



Talking to Patients About Home

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MEI Mission: *Help people with chronic disease learn to manage and improve their health.*



What We'll Cover

- * Where are your patients coming from?
- * How does in-center HD compare to home?
- * What's best to say—or NOT say?



**Where are your patients
coming from?**



Kidney failure is like a **personal tsunami**



Dialysis choice affects every aspect of lifestyle

Choice of a treatment needs to reflect this

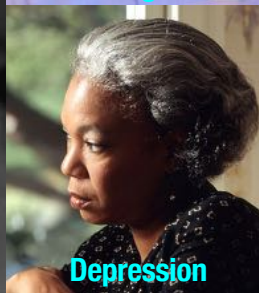
How would YOU feel if your kidneys failed?



Fear



Anger



Depression

Strong emotions are *normal*

Terror, anger, depression are common



A lot of the fear is about having a life not worth living



Lindström BR, Bohlin G.
Emotion. 2012 apr;12(2):384-93

People who are afraid *cannot learn*

How does in-center compare to home?

PD:

1. Manual
2. Cycler



IN-CENTER HD:

3. Standard (3x3.6)
4. Nocturnal (3x8)

HOME HD:

5. Standard (3-3.5x4-5)
6. Short daily (5-6 x 2.5-4)
7. Nocturnal (3.5-6 x 7-8)



There are 7 dialysis options



PD: Needle free, portable, easy



Short daily HD is transportable

- * Shifts tend to be 8pm-4am
- * No care partner needed at home
- * No equipment/supplies in the home



Nocturnal in-center HD: twice as much HD

- * Secure taping
- * Alarm on venous needle
- * Alarm under dialyzer



Nocturnal home HD: most like healthy kidneys

Standard in-center HD is equivalent to an eGFR of:

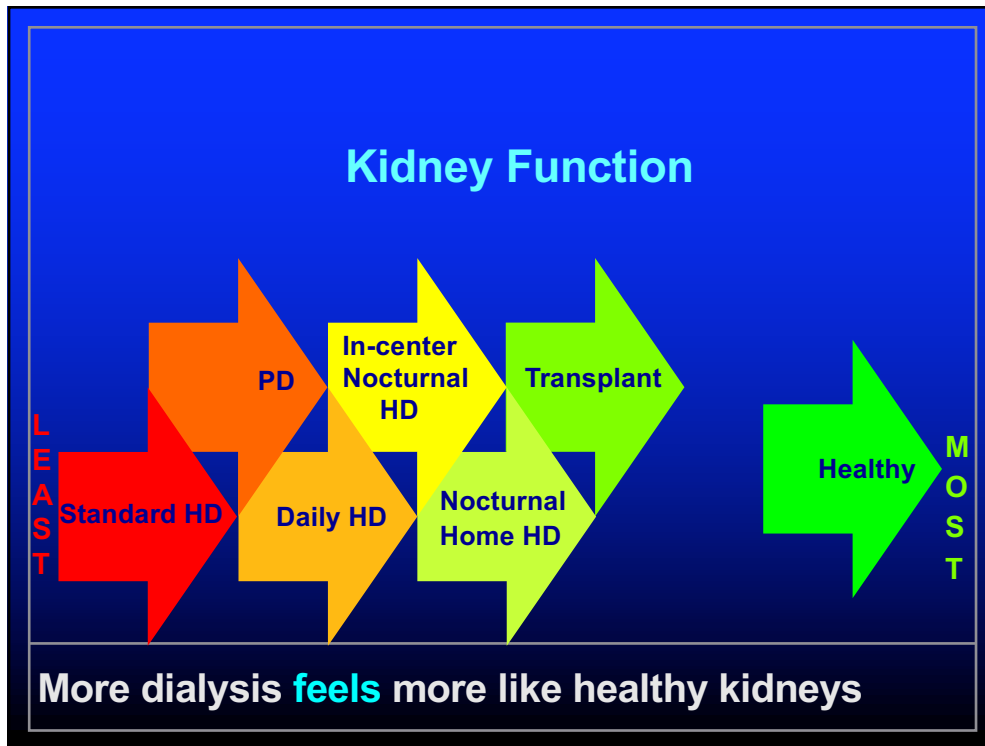
- A. 45% (CKD 2)
- B. 33% (CKD 3)
- C. 27% (CKD 4)
- D. 13.5% (CKD 5)

