Treatment Options for Patients with End Stage Renal Disease

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There are four treatment options for ESRD patients
Palliative Care (No Treatment)

Patients may chose not to receive treatment for their ESRD
The patient and family will need a great deal of support to deal with this decision

The patient should be placed on hospice
The patient and family will receive holistic care with hospice

There may be a number of reasons a patient may choose to not receive treatment for their ESRD

We should not judge patients who choose not to receive treatment, but rather support their decision
Hemodialysis

There are two types of hemodialysis

In center dialysis

Home hemodialysis
In Center Hemodialysis

Patient chooses to go to a center 3 days per week to receive their dialysis treatment
# In Center Hemodialysis

## PROS
- Staff (PCT and Nurses) to place patient on treatment
- Able to visit with other dialysis patients
- Days off between treatments to do what they want
- Able to talk to doctors and nurses often

## Cons
- Must travel to center 3 days per week.
- Possibility of headaches, cramps and nausea during treatment
- No flexibility, must be at center on assigned days and times
- Fewer health benefits r/t fluid and toxins in circulatory system
Cardiovascular-related Admission Rates

CVD = cardiovascular disease. CHF = congestive heart failure MI = myocardial infarction
HD1 = first hemodialysis session of the week. HD1 + 1 = the day after the first session.
HD2 = second hemodialysis session of the week. HD2 + 1 = the day after the second session.
HD3 = third hemodialysis session of the week. HD3 + 1 = the day after the third session. HD3 + 2 = the second day after the third session.
Mortality Rates

A Annualized Mortality Rate

- All causes
- Cardiac causes
- Infectious causes
- Vascular causes

Day of Week:

- HD1 = first hemodialysis session of the week. HD1 + 1 = the day after the first session.
- HD2 = second hemodialysis session of the week. HD2 + 1 = the day after the second session.
- HD3 = third hemodialysis session of the week. HD3 + 1 = the day after the third session. HD3 + 2 = the second day after the third session.
The long (2 day) interdialytic interval is a time of heightened risk among patients receiving hemodialysis.
It's bloodwork day, Bob.
Gotta take some blood!
Home Hemodialysis with Baby K
Baby K at Home

**PROS**
- Only have to do dialysis 3 days per week for 4+ hours per day
- Can do dialysis on their own time
- Patient data can be sent straight to the patients chart
- Nurses and Technician on call 24/7 if needed
- Staff assist available with Baby K (if approved by insurance)

**CONS**
- Possibility of headaches, cramps and nausea during treatment
- Fewer health benefits r/t fluid and toxins in circulatory system
- Have to set up to go in center if traveling
- Must have an RO system to make dialysate
- Must maintained Machine and RO system
- 4-6 weeks of training in center
- Must have a partner to do HH
- Must have room for supply storage in side for temperature control
I do sympathize with you, sir, but I'm afraid it cannot be viewed as 'carry on' luggage.
Home Hemodialysis with Nxstage
4TH OF JULY
Designed for the Home

- A simple faucet or undersink connection and a standard electrical outlet are all that are required to operate the PureFlow™ and System One™.¹

- Integrated water treatment, dialysate mixing, and heating prepares ultra-pure water and high-purity dialysate from tap water.²
 Nxstage at Home

**PROS**
- Freedom to do their dialysis on their schedule
- Feel better D/T more frequent dialysis
- Less restrictive diet
- Fluid volume less restrictive
- Able to travel with out going in center
- Very little to maintain on dialyzer and Pure Flow
- Simple set up of dialyzer
- Only have to go to center once per month
- Nurse and technical on call 24/7
- Staff assist available with Nxstage (if approved by insurance)

**CONS**
- Must have a partner to do home hemo
- Must do 4 weeks of 5 days per week training in center
- Have to learn to stick themselves
- Will have to do 5-6 days of dialysis per week for 2 ½-3 hours per treatment
- Must document on treatment sheet and send to clinic daily.
Average amount of supplies to be stored
Peritoneal Dialysis at Home
Continues Ambulatory Peritoneal Dialysis (CAPD)
# CAPD

## PROS
- Closest to how our real kidneys work, 24/7
- Freedom to do their dialysis on their schedule
- Less restrictive diet
- Fluid volume less restrictive
- Feel better D/T more frequent dialysis
- Able to travel with out going in center
- Only have to go to center twice per month
- No needles or blood involved
- Nurse on call 24/7
- No partner needed
- Only 5 days of training

## CONS
- Has Catheter outside of abdomen
- Can not take a bath, must only shower
- No getting in a hot tube
- No swimming in lakes or rivers
- Risk of peritonitis
- Must do 5-6, 30 minute exchanges per day, 7 days per week
- Must have room to store supplies inside
- Feeling of fullness until body adjust to having 2L of fluid in abdomen
Your tests reveal that you are retaining fluids!
Continuous Cycling Peritoneal Dialysis
CCPD
**CCPD**

**PROS**

- Most exchanges are done while the patient sleeps
- Very gentle treatment
- No partner needed
- Closest to how our real kidneys work, 24/7
- Freedom to do their dialysis on their schedule
- Less restrictive diet
- Fluid volume less restrictive
- Feel better D/T more frequent dialysis
- Nurse on call 24/7
- Only have to go back for one day of training to learn to use cycler

**CONS**

- Adjustment to being attached to cycler at night
- Must be attached to cycler 8-10 hours per night
- Will have to do at least one exchange during the day
- Must have room for storage of supplies inside
- Drain tubes running to nearest drain
Transplant
Transplant

- A kidney for transplant may come from a living donor, like a family member or friend
- A kidney may come from a cadaver or person who has passed away
- The donated kidney is placed in the lower abdomen
- The old kidneys are left in the body unless they are causing issues
## Transplant

<table>
<thead>
<tr>
<th><strong>PROS</strong></th>
<th><strong>CONS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Help return patient to a state of good health</td>
<td>• May have to wait for a number of years for a match</td>
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<tr>
<td>• Patient will no longer have to do dialysis</td>
<td>• Has to be approved by a transplant board. Not all patients are a candidate for transplant</td>
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- Transplant is not a cure
- Patient must follow treatment plain
- Must go to many follow up appointments with doctor
- Must take antirejection medication as prescribed for the life of the graft
Hello Kidney
GIVE THE GIFT OF LIFE!

BE A LIVING KIDNEY DONOR
Which Patients Should Be Educated on Treatment Options

• All patients should be educated on all their options for dialysis treatment
When Should Patients be Educated on Their Treatment Options

- Early education is best
- When patients are in stage 3 or 4, it is a good time to educate them on treatment options
- Patients who have to start dialysis in a hospital setting on an emergent basis should be educated while in hospital, if well enough
- Any patient who asks about treatment options
Who Should Educate Patients On Their Treatment Options

• Everyone on the treatment team!
• Doctors
• Nurses
• Patient Care Techs
• Social Workers
• Dieticians
• Treatment Options Specialist
Patient Care Techs

• Patient care techs spend the most time with patients after they start in center dialysis
• Techs know the patient probably better than any other team member
• Techs build relationships with the patients and the patients trust the Techs
• Techs are often the first to notice any issues with patients missing treatment and know the reasons why
Things To Avoid

• Patients should not be told horror stories about other patients who have had poor outcomes with home therapies and had to return to in-center dialysis
  – There are many patients that are very successful with home therapies that the in-center team does not always know about
There are only two ways to live your life. One is as though nothing is a miracle. The other is as though everything is a miracle.

(Albert Einstein)