mission:  
Endorsement of incorporation of interdisciplinary care models to improving outcomes for patients with ESKD and CV disease**

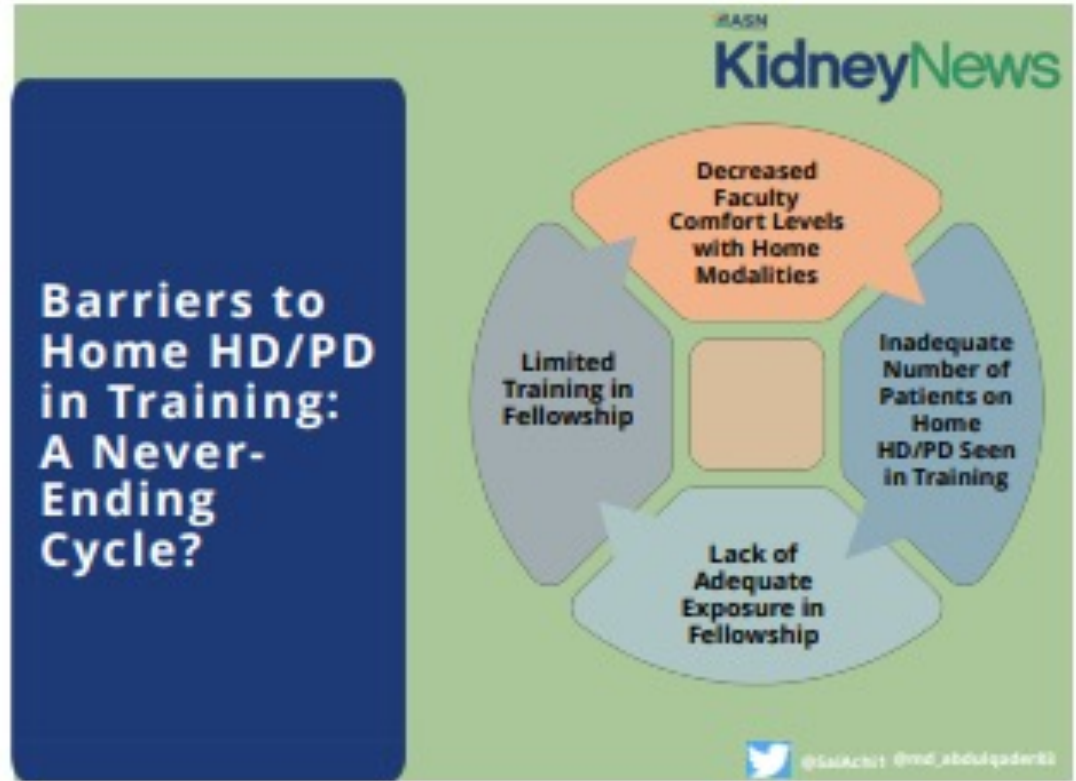


**The advancing American Kidney health Initiative 2019:**  
- Person-centered care.  
- Increase utilization of Home Dialysis and transplantation to 80 % by 2025