At Kt/V of 1.3 per treatment...	Treatments per week	eGFR Equivalent	CKD Stage
Standard in-center hemodialysis (HD)	3	13.5	5
Short daily home HD	5	27.5	4
Nocturnal home HD	6	33.5	3



<http://www.homedialysis.org/news-and-research/blog/188-hemodialysis-egfr-equivalence-why-more-and-more-often-matters>

eGFR Equivalency of HD Options



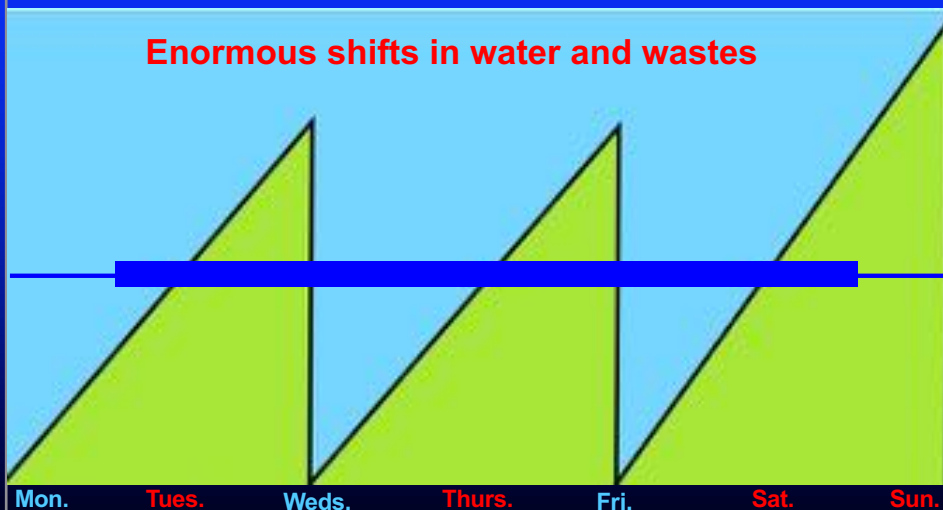
Dialysis Survival: Dose Effect

Modality	Days/week	Hours/day	TOTAL hours	5-year Survival
Standard in-center hemodialysis (HD)*	3	3.5-4	10.5-12	42%
Peritoneal dialysis*	7	8-24	14-70	52%
Short daily home HD ¹	4-6	2.5-4	10-24	64-72%
In-center nocturnal HD ²	3	8	24	72%
Nocturnal home HD ³	4-6	8	32-48	85%

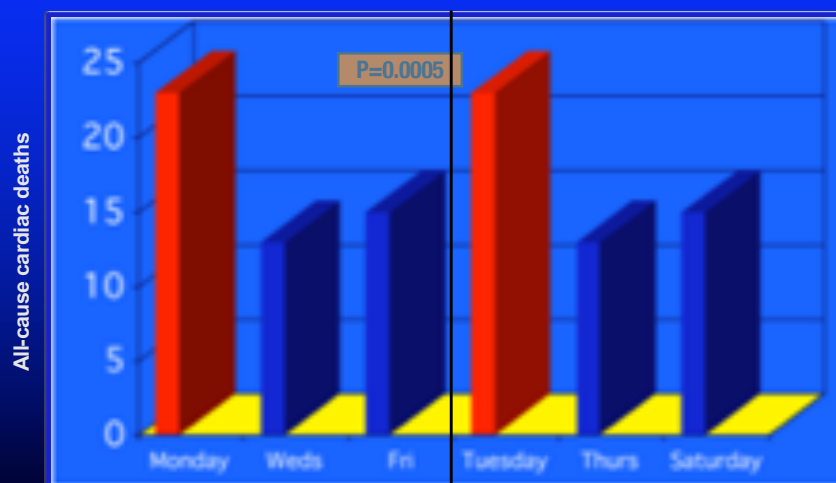
*USRDS ADR 2016, Tables I.17 and I.23
 1. Kjellstrand CM et al. 2008 Oct;23(10):3283-9
 2. Lacson E et al. J Am Soci Nephrol. 2012;23:687-95
 3. Pauly R et al. Nephrol Dial Transplant. 2009;24:2915-19

