

# Long Term Catheter Project: Plans for Patients and Staff, Steps to take post COVID

Midwest Kidney Network

May 2020

# Reducing Long-term Catheter Rates

Goal: Decrease LTC rate in the Midwest Kidney Network Region

Who: Every hemodialysis facility within the Midwest Kidney Network region will be included in the project.

# Access Placement Issues since COVID- 19

- Many hospitals and vascular access clinics have suspended operations for AVF creation as they consider them “nonessential”
- CMS prioritizes dialysis access procedures March 26, 2020:  
“We (CMS) wish to clarify that these planned procedures are essential in that establishing vascular access is crucial to end-stage renal disease patients to receive their life-sustaining dialysis treatments.”

# New Strategies and Ideas

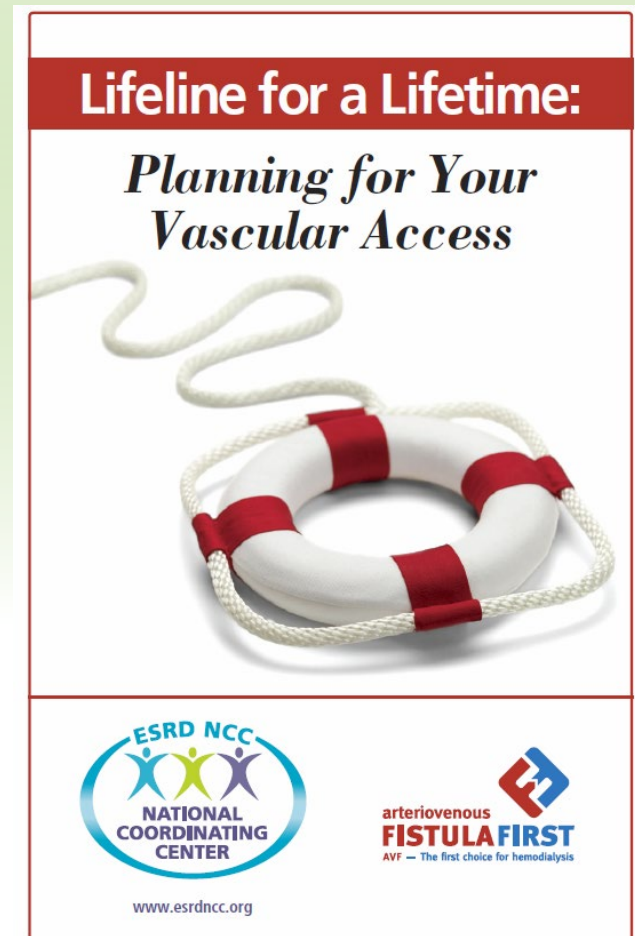
1. Work with **inpatient acute** dialysis providers through an outpatient unit outreach to get the process of permanent vascular access creation started while the patient is still in the hospital before going to an outpatient dialysis unit. Review education sources.
2. Share **emergent technologies** of AVF creation such as Elipsys and everLinq to units to distribute to their surgeons.
3. Share information on **cannulation** methods for new accesses to improve the longevity of fistulas and grafts.

# Access Choice Video

- <https://www.youtube.com/watch?v=J8cySsUbJOs>
- A short 13-minute patient to patient video on access choice. Show in the outpatient unit TV system.
- Highlights positive aspects of a fistula and answers questions patients may have.
- Get this link to the acute dialysis team your center uses for early patient education on need for permanent access placement.

# Patient Education


- This brochure goes through the steps for patients in planning for an access. It is available in English and Spanish.
- This can be handed out by acute dialysis staff or outpatient unit staff.




# Patient Education

**Patient**


**"Ready, Set, Go" The Steps to Catheter Freedom**  
**Weeks 1-2: New Fistula Daily Check**




Access Placed




Weeks 1-2




Week 3



Weeks 4-5



Week 6




Catheter Freedom


**Check your fistula every day.**

**If you do not know how, ask your Dialysis Care Team to teach you how to monitor your fistula.**

**Look**




**Feel**




**Did you notice anything different when you checked your fistula today?**

**No change.**

**Yes, a change.**



Great! Keep checking each day. At your next treatment, tell your Dialysis Care Team that there was no change.





Call the contact given to you by your Dialysis Care Team. Share what you found. They will tell you what to do next.

Continued..

**Patient**

**"Ready, Set, Go" The Steps to Catheter Freedom**  
**Weeks 1-2: New Fistula Daily Check**





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**Look**


The dressing is **clean and dry**.

The skin around the dressing looks **like it did before you had surgery. The hand looks the same as it did before surgery.**

When the dressing is no longer needed, the surgery site is **clean and dry**.

Once it has healed, the **skin over the fistula is all one color and looks like the skin around it.**

**Look**



The dressing is **wet or soiled**. There is **drainage** on the dressing.

The arm is **bruised and/or the hand is not the normal color**.

There is **redness, swelling, or drainage**.


There is **redness, swelling, or drainage**.