# Barriers and Solutions to Home Dialysis



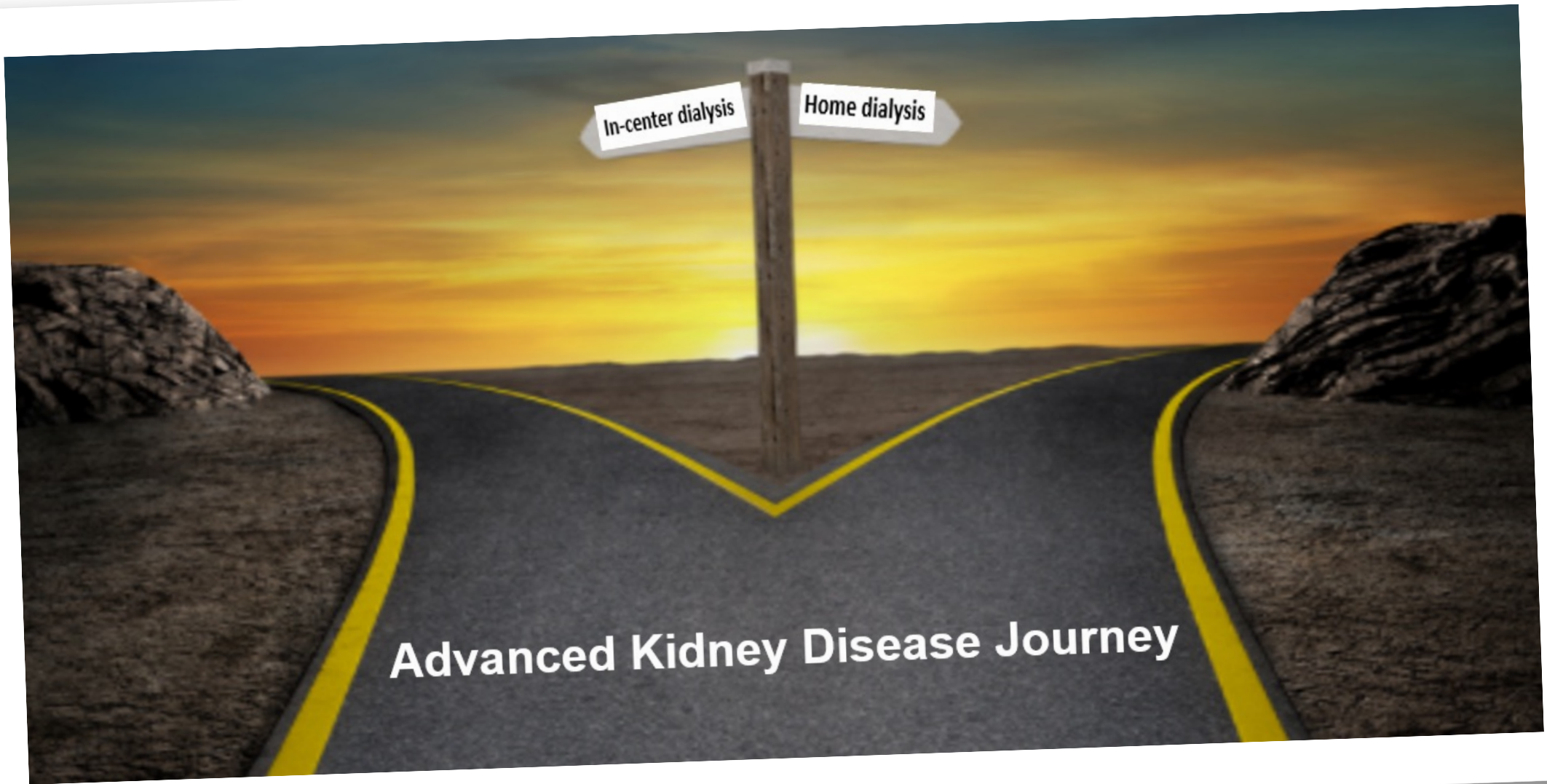




# Barriers to Teaching Home Dialysis

	Educator/program	Learner (fellow)	Educational Policy
Barriers	<ul style="list-style-type: none"> <li>• limited number of Home Dialysis experts.</li> <li>• Not enough patients on Home therapies.</li> <li>• Lack of structured Home Dialysis curriculum.</li> </ul>	<ul style="list-style-type: none"> <li>• Imbalance between number of fellows and Home Dialysis patients.</li> <li>• Different type learners.</li> </ul>	<ul style="list-style-type: none"> <li>• ACGME Core competencies.</li> <li>• ABIM Board certification/re-certification requirements.</li> <li>• Limited training time to 24 months or less</li> </ul>
Stakeholders	 	 	 
Solutions	<ul style="list-style-type: none"> <li>• Identify own Home Dialysis Champions as educators.</li> <li>• Standardize and Structure curriculum.</li> <li>• Mentorship from outside experts (virtual, conferences, webinars, patients).</li> <li>• Hands on learning/SIM workshops.</li> </ul>	<ul style="list-style-type: none"> <li>• Focus on Quality of learning</li> <li>• “PATIENTS AS MENTORS” PROGRAM.</li> <li>• Mandatory Home Dialysis rotation: Med Students and IM Residents.</li> </ul>	<ul style="list-style-type: none"> <li>• Standardize core competencies and requirements for graduation and board certification.</li> <li>• Home dialysis pathway/3<sup>rd</sup> year of fellowship.</li> </ul>

From this:



**Advanced Kidney Disease Journey**

**To this!**

**Kidney Transplant**



**Improve quality and quantity of life**

**Peritoneal dialysis**



**Home hemodialysis**

**In center hemodialysis**



# National Survey - Fellows 2010

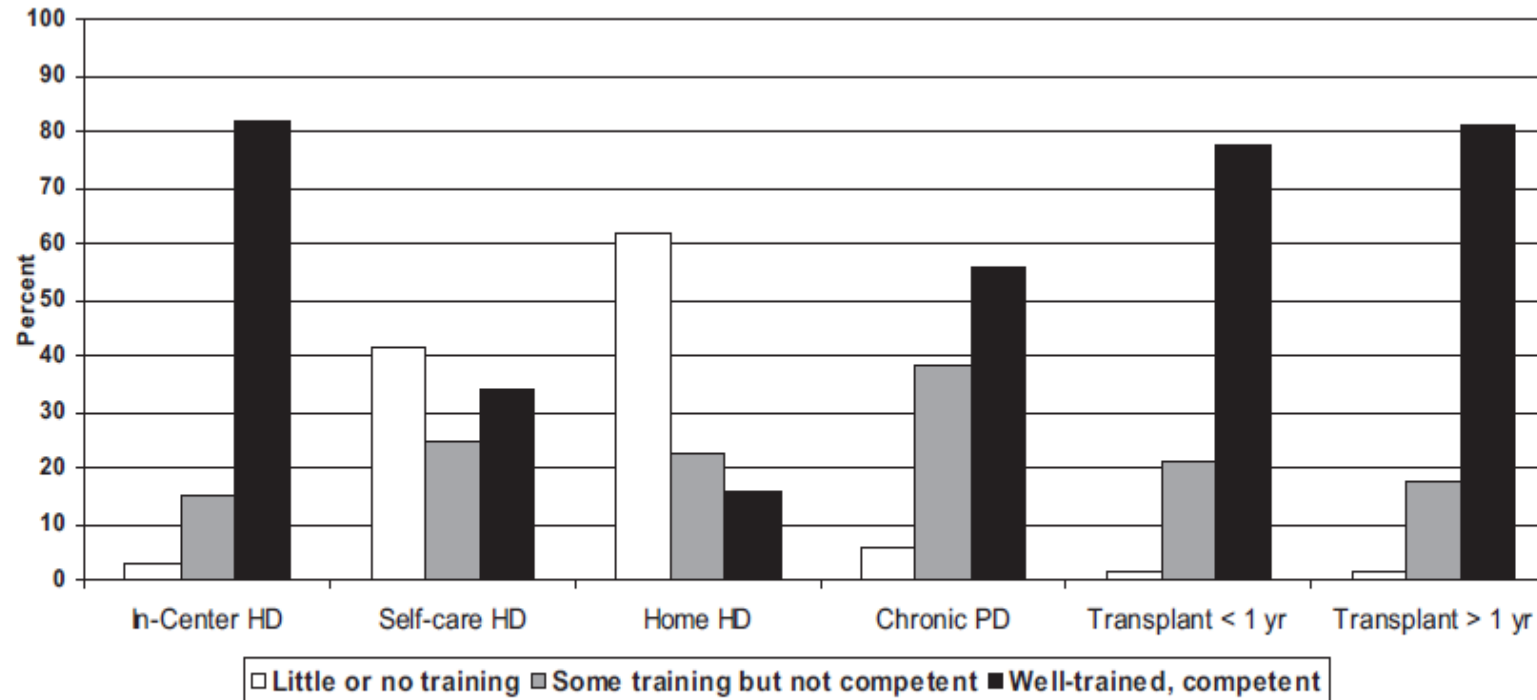


Figure 1. Reported training level and competence in care of dialysis and transplant patients.

# National Survey - Fellows 2017

Table 4. Additional instruction during fellowship (266 fellows responded)








Which Topics Would You Most Like to Receive Additional Instruction in during Fellowship?	N (%)
HHD	136 (51)
PD	119 (45)
Kidney ultrasound interpretation	118 (44)
Acute GN diagnosis/management	101 (38)
Obstetric nephrology	95 (36)
Toxicology	89 (33)
Renal pathology interpretation	85 (32)
Nephrolithiasis	69 (26)
Hemodialysis	67 (25)
Care of adults with pediatric renal disease	62 (23)
Renal pharmacology	61 (23)
Genetic renal diseases	59 (22)
Conservative/palliative management of ESRD	53 (20)
Electrolyte disorders/acid-base disorders	53 (20)
Secondary hypertension diagnosis/management	52 (19)
Nutrition	45 (17)
Kidney biopsy	44 (16)
Temporary dialysis catheter placement	42 (16)
Mineral and bone disease management	40 (15)
Nephrotic syndrome	32 (12)
Urinalysis	31 (12)
Post-transplant outpatient management	30 (11)
Geriatric nephrology	28 (11)
Inpatient general AKI diagnosis/management	26 (10)
Post-transplant acute inpatient management	25 (9)
Outpatient CKD diagnosis/management	24 (9)
Diabetic nephropathy	18 (7)
Anemia of renal disease management	14 (5)
Others specified by respondents: interventional nephrology, renal physiology	N/A

N/A, not applicable.