Standard HD: What happens in the body

Enormous shifts in water and wastes

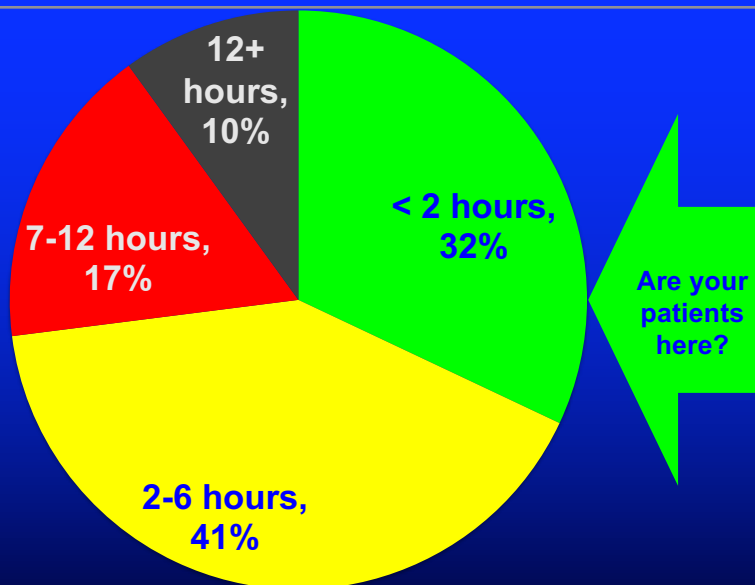
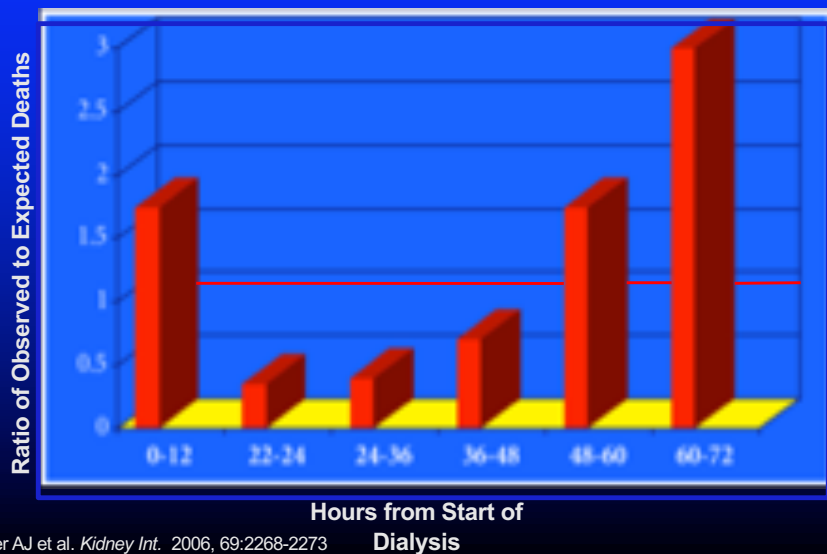


The 2-day in-center “Killer Gap”



Bleyer AJ et al. *Kidney Int.* 1999 55:1553

The "Killer Gap" by Hour



Rayner HC et al. *AJKD* 2014; 64(1):86-94

Long recovery time predicts a higher death rate

What causes long recovery time?

