NxSTAGE®

Summary of an AJKD Article on **Transitional Dialysis Care**

A Blueprint for Easing Patients Into Dialysis

A Patient-Centric Model
Transitional Dialysis Care

Transitional Dialysis Care (TDC) is a patient-centric approach to easing patients into dialysis. Using existing center staff and infrastructure, TDC provides the time needed to stabilize patients and help them select the modality and therapy frequency that meets their individual needs. A TDC Unit is for all patients, including incident patients, failed peritoneal dialysis patients, and failed transplant patients.

In the article ***Improving Incident ESRD Care Via a Transitional Care Unit,*** *authors Brendan Bowman, MD (University of Virginia Health System, VA), Sijie Zheng, MD (Kaiser Oakland Medical Center, CA), Alex Yang, MD (Satellite Healthcare, CA), Brigitte Schiller, MD (Satellite Healthcare & Stanford University, CA), Jose A. Morfin, MD (UC Davis School of Medicine, CA) Melvin Seek, MD (Ocala Kidney Group, FL), and Robert S. Lockridge (University of Virginia Health System, VA) provide a blueprint for establishing a TDC Unit. The article details a few objectives of a TDC unit: to provide a gentler start to dialysis therapy with more frequent dialysis, increased provider interaction, and a patient-centric education curriculum.*[1]

The full article can be found in the AJKD library at: https://doi.org/10.1053/j.ajkd.2018.01.035.

Clinical Blueprint for a TDC Unit

- Eliminate the 2-day treatment gap with more frequent hemodialysis (>3 weekly treatments)
- Blood and dialysate flow rates are consistent with typical home hemodialysis (HHD) prescriptions
- Facilitate target weight and blood pressure goals using more frequent hemodialysis and low UF rates
- Minimum of 12 h/wk of dialysis divided equally among the more frequent treatments
- Use standard heparin, EPO, iron, vital signs, weight, and laboratory protocols per unit

TDC Operational Framework

- Use home equipment such as the NxStage HHD system
- Provide a dedicated space to provide education and individualized attention to patients
- Use dedicated staff
- Provide thorough patient education covering psychosocial issues, modality education, nutrition, vascular access, and more

TDC Demonstration Initiative

The Transitional Dialysis Care Demonstration Initiative created an interactive operational guidance PDF resource that may help in implementing a TDC Unit.

TDC Education & Intended Outcomes

Sample High-Level Curriculum[1]

WEEK 1: Assure Patient / Clinical Stabilization

- Emotionally support patient during the transition period
- Elicit patient's fears concerning dialysis
- Talk about the cause of the patient's kidney failure
- Explain the cost of dialysis and how it is compensated

WEEK 2: Overview of Kidney Failure

- General review of renal replacement therapies and access options by modality
- Review quality-of-life aspects of each modality
- Review clinical outcomes specific to each modality
- Collaboratively complete a patient-centered modality selection assessment tool such as "My Life, My Dialysis Choice"

WEEK 3: In-Depth Modality Education

- Transplantation and access education
- Detailed peritoneal and home hemodialysis modality education by home training team
- In-center education by staff about transportation, schedule, and vacation travel
- In-center, home hemodialysis, peritoneal dialysis, and transplantation patients meet with the patient to discuss their modality

WEEK 4: Make Modality Choice

- Final review of modality and access options
- Refer patient to transplantation center of choice
- If patient chooses a home modality, refer to the home training unit of choice
- Finalize the access plan for the patient when transitioning out of the TDC Unit

The Transitional Dialysis Care Blueprint is Designed to Achieve

Clinical stabilization as "crash" patients are at greatest risk of mortality and hospitalization during their first 90 days of dialysis.[1-2]

Alleviate incident patients' high level of anxiety, fear, and depression.

Incident patients will be more informed of their dialysis modality options, including transplantation.

Improved home dialysis uptake for dialysis providers.

Decreased time to access placement/first use for dialysis providers.

For more information about Transitional Dialysis Care, visit

www.nxstage.com/tdc

RISKS & RESPONSIBILITIES

The reported benefits of home hemodialysis (HHD) may not be experienced by all patients.

The NxStage System is a prescription device and, like all medical devices, involves some risks. The risks associated with hemodialysis treatments in any environment include, but are not limited to, high blood pressure, fluid overload, low blood pressure, heart-related issues, and vascular access complications. When vascular access is exposed to more frequent use, infection of the site, and other access related complications may also be potential risks. The medical devices used in hemodialysis therapies may add additional risks including air entering the bloodstream, and blood loss due to clotting or accidental disconnection of the blood tubing set.

Home hemodialysis with the NxStage System during waking hours may not require a care partner, provided a physician and a qualified patient agree that solo home hemodialysis is appropriate. Patients performing nocturnal treatments are required to have a care partner. Care partners are trained on proper operation and how to get medical or technical help if needed.

Certain risks associated with hemodialysis treatment are increased when performing solo HHD because no one is present to help the patient respond to health emergencies. If patients experience needles coming out, blood loss, or very low blood pressure during solo HHD, they may lose consciousness or become physically unable to correct the health emergency. Losing consciousness or otherwise becoming impaired during any health emergency while alone could result in significant injury or death. Additional ancillary devices and training are required when performing solo HHD

Certain risks associated with hemodialysis treatment are increased when performing nocturnal therapy due to the length of treatment time and because therapy is performed while the patient and care partner are sleeping. These risks include, but are not limited to, blood access disconnects and blood loss during sleep, blood clotting due to slower blood flow and/or increased treatment time, and delayed response to alarms when waking from sleep.

Patients should consult their doctor to understand the risks and responsibilities of performing these therapies using the NxStage System.

References:

1. Chan KE, Maddux FW, Tolkoff-Rubin N, Karumanchi SA, Thadhani R, Hakim RM. Early outcomes among those initiating chronic dialysis in the United States, *Clin J Am Soc Nephrol 6: 2642-2649, 2011.* **2.** Robinson BM, Zhang J, Morgenstern H, et al. Worldwide, mortality risk is high soon after initiation of hemodialysis. *Kidney Int. 2014;85(1):158-165.*

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