**SPECIAL ARTICLE**

# Home Dialysis Training and Experience Among Nephrology Fellows

Methods	Findings
 <p>Survey developed to assess self-perceived confidence with home dialysis management among nephrology trainees in the US</p>	 <p><b>Confidence with</b></p> <ul style="list-style-type: none"><li>• Home hemodialysis (HHD): <b>Low</b></li><li>• Peritoneal dialysis (PD): <b>Moderate</b></li></ul>
 <p>Survey distributed to 110 trainees who attended ≥ 1 home dialysis conference</p>	<p><b>During Training:</b></p>  <p><b>3%</b> used urgent-start PD for ≥1 patient</p>
 <p><b>66%</b> completed survey</p>	 <p><b>11%</b> observed PD catheter insertion</p>
	 <p><b>59%</b> attended a home dialysis continuity clinic</p>

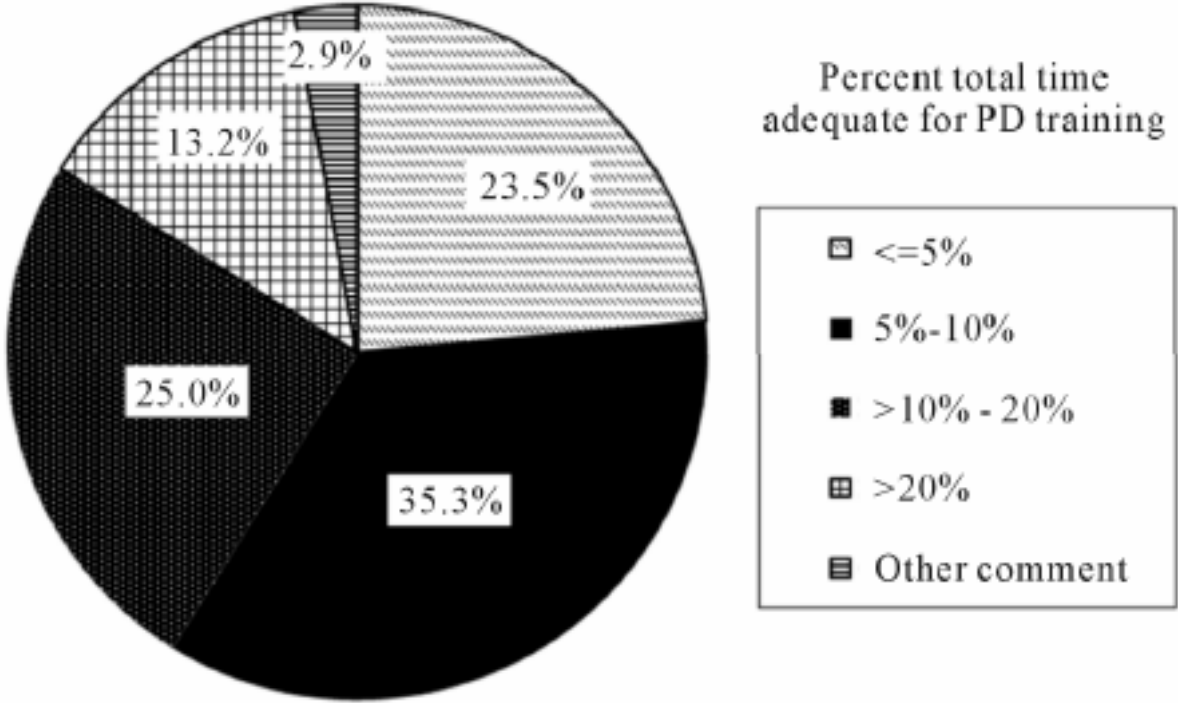
**CONCLUSION:** Self-perceived level of preparedness by nephrology trainees for managing home dialysis therapy is low for HHD and moderate for PD.

Nupur Gupta, Elizabeth B. Taber-Hight, and Brent W. Miller (2020)

@AJKDonline | DOI: 10.1053/j.ajkd.2020.09.014



# National Survey - PDs 2002





November 05, 2022 | 2 min read

SAV

## Minimum of 10 to 12 clinics needed for fellows to give home dialysis without supervision

Minimum number of home dialysis clinics trainings that fellows should complete before providing peritoneal dialysis without supervision



of program directors said 10-12 clinics

vs



of division chiefs said between 10-12 clinics



“Leveraging the second year of fellowship to go beyond level 1 competency is the goal.”

Mark E. Rosenberg, MD, FASN

## The Future of Nephrology: Reimagining Nephrology Fellowship Education

A Report of the American Society of Nephrology  
Task Force on the Future of Nephrology

Mark E. Rosenberg, MD, FASN; Sharon Anderson, MD, FASN; Samira S. Farouk, MD, MS, FASN; Keisha L. Gibson, MD, MPH, FASN; Robert S. Hoover, Jr., MD, FASN; Benjamin D. Humphreys, MD, PhD, FASN; Janis M. Orlowski, MD; Suneel, M. Udani, MD, FASN; Joshua S. Waitzman, MD, PhD; Melissa West; and Tod Ibrahim

- Recommendations to Redefine the Future of Nephrology .....
- Recommendation 1: Enhance Competency-Based Nephrology Education .....
- Recommendation 2: Establish Individualized Pathways to Meet Career Goals .....
- Recommendation 3: Emphasize Personalized Care .....
- Recommendation 4: Reconsider Expectations for Training in Procedures .....
- Recommendation 5: Close Gaps in Current Nephrology Training .....
- Recommendation 6: Promote the Well-being of Nephrology Fellows .....
- Recommendation 7: Prioritize Diversity, Equity, Inclusion, and Health Care Justice .....
- Recommendation 8: Ensure Equal Opportunities for All Nephrologists .....
- Recommendation 9: Foster Interprofessional and Interdisciplinary Practice .....
- Recommendation 10: Inspire Lifelong Learning .....