- A. Bioincompatible membranes
- B. Rapid and/or aggressive UF
- C. Kidney failure
- D. High blood flow rates

1. UF reduces blood volume
2. Blood loss is compensated by plasma refill (fluid shift)
3. Mismatch between UF and plasma refill rate—> IDH
4. Worse: poor ♥ function, BP meds, autonomic neuropathy
5. Repeated IDH causes organ damage



Nesrallah GE et al. *Nephrol Dial Transplant.* 2013;28:182-91

Rapid/Aggressive UF Causes IDH and Stuns Organs



PD - Selby NM, McIntyre CW. *Perit Dial Int.* 2011 Jan-Feb;31(1):27-33

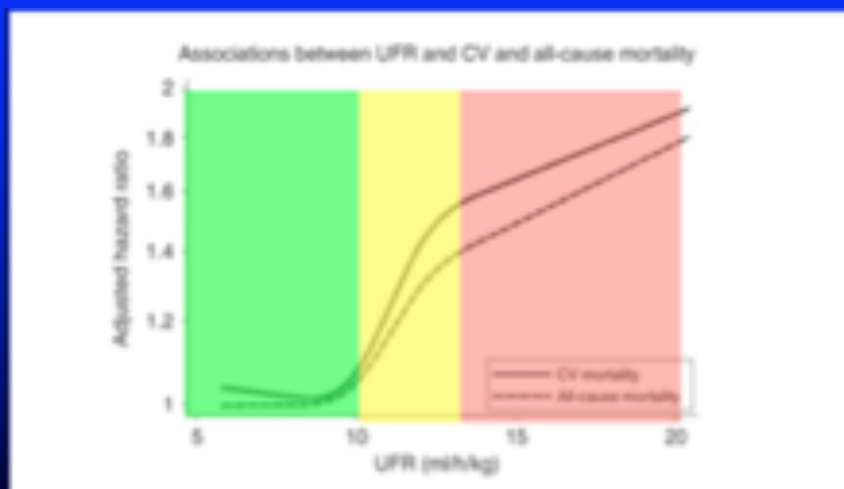
Short daily or nocturnal HD - Jefferies HJ et al. *Clin J Am Soc Nephrol.* 2011 Jun;6(6):1326-32

Gentler dialysis = less organ stunning

What is the safest UFR?

- A. <13 mL/Hr/Kg
- B. UFR amount matters, not the rate
- C. <10 mL/Hr/Kg
- D. <15 mL/Hr/Kg

CMS: New UFR Measure



1 Flythe JE et al. *Kidney Int.* 2011 Jan; 79(2):250-7

Ultrafiltration Rate Calculator

Are you in the green? Pulling water out of your blood at dialysis is "ultrafiltration" (UF). A safe UF rate (UFR) for HD is gentle—and you feel well after a treatment. Put in your fluid goal, weight, and treatment time to find out.

I want to take off this much fluid:

Liters

My weight:

Kilograms

My treatments are this long:

Hours

My doctor says I have heart problems:

Yes

No

Your ultrafiltration Rate (UFR):

8.3 ml/kg/hour

Great! You are in the green. Your HD treatment is removing water at a safe rate for you.

www.homedialysis.org/UFR-calculator

What's best to say—or NOT say?



WE may view options like this





Without HOPE, our patients CANNOT hear us

N=103 UK adults on dialysis¹

Higher levels of hope:

