Expert Teams – Home Dialysis

Case-Based Learning & Mentorship

Thursday, September 28, 2023

Facilitator: Julie Moss, ESRD National Coordinating Center

Meeting Logistics

- Call is being recorded
- Participants can unmute themselves
  - Please stay on mute unless you are speaking
  - Do not place the call on “hold”
- Everyone is encouraged to use the video and chat features
- Meeting materials will be posted to the ESRD NCC website.

Who Is On The Call?

- Clinician and Practitioner Subject Matter Experts
- Dialysis Facility and Transplant Professionals
- ESRD Network Staff
- Kidney Care Trade Association Members
- Centers for Medicare & Medicaid Services (CMS) Leadership

What are Expert Teams?

Participants from varying levels of organizational performance, each with lived experience and knowledge, come together to support continual learning and improvement

Help others learn faster by sharing what worked and what didn't work around a particular case, situation, or circumstance

Bring the best possible solutions to the table

Home Dialysis Improvement Initiatives

- Increase the number of incident ESRD patients starting dialysis using a home modality
- Increase the number of prevalent ESRD patients moving to a home modality
- Increase the number of rural ESRD patients using telemedicine to access a home modality

How Might We . . .

- Collaborate with other healthcare providers and stakeholders to increase the number of patients that start dialysis at home?
- Educate differently to increase patient transition to a home modality?
- Utilize telemedicine more effectively to provide patients with access to a home modality?

Presenters

Sijie Zheng, MD, PhD, FASN, FNKF
Assistant Chief, Department of Nephrology
Kaiser Permanente East Bay

William Vega Ocasio, MD
Nephrologist
Fresenius Kidney Care Cayey
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“Refusing Dialysis”

Sijie Zheng, MD, PhD

The Permanente Medical Group/Kaiser Oakland Medical Center

Home Dialysis Expert Team Call

9/28/23

Case Study

- 76 Y female with CHF, hypertension, DM, CKD5 (creatine around mid-5s, with eGFR around 7-8 ml/min)
- followed by a nephrologist, had dialysis option education
- Decided Medical Management without dialysis
- Presented with HTN emergency in April, 2023:
  - SBP 220s, SOB, pleural effusion, edema and anemia
- Still making urine
- started on nitroglycerin gtt and admitted to the ICU,
- Got PRBC transfusion and diuretics

Case Study Continued

- Patient improved, transferred out of ICU
- Hospital team discussed with her regarding dialysis
- She again stated she did not want dialysis
- Family members want her to reconsider

- ask nephrology to “convince her, she needs to start dialysis”.

Case Study Continued

- Exam:
  - Elderly thin women with no acute distress
  - +edema and decreased BS at base, breathing in room air
- Son and daughter at bed side, concerned for their mom.

- Dig deeper:
  - Husband was on ICHD for 10 years, passed away 2 years ago
  - Living through what her husband had gone through during ICHD, she does not want dialysis.
  - Lives with her daughter, and son lives nearby

Case Study Continued

- Me: “What about dialysis at home?”
- Patient: “I don’t think I can do it”

- Discussed with patient, son and daughter regarding every aspect of PD vs. HHD vs. ICHD
- Family interested in PD; Patient wants to think about it
- Renal nurse (Spanish Speaking) to discuss PD again next few days

- Decided trial of PD
- Discharged home with bumex and ESA outpatient

Case Study Continued

- PD catheter placed in late May 2023

- Admitted again in early June 2023 with SOB, volume overload, creatinine still around high 5s
- Received diuretics, improved
- Discharged

- Started PD 2 days after discharge with the help of her daughter
- “She is feeling great!”

Lesson Learned

- Find out why patient does not want dialysis
- Repeat education with native speaking eductor
- Avoid rush into dialysis because of creatinine/eGFR (Dialysis should not be started based on eGFR alone)
- Family support

Implementation of a Staff-Assisted Peritoneal Dialysis Program in the United States

A Feasibility Study

Wael F. Hussein,[1,2] *Paul N. Bennett*,[1,3] *Ayesha Anwaar*,[1,2] *Jugjeet Atwal*,[1] *Veronica Legg*,[1] *Graham Abra*,[1,2] *Sijie Zheng*,[4] *Leo Pravoverov*,[4] *and Brigitte Schiller*[1,2]