### Recommendation 3: Emphasize Personalized Care.

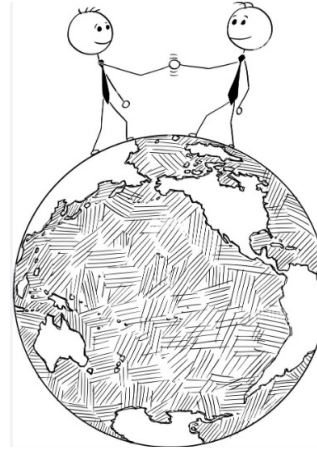
*Nephrology must emphasize personalized care to optimize kidney health and increase patient choice, including early intervention, transplantation, and dialysis.*

#### Why?

- Supports the goals of US government policy outlined in the AAKH initiative<sup>11</sup>
  - Intervening earlier to diagnose and maintain kidney health
  - Ensuring people with kidney failure understand their treatment choices, including home dialysis
  - Prioritizing kidney transplantation when possible for those facing kidney failure
- Emphasizes that kidney transplantation is the optimal form of treatment for kidney failure and should be promoted as the first form of treatment for kidney failure if there is not an absolute contraindication
- Recognizes home-based modalities for kidney replacement therapy are often preferred options
- Expands nephrologists' expertise and enhances fellowship training in counseling and managing patients on these therapies, which currently lags behind nephrologists' comfort with in-center hemodialysis

#### What?

- Every fellow in every nephrology fellowship training program must be trained to Level I competence in the prevention and early diagnosis of kidney diseases, kidney transplantation, and dialysis (particularly home therapies), which likely means strengthening the current ACGME Nephrology Program Requirements in these areas, especially home hemodialysis. Areas of training must include:
  - Longitudinal management of kidney transplant recipients
  - Longitudinal care of people with kidney failure treated in the home, including competency in engaging patients on home therapies to ensure patient-centered care
  - Technical and regulatory aspects of home therapies
  - Emerging technologies and treatments
- Interested nephrology fellowship training programs may provide training to Level III competence in kidney transplantation as is currently being done.
- Interested nephrology fellowship training programs may provide more advanced training to Levels II and III competence in home therapies.



**Within ASN, the Task Force supports:**

- Intentional/deliberate use of the term “home dialysis” separate from “dialysis” across ASN
- All ASN committees to have home dialysis expert representation where appropriate



**Within the kidney community, the Task Force supports policies that address:**

- Disparities in access to care
  - Improvement of timely placement of peritoneal dialysis (PD) catheters and PD catheter outcomes
- Enhanced use of telemedicine during dialysis transitions
- Access to caregiver respite and staff-assisted home dialysis



2008 ABIM Nephrology Blueprint		2020 ABIM Nephrology Blueprint	
Content Category	% of Exam	Content Category	% of Exam
Chronic kidney disease	14%	Chronic kidney disease	22%
Glomerular/vascular disorders	12%	Glomerular/vascular disorders	12%
Kidney transplantation	10%	Kidney transplantation	11%
Hypertension	10%	Hypertension	10%
Sodium/water	10%	Sodium/water	8%
Acid-base/Potassium	10%	Acid-base/Potassium	9%
Clinical pharmacology & misc.	10%	Pharmacology	5%
Tubular/interstitial, cystic dz	6%	Tubular/interstitial, cystic disorders	4%
Mineral metabolism	8%	Calcium, Phosphorus, Mg, Stones	4%
Acute renal failure/ICU	10%	AKI/ICU nephrology	15%
<b>Total</b>	<b>100%</b>		<b>100%</b>

**Chronic Kidney Disease**

**22% of Exam**

**End-stage renal disease**



**11.5%**

Hemodialysis

- Adequacy and prescription
- Dialyzers and dialysate
- Vascular access
- Water treatment

Hemodialysis complications

- Hypertension
- Hypotension
- Interdialytic weight gain
- Electrolyte abnormalities

Peritoneal dialysis

- Adequacy and prescription
- Dialysate
- Catheters
- Other peritoneal dialysis issues (hyperkalemia)

Peritoneal dialysis complications

- Peritonitis and infections
- Ultrafiltration failure
- Other peritoneal dialysis complications (inguinal hernia; atrial fibrillation; peripheral edema)

Home hemodialysis

End-stage renal disease complications

- Anemia
- Cardiovascular disease
- Blood pressure abnormalities
- Other complications (hemolysis; hypoalbuminemia; thrombosis; calciphylaxis; uremic polyneuropathy)
- Medical director responsibilities and conditions of coverage



# Nephrology Milestones

The Accreditation Council for Graduate Medical Education



Version 2

Nephrology Medicine, ACGME Report Worksheet

Patient Care 2: Chronic Dialysis Therapy				
Level 1	Level 2	Level 3	Level 4	Level 5
Lists the indication(s) for initiation of chronic dialysis	Selects appropriate dialysis modality and writes patient-specific hemodialysis and peritoneal dialysis prescriptions	Modifies a dialysis prescription based on patient assessment	Independently manages patients receiving dialysis	Identifies the complexities of providing quality care to a population of patients receiving dialysis
Lists common complications in patients on chronic dialysis	Assesses for common complications of chronic dialysis	Treats common complications of chronic dialysis	Independently anticipates and manages common and uncommon complications of chronic dialysis	Anticipates and manages the breadth of comorbid medical and technical complications in the patient on dialysis, including when dialysis is not appropriate
Identifies types of dialysis access and common access complications	Performs basic assessment of dialysis accesses	Develops a diagnostic and therapeutic plan for management of common access complications	Develops a diagnostic and therapeutic plan for management of uncommon access complications	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b> <div style="text-align: right;">           Not Yet Completed Level 1 <input type="checkbox"/>            Not Yet Assessable <input type="checkbox"/> </div>				