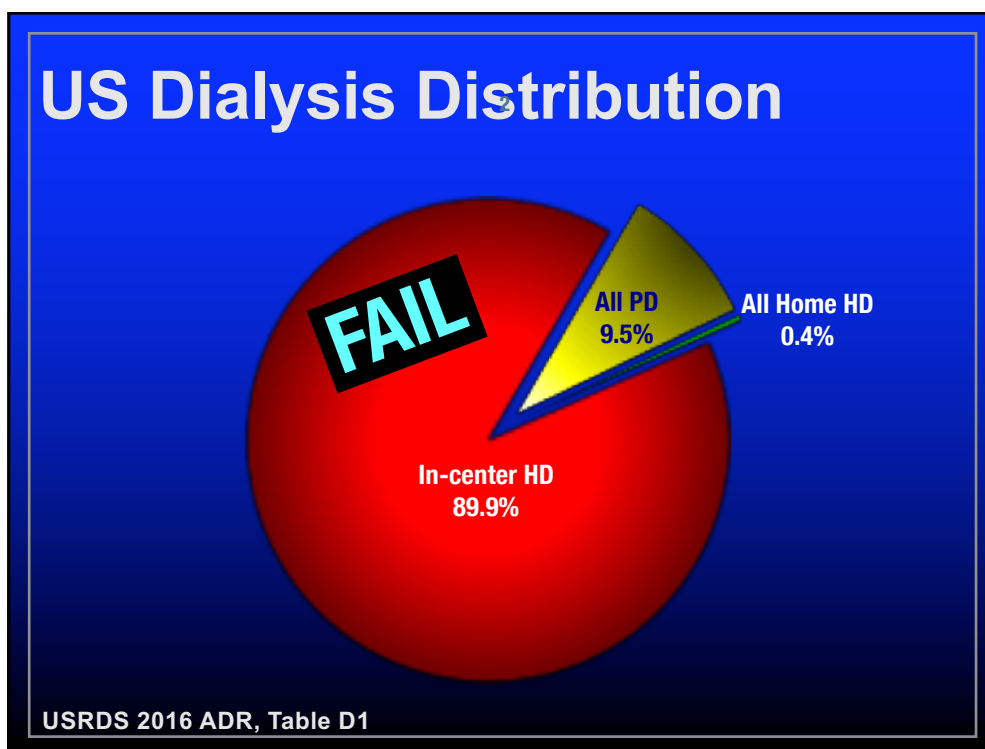
- < Anxiety**
- < Depression**
- < Disease burden**
- > Mental functioning**