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**Feel**

When a dressing is no longer needed, place your hand over the fistula. **You can feel the fistula under the skin.**

**Feel**




You **cannot feel the fistula**. The hand of the affected arm feels **numb and/or cold to the touch**.

*Ask a member of your Dialysis Care Team to complete the form below. Did any of the results of your daily fistula check fall under the "STOP" column? If so, call the contact listed below and share your results to find out what to do next.*

Contact: \_\_\_\_\_


During regular facility hours: \_\_\_\_\_


After hours: \_\_\_\_\_



[www.esrdncc.org](http://www.esrdncc.org)

This publication was developed under Contract Number 18 EM 540 2013 HAWKOPC, titled "End Stage Renal Disease National Coordinating Center (ESRD NCC)," sponsored by the Centers for Medicare & Medicaid Services (CMS), Department of Health and Human Services. The contents presented do not necessarily reflect CMS policy.





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# Patient Education

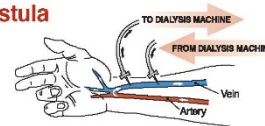
- This is a great one-page handout for patients to see each type of access.
- This can be handed out by acute dialysis staff or outpatient staff.

## Hemodialysis Vascular Access

Hemodialysis cleans your blood through a fistula, graft or catheter. If you have kidney failure, one of these will be your **LIFELINE!** Talk with your doctor to decide which type of vascular access is best for you.



### Fistula



A fistula directly connects an artery to a vein. The vein stretches over time, allowing needles to be put in it.

**Fistulas are the gold standard for hemodialysis.**

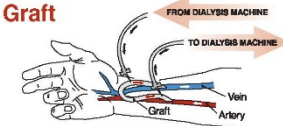
#### Advantages

- ✓ Permanent
- ✓ Beneath the skin
- ✓ Lasts longest, up to 20 years
- ✓ Provides greater blood flow for better treatment
- ✓ Fewer infections & other complications
- ✓ Fewer hospitalizations
- ✓ Better survival (lower risk of dying than patients with catheters)

#### Disadvantages

- ✗ May not mature/develop
- ✗ Not possible for all patients
- ✗ Usually cannot be used for at least 6-8 weeks

### Graft



A graft is a tube, usually made of plastic, that connects an artery to a vein, allowing needles to be put in it. Grafts are the second best way to get access to the bloodstream for hemodialysis.

#### Advantages

- ✓ Permanent
- ✓ Beneath the skin
- ✓ May be used after 2 weeks, in some cases
- ✓ May work in patients with poor veins

#### Disadvantages

- ✗ Increased hospitalizations
- ✗ Increased risk for clotting
- ✗ Increased risk for serious infections
- ✗ Increased risk for other complications and repair procedures
- ✗ Does not last as long as a fistula

### Catheter

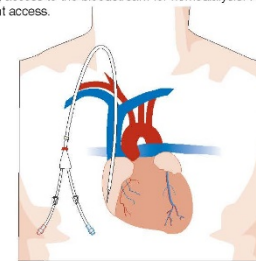
A catheter is a tube inserted into a vein in the neck or chest to provide vascular access for hemodialysis. The tip rests in your heart. It is usually a **temporary** access. It is the third choice for getting access to the bloodstream for hemodialysis. For some patients it is the only choice and it will need to be used as a permanent access.

#### Advantages

- ✓ Can be used immediately after placement

#### Disadvantages

- ✗ Higher infection rates, which can be very serious or fatal
- ✗ Increased hospitalizations
- ✗ Does not last long, usually less than one year
- ✗ May require longer treatment times
- ✗ Prolonged use may lead to inadequate dialysis
- ✗ Cannot shower without special appliance
- ✗ High rate of clotting requiring frequent procedures
- ✗ Risk of destroying important vein



Adapted with modifications from a 9-page brochure by the Toronto Vascular Access Centre (4/03). This material was prepared by the Midwest End Stage Renal Disease Network as part of the Tertiary Care Partnership Initiative. Credit: Further updates provided by the End Stage Renal Disease Network Coordinating Center (4/11) at the contract of the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents presented do not necessarily reflect CMS policy. CMS Contract Number: HHS-89-001-0019-K00100.



# Patient Education

- This is a one-page handout showing the benefits of AVF over CVC.
- This can be handed out by acute dialysis staff or outpatient staff.

## Benefits of Having a Permanent Access

Are you getting the most out of your dialysis treatment?

Is your current access meeting your needs?

Is there another type of access that might work better and could give you more freedom?

Find out by getting an evaluation for a **permanent** dialysis access!

An access is needed to reach your blood so that it can be cleansed by the hemodialysis machine. The two permanent access types include the:

- **Arteriovenous fistula**, which is often referred to as an **AVF**.
  - This access can be done with a minor surgery that joins an artery and vein in your arm.
- **Arteriovenous graft**, which is often referred to as an **AVG**.
  - This can be done with a minor surgery that uses a piece of soft tube to join an artery and vein in your arm.