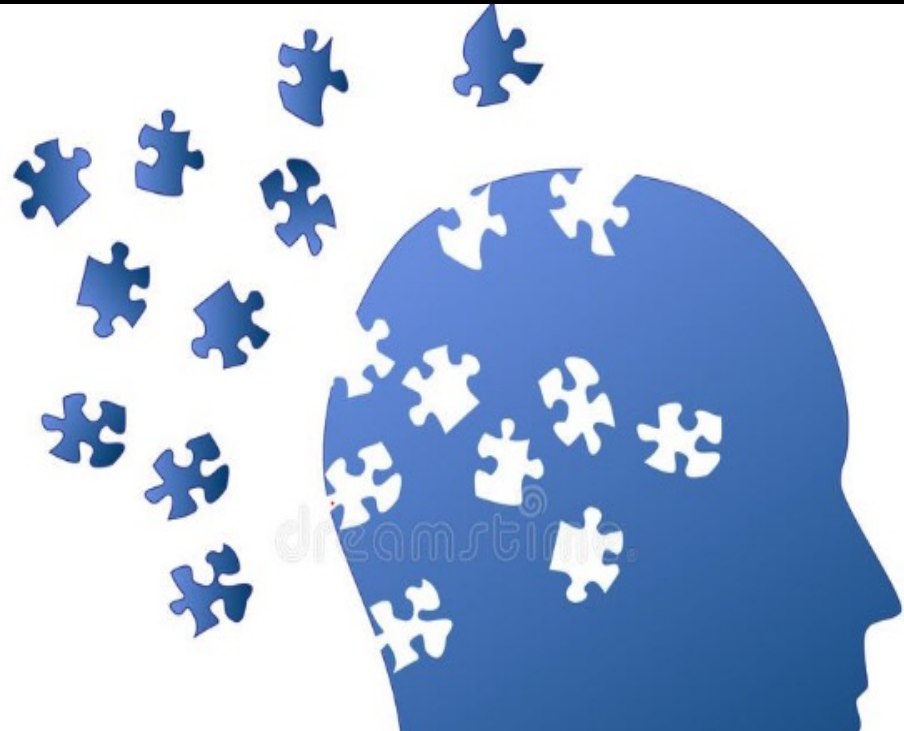
**With Great  
Power Comes  
Great  
Responsibility**

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# Proposals for Home Dialysis competence during Fellowship



Home Dialysis Curriculum with Accreditation Council for Graduate Medical Education Core Competencies

Peritoneal Dialysis

Home Hemodialysis

**Procedural skills**

- PD catheter pre- and postinsertion management
- PD fluid exchanges
- Automated PD cyclers setup
- Transfer set exchange

- Machine setup and basic alarms
- Training sessions
- Vascular access cannulation

**Clinical knowledge and patient care topics**

- Managing the dialysis prescription (initiation and adjustment)
- Urea kinetics and interpretation
- Peritoneal equilibration test
- Volume and BP management
- CAPD versus CCPD
- Hernia development and treatment
- Peritonitis prevention and treatment
- PD catheter insertion and complications
- Exit site care and infection
- Alternative PD solutions
- Electrolyte complications
- Long-term patient management issues

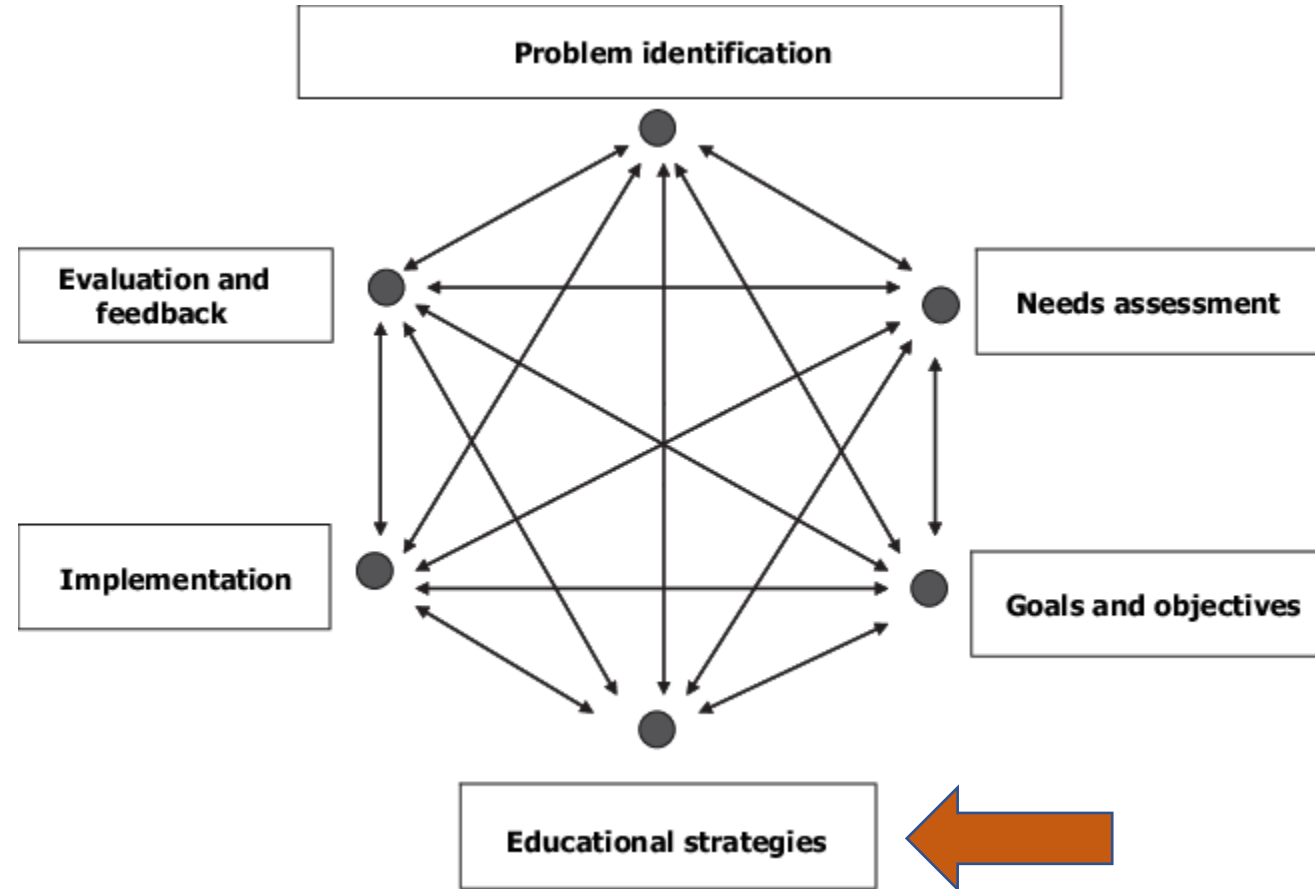
- Managing the dialysis prescription (initiation and adjustment)

- Urea kinetics and interpretation
- Home HD water treatment
- Volume and BP management
- Buttonhole versus rotating site cannulation of vascular access
- Physical examination and clinical monitoring of vascular access
- Nocturnal home HD
- Calcium mass balance
- Potassium mass balance
- Long-term patient management issues

**Administrative skills**

- Telehealth
- Outpatient dialysis clinic management
- Home dialysis supply management
- Quality assurance program
- Economics of home dialysis
- Medical directorship training

# 6-step Approach to Curriculum Development



# The peritoneal dialysis orders objective structured clinical examination (OSCE): A formative assessment for nephrology fellows

Prospective multicenter cohort study of a formative objective structured clinical examination (OSCE) assessing competence in managing PD-associated bacterial peritonitis, using the unified model of construct validity.