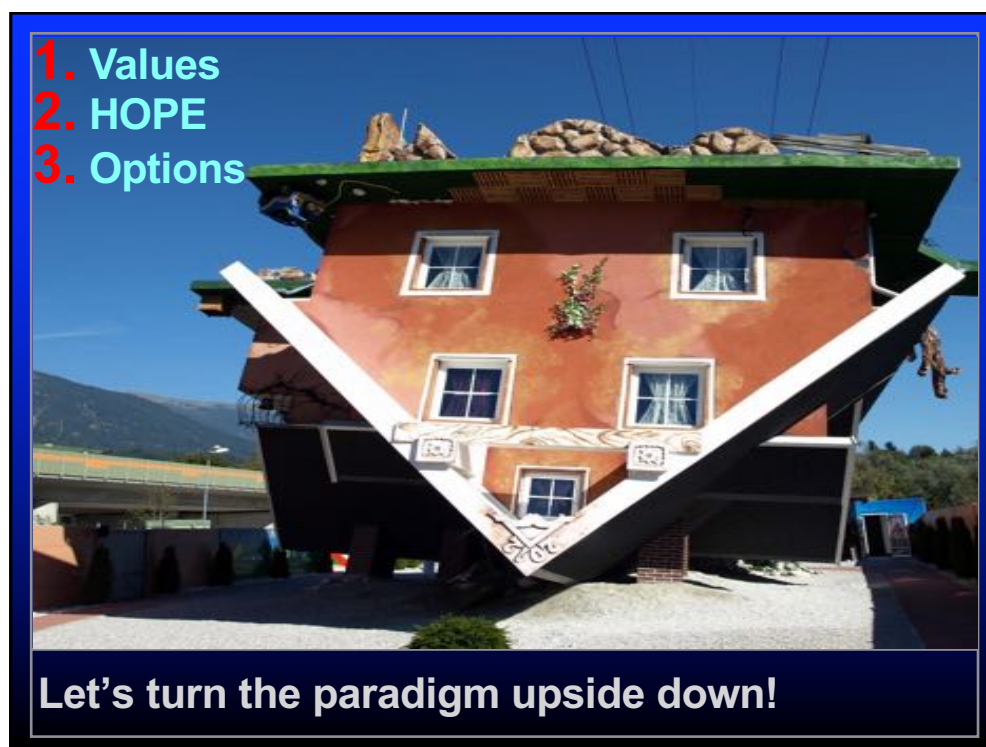
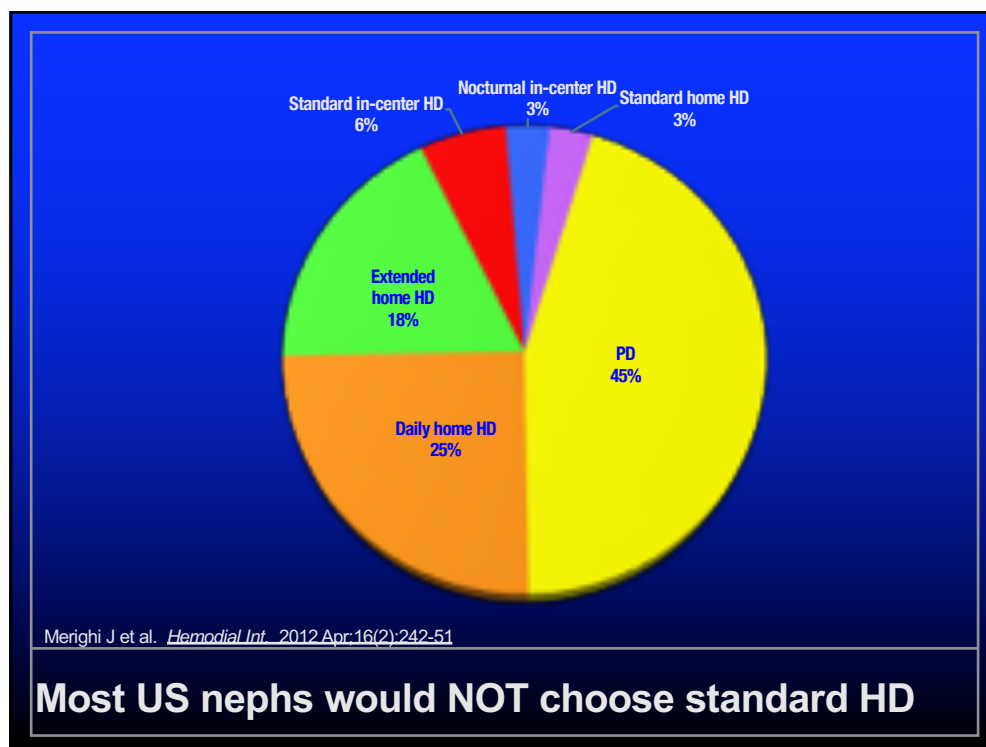


“Hopefulness could serve to lessen the emotional impact of ESRF and treatment by empowering the individual to reframe threats as challenges”

¹Billington E et al. 2008 *Br J Health Psychol.* 13:683-99

HOPE is as important as OXYGEN







1. Learn YOUR patients' values



2. Offer HOPE for a good life





Thirsty? More dialysis = fewer fluid limits



Too many meds? More dialysis = fewer meds



Work? PD, Nocturnal HD = **Work-friendly**




Travel? PD, NxStage HD = **Travel-friendly**



Sex life? More HD = Better Sex Life

With ___ hours of HD/week, there is an 85% chance that a pregnant woman on dialysis will have a healthy baby:

- A. 12
- B. 24
- C. 36
- D. 48



Hladunewich MA et al.
JASN 2014 May;25(5):1103-9

Baby? 36+ hrs/week. NHDH = best chance



My Life. My Dialysis Choice
www.mydialysischoice.org

If your kidneys fail, dialysis
can save your life.

But, dialysis is not just a
medical treatment.

It can also affect every
aspect of your lifestyle.