CJASN 17: 703–705, 2022. doi: https://doi.org/10.2215/CJN.00940122

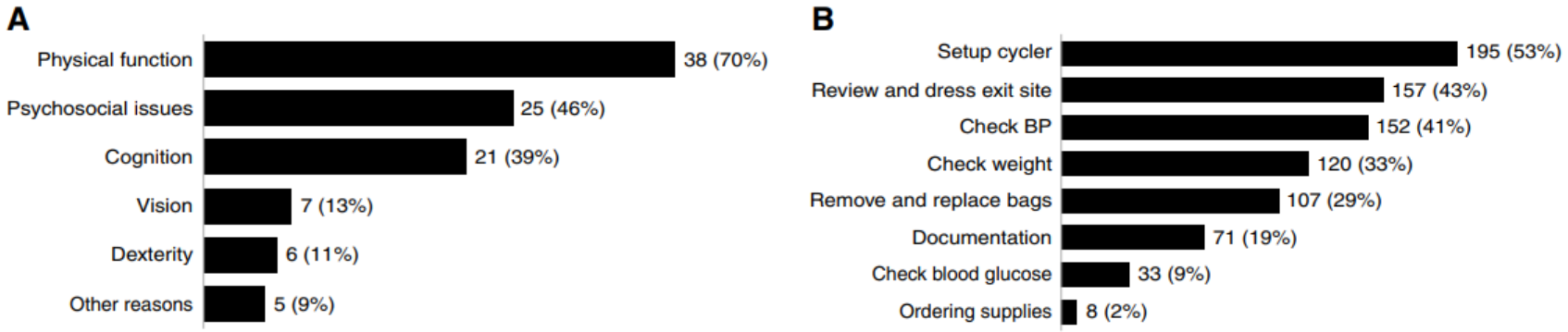

Figure 1. | **Referral indications and provided services.** (A) Indications for referral to staff-assisted peritoneal dialysis (number and percentage of patients) and (B) services provided (number and percentage of visits). Percentages do not add up to 100% as categories are not mutually exclusive. Commonly documented services under the "other" category (not shown) included observing patients perform the aseptic technique correctly and moving and organizing supplies.

Outcomes of an Assisted Peritoneal Dialysis Program in the United States	Wael Hussein, Shijie Chen, Jugjeet Atwal, Sijie Zheng, Graham Abra	Oral Presentation	FR-OR77	Session title: Managing the Many Facets of Home Dialysis [OR0802] November 3, 2023 from 4:30 PM to 6:00 PM Room 120 5:24 PM to 5:33 PM (9 minutes total: 6 minutes for presentation, 3 minutes for Q&A)

Bipartisan Legislation to Expand Home Dialysis Access

Introduction

Representatives Bobby L. Rush (D-Ill.) and Jason Smith (R-Mo.) have introduced H.R.5426, a bipartisan legislation, aimed at expanding access to home dialysis for kidney patients. This bill will allow Medicare to pay professional staff to assist patients in learning how to properly perform home dialysis in their own homes, which is often more flexible and leads to better health outcomes than in-center dialysis.

What the New Bill Does

The new bill includes several provisions aimed at improving access to home dialysis, including:

1. Reimbursement through Medicare for in-home assistance by dialysis facility staff for the first 90 days of treatment.
2. In-home respite staff assistance under certain circumstances outside the initial 90 days.
3. Continuous staff assistance without a time limit for patients with certain disabilities.
4. Expansion of healthcare professionals who can provide home dialysis training.
5. Additional educational opportunities for patients to learn about all dialysis options, including group settings or telehealth.
6. Training on home dialysis to occur in the patient's intended location.

https://www.kidneyluv.com/post/h-r-5426-improving-access-to-home-dialysis-act-a-bipartisan-bill

Home Therapies

Dr. William Vega-Ocasio
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Renal (kidney) Replacing Therapy-New Patients

- **Discussion regarding initiation of Kidney Replacement Therapy**
  - Should begin early during disease "Life Plan"
  - Depends on the rate of decline in Kidney Function
  - Timely Referral Results Critical in decision making
  - eGFR is < 30 ml/min/1.73m2
- **Choosing the Adequate Dialysis Modality is Essential**
  - **Hemodialysis (AVF Construction Referral)**
    - In Center (IHD)
    - Home (HHD)
  - **Peritoneal Dialysis (Cannula Insertion Referral)**
    - CAPD
    - APD

Home Therapies - Ideal Candidate

Understands Instructions and able to communicate (HHD & PD)

Suitable environment to Stores Supplies and Perform Therapy (HHD & PD)

Sufficient eyesight, manual strength and dexterity (HHD & PD)

Personal Hygiene (HHD & PD)

Family/Caregiver Support (HHD > PD)

Water Source, Telephone/Internet Connection (HHD > PD)

Significant Residual Kidney Function (PD > HHD)

Minimal or No Abdominal Surgeries (PD)

Home Therapies - Exclusion Criteria

Exclusion criteria for frequent home hemodialysis

Patient and/or partner unable to make appropriate decisions or follow instructions
Severe psychiatric disease
Use of chronic sedating medications
History of substance use disorder
Significant neurologic disorder
Dementia or encephalopathy
Inability to cannulate access

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Renal (Kidney) Replacing Therapy Modality Change in ESKD Patients