## Results:

87 fellows (16 programs) were tested; 67% passed.

Fellows scored significantly less than validators:  $17 \pm 3$  versus  $19 \pm 2$ ,  $p < 0.001$  [95% CI 1.2-3.6].

86 % of evidence-based/standard-of-care questions were answered correctly by validators versus 54% by fellows;  $p < 0.001$ .

86% of fellows surveyed agreed/strongly agreed that the OSCE was useful in self-assessing proficiency.

Second-year in-training examination and OSCE scores were positively correlated (Pearson's  $r = 0.57$ ,  $p < 0.00$ ).



Nephrology Education Research and Development Consortium (NERDC)

Version: **For Fellow Testing 1.2**

Total Points: 22

17 JAN 2019

Dialysis Orders OSCE: 1 scenario (Peritoneal Dialysis)

Time: Up to 45 minutes

**DO NOT PUT YOUR NAME OR THE NAME OF YOUR TRAINING PROGRAM ON THIS TEST**

This is a formative test. Please read the following case carefully, write a set of dialysis orders as requested (you should use the standard order sets available at your institution, if permitted by your Program Director), and answer content questions. Normal laboratory values are given within the case.

### **Components of PD OSCE:**

Case description

Complete HPI including PD history and prescription, PSH, PMH, Meds, allergies, SH. Physical Exam. Pertinent labs.

**2 groups of questions (point system)**

#### **QUESTION GROUP #1 (8 points):**

- A. Give the 3 diagnostic criteria for peritonitis in CAPD. (3 points)
  - a.
  - b.
  - c.
  
- B. Can this patient be diagnosed with peritonitis at this point in the evaluation? Please explain why or why not? (2 points)
  - a. Yes or no?
  - b. Why or why not?
  
- C. Would you manage this patient as an inpatient or an outpatient? Please explain what factors of this patient's presentation, chronic dialysis prescription, and living situation influence your decision—should discuss at least 3. (1 point)

*Direct*

*Observation*

*Assessment Tool*



Mini-Clinical Evaluation Exercise (CEX)

Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_

Resident: \_\_\_\_\_  R-1  R-2  R-3

Patient Problem/Dx: \_\_\_\_\_

Setting:  Ambulatory  In-patient  ED  Other \_\_\_\_\_

Patient: Age: \_\_\_\_\_ Sex: \_\_\_\_\_  New  Follow-up

Complexity:  Low  Moderate  High

Focus:  Data Gathering  Diagnosis  Therapy  Counseling

1. Medical Interviewing Skills ( Not observed)

1	2	3	4	5	6	7	8	9
UNSATISFACTORY			SATISFACTORY			SUPERIOR		

2. Physical Examination Skills ( Not observed)

1	2	3	4	5	6	7	8	9
UNSATISFACTORY			SATISFACTORY			SUPERIOR		

3. Humanistic Qualities/Professionalism

1	2	3	4	5	6	7	8	9
UNSATISFACTORY			SATISFACTORY			SUPERIOR		

4. Clinical Judgment ( Not observed)

1	2	3	4	5	6	7	8	9
UNSATISFACTORY			SATISFACTORY			SUPERIOR		

5. Counseling Skills ( Not observed)

1	2	3	4	5	6	7	8	9
UNSATISFACTORY			SATISFACTORY			SUPERIOR		

6. Organization/Efficiency ( Not observed)

1	2	3	4	5	6	7	8	9
UNSATISFACTORY			SATISFACTORY			SUPERIOR		

7. Overall Clinical Competence ( Not observed)

1	2	3	4	5	6	7	8	9
UNSATISFACTORY			SATISFACTORY			SUPERIOR		

Mini-CEX Time: Observing \_\_\_\_\_ Mins Providing Feedback: \_\_\_\_\_ Mins

Evaluator Satisfaction with Mini-CEX

LOW 1 2 3 4 5 6 7 8 9 HIGH

Resident Satisfaction with Mini-CEX

LOW 1 2 3 4 5 6 7 8 9 HIGH




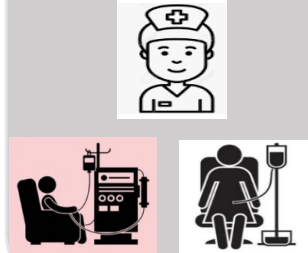

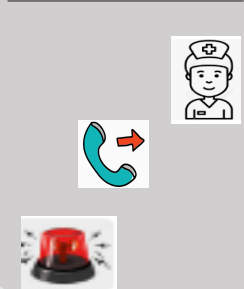

Comments: \_\_\_\_\_

Resident Signature \_\_\_\_\_

Evaluator Signature \_\_\_\_\_

# Stepwise Approach to Home Dialysis

## Home Dialysis Curriculum 2.0:

	1	2	3	4	5	6	7
STEPS	<p><b>Patient selection</b></p> 	<p><b>Home assessment</b></p> 	<p><b>Dialysis access</b></p> 	<p><b>Patient training</b></p> 	<p><b>Prescription and test interpretation</b></p> 	<p><b>Troubleshooting</b></p> 	<p><b>Multidisciplinary monthly clinic</b></p> 
EDU STRATEGIES	<ol style="list-style-type: none"> <li>1. Communication workshop.</li> <li>2. 100% MATCH-D campaign (IP/OP).</li> <li>3. Fellow participation in Options class.</li> </ol>	<ol style="list-style-type: none"> <li>1. Fellow to perform Home visits with nurse.</li> <li>2. Home feasibility questionnaire. (telemedicine).</li> <li>3. Visit patient at home after patient graduated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Fellow to observe AVF, TDC and PD cath placement in OR/IR.</li> <li>2. Shadow cannulation training HHD.</li> <li>3. Cannulation/SIM workshop.</li> </ol>	<ol style="list-style-type: none"> <li>1. Shadow min of 2 training sessions.</li> <li>2. <u>SIM workshops</u> : CAPD, CCPD, HHD machine set up.</li> <li>3. Learn about all HHD machines and PD machines.</li> </ol>	<ol style="list-style-type: none"> <li>1. Prescription workshops .</li> <li>2. Live prescription exercises during OP rotation PD and HHD.</li> <li>3. Urgent start PD</li> </ol>	<ol style="list-style-type: none"> <li>1. Nurse to contact fellow. Fellow to suggest solution/ discuss with attending. Report generated.</li> <li>2. TEAMS channel for case discussion.</li> </ol>	<ul style="list-style-type: none"> <li>- Monthly continuity Clinic 2<sup>nd</sup> yr fellowship (12 clinics).</li> <li>- Fellow as Junior attending on last 3 clinics 2<sup>nd</sup> yr.</li> <li>- Monthly QI.</li> <li>- Med Director training.</li> </ul>
EVALUATION	<ul style="list-style-type: none"> <li>- Mini-CEX</li> <li>- MATCH-D log.</li> </ul>	<p><b>Written report:</b> Home feasibility, barriers and strategies to overcome them. Debriefing and evaluation.</p>	<p><b>OSCE:</b> Access complications</p> <p>TEAMS channel for access troubleshooting</p>	<p>Evaluation by nurse.</p>	<p><b>PD OSCE:</b></p> <ul style="list-style-type: none"> <li>- Prescriptions</li> <li>- PET</li> <li>- Test interpretation</li> </ul>	<p><b>Evaluation by nurse and patient feedback.</b></p>	<p>Evaluation by all members of the team (including patient feedback.)</p>