This tool will help you choose the right treatment
for you, so you can feel your best and live the way
you want to.

[Get started >](#) - [See how it works >>](#)

www.mydialysischoice.org

Use our free treatment matcher!






What matters to you?

Check the values that matter **most** to you. For each value you select, you'll be able to rate how each treatment option fits your life. We'll show you a summary when you're done.

Lifestyle Values	Health Values
<input type="checkbox"/> I want to be able to work or go to school	<input type="checkbox"/> I want to be able to sleep as well as I can at night
<input type="checkbox"/> I want to be able to travel	<input type="checkbox"/> I want the best chance for a kidney transplant
<input type="checkbox"/> I want to be able to eat and drink what I like	<input type="checkbox"/> I want to avoid being on dialysis as much as I can
<input type="checkbox"/> I want to walk and/or take full baths	<input type="checkbox"/> I want to protect my bones, joints, and nerves
<input type="checkbox"/> I don't want to give up my pets	<input type="checkbox"/> I want to protect my heart
<input type="checkbox"/> I want to feel well from one day to the next	<input type="checkbox"/> I want to stay out of the hospital
<input type="checkbox"/> I worry about how much stress will cost	<input type="checkbox"/> I want to live as long as I can

Hospital Stays
Progress: 18 of 24

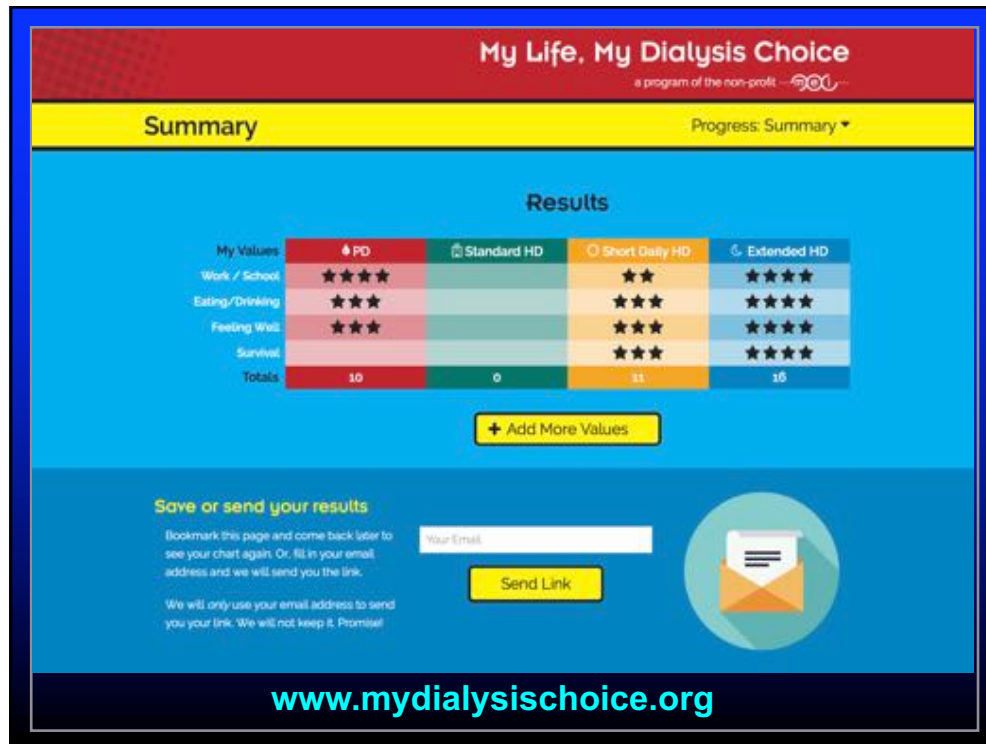


I want to stay out of the hospital.

Will longer or more frequent **stays** give you a better chance of staying out of the hospital? The type of access you have also plays a role. An access that can get you in the hospital more problems and fluid overload also cause lots of hospital stays.