How to Assess a Change in Modality in an ESKD Patient

Modality Should be Available for All

Conversation is not as easy when compared to New Patients

Dealing Multiple Misconceptions

Great Deal of Resistance for Change

Ideal Candidate

Poor Intra Dialysis Weight Gain (IDWG) Control

Poor compliance with Required Dietary Restrictions

Significant Cardiovascular Disease

Significant Bone-Mineral-Metabolic Disease

Clinical Scenario Jane

42 years old lady (Teacher) on RRT for over 25 years (Dx at 18 years old)

S/P Kidney Transplant with sub-sequent Allograft Loss
Former Peritoneal Dialysis Patient
Refusing Permanent Vascular Access Construction
No Residual Kidney Function (Anuric)
Active on two different Transplant Lists for over 5 years
Poor IDWG Control
Significant BMM Disease
Poorly Controlled HCVD
Significant Cardiovascular Disease (LVH, Obstructive CAD S/P PTCA-DES x 2 2021)
Non-compliant with Required Dietary Restrictions
Non-compliant with Medications Use as Rx
Currently with over five (5) Anti-HTN Medications
Significant Neuro-Psychiatric Component (MDD)

HOME HEMODIALYSIS-MODALITIES

- **Short Daily HD**
  - Most Popular Modality in Continental USA and Puerto Rico
  - Five (5) times a week or Less, three to Four hours per session
- **High Intensity Hemodialysis**
  - More than 5 times a week, six to eight hours per session

Short Daily Hemodialysis

Improvement in Blood Pressure Control

Regression of Left Ventricular Hypertrophy

Reduction in Cardiovascular-related Hospitalizations

Improved Overall Survival

Improve Bone-Mineral-Metabolic Control

HIGH-INTENSITY HEMODIALYSIS

Regression of left ventricular hypertrophy

Stabilization of left ventricular remodeling

Normalization of blood pressure with reduction of vasoactive medications

Augmentation of left ventricular ejection fraction

Correction/Improvement of obstructive sleep apnea

Normalization of phosphate levels without dietary restrictions

Improvement in kidney-disease-specific quality-of-life scores

Term delivery with reduced maternal and fetal complications

Minimized interdialytic fluctuations in fluid and biochemistry control

Enhanced survival compared with conventional three times per week hemodialysis

Specific indications and considerations for frequent home hemodialysis

Reduction or elimination of long interdialytic gap
Treatment for patients with refractory hypertension
Regression of left ventricular hypertrophy
Control of refractory hyperphosphatemia
Treatment strategy for intradialytic hemodynamic instability, myocardial stunning
Improving the feasibility of successful term pregnancy
Correction of obstructive sleep apnea
Difficult to control interdialytic volume gains
Prolonged recovery time and/or inadequate control of uremic symptoms

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Clinical Scenario Jane

Patient was initiated on HHD Program Last September 18, 2023 (8 Sessions)

EDW reduced by 1.2 Kg
Potassium decreased from 6.6 mmol/L to 4.7 mmol/L
Phosphorus decreased from 5.6 mg/dL to 5.0 mg/dL
IDWG decreased from an average of 3.2 Kg to an average of 0.8 Kg

Goal is to complete Training by mid October with a net EDW reduction of 2.5 to 3.0 Kg

Home Therapies- Challenges

Factors Influencing Patient Selection

Evaluating HHD Program and Training (Staff and Physicians)

Vascular Access Considerations

Dialysis Prescriptions

Clinical Outcomes Goals

Professional Resources (Surgeons, Vascular Access Centers, Insurance Companies)

Home Therapies - Barriers

Low Patient awareness and education (PD & HHD)

Low Staff awareness and education (PD & HHD)

Physical or cognitive limitations (PD & HHD)

Fear to treatment-related complications (PD & HHD)

Fear to Self Cannulation (HHD)

Emotional impact on Patient and Caregivers (Burnout) (PD & HHD)

Home Therapies - Barriers

Psychosocial Barriers to Successful Home Dialysis

- Physical Ability
- Cognition
- Patient attitudes toward HHD
- Physician attitudes toward HHD
- Emotional impact on the Patient
- Emotional impact on the Family
- Support from family
- Whether patient or caregiver is responsible for treatment
- Time constraints

Thank You !!!

Questions and Answer Discussion

Knowledge Into Action

Top Take-Aways

What is one thing you learned today that you could start doing immediately?

How will this action improve your current way of doing the practice/process?

Who is involved and how can they support the action to make it sustainable?

Recap & Next Steps

- Additional pathways for learning
  - Share Best Practices to a greater community through coalition meetings and peer-to-peer sharing
  - Use take-aways from today's presentation to identify new ways of doing something or missed opportunities

- Next meeting – Thursday, December 21, 2023 @ 2pm ET

Visit the ESRD NCC website to find materials and share

https://esrdncc.org/en/professionals/expert-teams/

Social Media

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Thank You

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