# Hands-on Learning



# Method to Assess Treatment Choices for Home Dialysis (MATCH-D)

## Suitability Criteria for Self Peritoneal Dialysis: CAPD or CCPD

Strongly Encourage PD	Encourage PD After Assessing and Eliminating Barriers	May Not Be Able to Do PD (or will Require a Helper)
<ul style="list-style-type: none"> <li><input type="checkbox"/> Any patient who wants to do PD or has no barriers to it</li> <li><input type="checkbox"/> Employed full- or part-time</li> <li><input type="checkbox"/> Student – grade school to grad school</li> <li><input type="checkbox"/> Caregiver for child, elder, or person with disability</li> <li><input type="checkbox"/> New to dialysis or has had transplant rejection</li> <li><input type="checkbox"/> Lives far from clinic and/or has unreliable transportation</li> <li><input type="checkbox"/> Needs/wants to travel for work or enjoyment</li> <li><input type="checkbox"/> Has needle fear or no remaining HD access sites</li> <li><input type="checkbox"/> BP not controlled with drugs</li> <li><input type="checkbox"/> Can't or won't limit fluids or follow in-center HD diet</li> <li><input type="checkbox"/> No (required) partner for home HD</li> <li><input type="checkbox"/> Wants control; unhappy in-center</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Minority – not a barrier to PD</li> <li><input type="checkbox"/> Unemployed, low income, no High School diploma – not barriers to PD</li> <li><input type="checkbox"/> Simple abdominal surgeries (e.g. appendectomy, hernia repair, kidney transplant) – not barriers to PD</li> <li><input type="checkbox"/> Has pet(s)/houseplants (carry bacteria) – bar from room at least during PD connections</li> <li><input type="checkbox"/> Hernia risk or recurrence after mesh repair – use low daytime volume or dry days on cyclor</li> <li><input type="checkbox"/> Blind, has no use of one hand, or neuropathy in both hands – train with assist device(s) as needed</li> <li><input type="checkbox"/> Frail or can't walk/stand – assess lifting, offer PT, offer CAPD, use 3L instead of larger bags for cyclor*</li> <li><input type="checkbox"/> Illiterate – use pictures to train, return demonstrations to verify learning, tape recorders for patient reports</li> <li><input type="checkbox"/> Hearing impaired – use light/vibration for alarms</li> <li><input type="checkbox"/> Depressed, angry, or disruptive – increased personal control with PD may be helpful</li> <li><input type="checkbox"/> Unkempt – provide hygiene education; assess results</li> <li><input type="checkbox"/> Anuric with BSA &gt;2 sqm – assess PD adequacy††</li> <li><input type="checkbox"/> Swimmer – oslomy dressings, chlorinated pool, ocean</li> <li><input type="checkbox"/> Limited supply space – visit home, 2x/mo. delivery</li> <li><input type="checkbox"/> Large polycystic kidneys or back pain – use low daytime volume or dry days on cyclor††</li> <li><input type="checkbox"/> Obese – consider presteral PD catheter</li> <li><input type="checkbox"/> Has colostomy – consider presteral PD catheter</li> <li><input type="checkbox"/> Rx drugs impair function – consider drug change</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Homeless and no supply storage available</li> <li><input type="checkbox"/> Can't maintain personal hygiene even after education</li> <li><input type="checkbox"/> Home is unclean/health hazard; patient/family won't correct</li> <li><input type="checkbox"/> No/unreliable electricity for CCPD; unable to do CAPD</li> <li><input type="checkbox"/> Multiple or complex abdominal surgeries; negative physician evaluation.††</li> <li><input type="checkbox"/> Brain damage, dementia, or poor short-term memory*</li> <li><input type="checkbox"/> Reduced awareness/ability to report body symptoms</li> <li><input type="checkbox"/> Malnutrition after PD trial leads to peritonitis†</li> <li><input type="checkbox"/> Uncontrolled anxiety/psychosis*</li> </ul>