Rate how well each treatment fits this value

<div style="background-color: #c00000; color: white; padding: 5px; border-radius: 10px; display: flex; align-items: center;">  Dialysis (HD) & Hospital Stay </div> <div style="background-color: #ffff00; color: white; padding: 5px; border-radius: 10px; text-align: center; margin-top: 5px;"> Rate this: ☆☆☆☆ </div> <ul style="list-style-type: none"> 1. I want <input type="checkbox"/> dialysis and to avoid being in the hospital 2. Average of all hospital stays per year (HD) includes those who never get on a graft <p style="font-size: x-small; margin-top: 5px;">But...</p> <ul style="list-style-type: none"> 1. Average of all hospital stays per year (HD) includes those who never get on a graft 	<div style="background-color: #008080; color: white; padding: 5px; border-radius: 10px; display: flex; align-items: center;">  Dialysis (HD) & Hospital Stay </div> <div style="background-color: #ffff00; color: white; padding: 5px; border-radius: 10px; text-align: center; margin-top: 5px;"> Rate this: ☆☆☆☆ </div> <ul style="list-style-type: none"> 1. I can follow your treatment plan, you stay the same 2. Average of all hospital stays per year (HD) includes those who never get on a graft 3. Average of all hospital stays per year (HD) includes those who never get on a graft <p style="font-size: x-small; margin-top: 5px;">But...</p> <ul style="list-style-type: none"> 1. Average of all hospital stays per year (HD) includes those who never get on a graft 2. Average of all hospital stays per year (HD) includes those who never get on a graft
<div style="background-color: #ffa500; color: white; padding: 5px; border-radius: 10px; display: flex; align-items: center;">  HD & Hospital Stay </div> <div style="background-color: #ffff00; color: white; padding: 5px; border-radius: 10px; text-align: center; margin-top: 5px;"> Rate this: ☆☆☆☆ </div> <ul style="list-style-type: none"> 1. I don't stays because you can avoid going to the hospital 2. Average of all hospital stays per year <p style="font-size: x-small; margin-top: 5px;">But...</p> <ul style="list-style-type: none"> 1. Average of all hospital stays per year 	<div style="background-color: #000080; color: white; padding: 5px; border-radius: 10px; display: flex; align-items: center;">  HD & Hospital Stay </div> <div style="background-color: #ffff00; color: white; padding: 5px; border-radius: 10px; text-align: center; margin-top: 5px;"> Rate this: ☆☆☆☆ </div> <ul style="list-style-type: none"> 1. I stays because you can avoid going to the hospital 2. Average of all hospital stays per year (HD) includes those who never get on a graft 3. Average of all hospital stays per year (HD) includes those who never get on a graft <p style="font-size: x-small; margin-top: 5px;">But...</p> <ul style="list-style-type: none"> 1. Average of all hospital stays per year (HD) includes those who never get on a graft 2. Average of all hospital stays per year (HD) includes those who never get on a graft



1. Known, progressive CKD
2. Urgent start dialysis (“crashes”)
3. Transplant failure
4. Unhappy with current dialysis modality

Four Audiences



The image shows two sets of iPads. On the left, there are three smaller iPads in rose gold, silver, and gold colors, with one white iPad in front of them displaying the time 09:41. On the right, there are two larger iPads in silver and gold colors, with one white iPad in front of them displaying the time 09:41. A large black "VS" is placed between the two groups. The entire image is set against a white background within a blue border.

Tip: Use the largest screen you can



A photograph of a woman with curly hair wearing a purple top and an older man with grey hair wearing a grey turtleneck. They are both looking at a laptop screen. The woman is leaning over the man's shoulder. The photo is centered within a blue border.

Tip: Use the tool first, THEN educate

**Will you try this decision aid
with your patients?**

- Yes!
- Maybe!
- No!

Take Aways

- * Kidney failure is an emotional blow
- * Treatment option affects every aspect of life
- * Matching modalities to life goals matters
- * YOU can help patients do this!