## Suitability Criteria for Self Home Hemodialysis: Conventional, Daily, or Extended

Strongly Encourage Home HD	Encourage Home HD After Assessing and Eliminating Barriers	May Not Be Able to Do Home HD (or Helper Must Do More)
<ul style="list-style-type: none"> <li><input type="checkbox"/> Any patient who wants to do home HD or has no barriers to it</li> <li><input type="checkbox"/> Employed full- or part-time</li> <li><input type="checkbox"/> Drives a car – skill set is very similar to learning home HD</li> <li><input type="checkbox"/> Caregiver for a child, elder, or person with disability</li> <li><input type="checkbox"/> Lives far from clinic and/or has unreliable transportation</li> <li><input type="checkbox"/> Student: grade school to grad school</li> <li><input type="checkbox"/> Needs/wants to travel for work or enjoyment</li> <li><input type="checkbox"/> Wants a flexible schedule for any reason</li> <li><input type="checkbox"/> Has rejected a transplant</li> <li><input type="checkbox"/> Has neuropathy, amyloidosis, LVH, uncontrollable BPT†</li> <li><input type="checkbox"/> Obese/large; conventional HD or PD are not adequate ††</li> <li><input type="checkbox"/> Can't/won't follow in-center HD diet &amp; fluid limits ††</li> <li><input type="checkbox"/> Is pregnant or wants to be ††</li> <li><input type="checkbox"/> Frail/elderly with involved, caring helper who wants home HD*</li> <li><input type="checkbox"/> Wants control; unhappy in-center</li> <li><input type="checkbox"/> No longer able to do PD</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> No employer insurance – not a barrier to nocturnal 3x/wk home HD, which Medicare &amp; Medicaid cover</li> <li><input type="checkbox"/> Unkempt – provide hygiene education; assess results</li> <li><input type="checkbox"/> Has pet(s)/houseplants (carry bacteria) – bar from room at least while cannulating/connecting access</li> <li><input type="checkbox"/> Frail or can't walk/stand – assess lifting ability, offer PT*</li> <li><input type="checkbox"/> Illiterate – use pictures to train, return demonstrations to verify learning, tape recorders for patient reports</li> <li><input type="checkbox"/> Hearing impaired – use light/vibration for alarms</li> <li><input type="checkbox"/> Depressed, angry, or disruptive – increased control with home HD may help</li> <li><input type="checkbox"/> No helper &amp; clinic requires one – reconsider policy, monitor remotely, use LifeLine device to call for help</li> <li><input type="checkbox"/> Rents – check with landlord if home changes needed</li> <li><input type="checkbox"/> Can't/won't self-cannulate – use patient mentor, practice arm, local anesthetic cream, desensitization†</li> <li><input type="checkbox"/> No running water, poor water quality, low water pressure – assess machine &amp; water treatment options</li> <li><input type="checkbox"/> Limited space for supplies – visit home, 2x/mo. delivery, consider machine with fewer supply needs</li> <li><input type="checkbox"/> Drug or alcohol abuse – consider after rehab</li> <li><input type="checkbox"/> Bedridden and/or has tracheostomy/ventilator – assess self-care and helper ability*</li> <li><input type="checkbox"/> Rx drugs impair function – consider drug change</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Homeless; consider PD if storage is available</li> <li><input type="checkbox"/> Can't maintain personal hygiene</li> <li><input type="checkbox"/> Home is health hazard, will not correct</li> <li><input type="checkbox"/> Unreliable or no electricity</li> <li><input type="checkbox"/> Brain damage, dementia, or poor short-term memory*</li> <li><input type="checkbox"/> No use of either hand*</li> <li><input type="checkbox"/> Uncontrolled psychosis or anxiety*</li> <li><input type="checkbox"/> Blind or severely visually impaired – consider PD*</li> <li><input type="checkbox"/> Uncontrolled seizure disorder*</li> <li><input type="checkbox"/> No remaining HD access sites – consider PD</li> <li><input type="checkbox"/> Reduced awareness/ability to report bodily symptoms</li> <li><input type="checkbox"/> Has living donor, transplant is imminent – consider PD</li> </ul>



Check all the boxes that apply. Keep a copy of the MATCH-D in the patient's record.

\* May be able to do with a helper  
 † Consider extended home HD  
 †† Consider daily home HD

## Fellow MATCH-D LOG

DATE	MRN	IP/OP	CKD stage	IF ESRD (MODALITY)	YELLOW	GREEN	RED	BARRIER (S)	STRATEGIES TO OVERCOME BARRIERS	PT CHOICE	UNDECIDED	6 MONTH F/U
3/3/23	MMMM	OP	4	N/A	X			limited space supply delivery twice montly		N/A	X	patient on PD



# Patients as Teachers Program (PaT)

**PRiMER**

peer-reviewed reports in medical education research

research brief

## The Benefits of Honoring Patients as Teachers: A Qualitative Study

Victoria Hayes, MD | Robert Bing-You, MD | Dan Pitts, MD | Lauren Manning, MD

Published: 2/12/2018 | DOI: 10.22454/PRiMER.2018.242345

### Results: 4 themes emerged:

1. Appreciating humanism in Medicine
2. Expressing gratitude
3. Connecting with patients
4. Expressing a unique event.

Students reflected on the privilege of serving as someone's doctor and what the physician role meant for them personally.

**They resolved to adopt behavioral changes:** taking more time with patients, self-reflection and appreciating the role of families.

# Learning Resources Home Dialysis

## Programs for Fellows:



Home Dialysis University, ISPD  
March 19-21 Chicago 2023



Home Dialysis Academy, May  
10-12, 2023.



2023 TBD

## Home Dialysis Fellowship (3<sup>rd</sup> year):

VANDERBILT UNIVERSITY  
MEDICAL CENTER



## Online learning:



A program of the non-profit 



Montefiore Medical Center,  
Bronx NY

<https://homehemodialysislearningtool.com>



HOME DIALYSIS TOOLKIT 

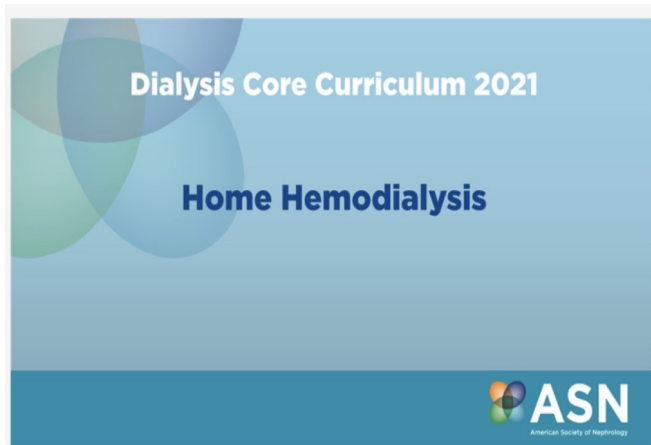
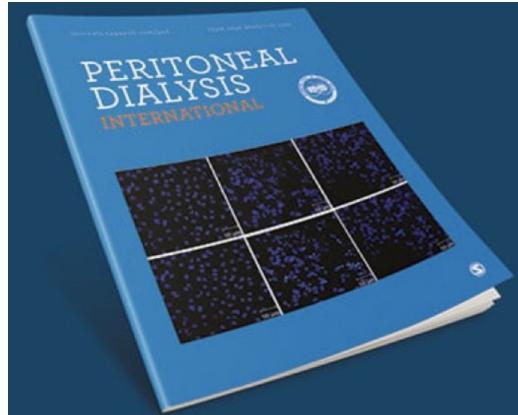
[http://www.ishd.org/home\\_dialysis](http://www.ishd.org/home_dialysis)



Nephrology Education Research and Development Consortium

Webinars Fresenius, Nx2me, Baxter, Outset

# And many more Learning Resources... Home Dialysis



# **Summary Home Dialysis Fellowship Training:**

- **Identify individual program barriers.**
- **Identify Home dialysis champions and utilize outside expert and Educational resources.**
- **Hands-on experience of every step of Home Dialysis.**
- **Standardize and structure Home Dialysis curriculum.**
- **Objective evaluating methods of core competencies mandatory for graduation and ABIM certification.**
- **Need for HOME DIALYSIS specific MILESTONES.**
- **PATIENTS AS MENTORS.**

GOAL:

**FROM THINKERS -> DOERS -> BELIEVERS**