### Top Patient-Identified Benefits of a Permanent Access

Having a permanent access could give you:

- The ability to take a bath/shower and do water sports.
- Improved skin tone with less itchiness and dryness.
- The potential for a shorter chair time due to fewer alarms interrupting and faster hook-up/take-off times.
- Less risk for infection or hospitalization.



Although a permanent access type, including an AVF or AVG, is preferred, it may not always be the most suitable access option. **Please talk with your care team about what the best access type is for you!**

# Patient Education

- This is a one-page sheet with a place for each patient's appointment day and time
- This can be handed out by acute dialysis staff or outpatient staff.

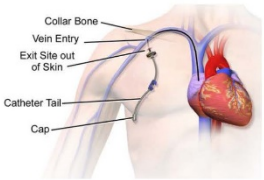
**HSAG** HEALTH SERVICES ADVISORY GROUP  
ESRD Network 17

## Dialysis Vascular Access Options

Patient Name: \_\_\_\_\_  
Admission Date: \_\_\_\_\_  
Next Vascular Access Appointment: \_\_\_\_\_

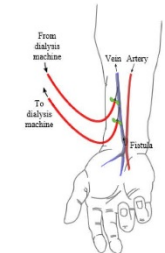
Upon admission to a dialysis facility, a vascular access plan is initiated. In order to get the best dialysis possible, it is recommended that you get an evaluation for a **permanent** dialysis access. A permanent access, often called an arteriovenous fistula (AVF) or arteriovenous graft (AVG) is not appropriate for everyone, but it is recommended. Speak with your facility staff about vascular access options for you.

**Central Venous Catheter (CVC)**

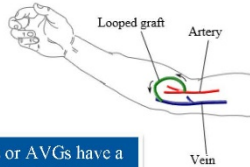


A CVC is considered a temporary option for a patient who is eligible to get an AVF or AVG.

**Arteriovenous Fistula (AVF)**



**Arteriovenous Graft (AVG)**



AVFs or AVGs have a lower risk for infection, and a greater ability to clean your blood.

Photos courtesy of:  
• Ritsoun.com staff (2014). "Medical gallery of Ritsoun Medical 2014." *WikiJournal of Medicine* 1 (2): DOI:10.15317/wjvim/2014.010. ISSN 2092-1146  
• KBK at English Wikipedia

This material was prepared by HSAG/ESRD Network 17, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents presented do not necessarily reflect CMS policy. CA-ESRD-17-A139-91122017-01

# Fistula or Catheter Brochure

## Midwest Kidney Network

Fistula or Catheter:  
Patient Perspectives



Dialysis patients share  
their stories about  
choosing vascular access.



- Available: Call us at
- 651-644-9877.
- Or email Alli Bailey at
- [Alli.bailey@midwestkidneynetwork.org](mailto:Alli.bailey@midwestkidneynetwork.org)

# Patient Education

## Facts you should know!

On average, patients who dialyze with a catheter are **15 times more likely to get a vascular-access related infection** than patients using an arteriovenous (AV) fistula for dialysis.

Patients who receive dialysis with a catheter **spend on average 35 days per year in the hospital** compared with only 7.7 days for patients with an AV fistula.

Patients who dialyze with a catheter **have two times the risk of death** compared to patients who use an AV fistula.

Patients using catheters have a **38 percent greater risk for a major heart problem**.

Patients who use an **AV fistula report greater physical activity, energy, and emotional and social wellbeing** compared to patients using a catheter.

**Talk to your health care team today about being evaluated for an AV fistula.**

Midwest Kidney Network is a private, nonprofit organization and contractor with the Centers for Medicare & Medicaid (CMS).

Our mission is to assess and improve the quality of care provided to people with kidney disease through the following actions.

- Respond to patient concerns about their care.
- Help providers improve care and quality of life for dialysis and kidney transplant patients.
- Maintain the patient database that supports the national kidney disease program.
- Partner with other ESRD Networks, State Survey Agencies, ESRD providers, and organizations helping people with kidney disease.



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2017

## Midwest Kidney Network

### Fistula or Catheter: Patient Perspectives



Dialysis patients share their stories about choosing vascular access.



## Fistula or Catheter: Patient Perspectives

"I'm glad that my catheter allows me to leave sooner after dialysis, and I do not have to wait like other patients."



"Complications with my catheter put me in the hospital; I wish I could be spending more time at home with family."

"I like having a catheter—I don't have to wait around for my needle sites to clot."

"I do have to wait around for a few minutes after dialysis for my sites to clot, but I haven't been in the hospital since my catheter was removed."



"With this catheter, I don't think I look as sick as those patients with a fistula in their arm."



"I am glad now that I have a fistula. I look and feel physically better! With my catheter, I couldn't hide my lack of wellness."



"I chose a catheter. I feel like I have enough energy."

"I feel so much better now that I can be out more with my friends and family. I couldn't do this with a catheter."



"Infection is a risk, but if I keep my catheter clean I can control it."

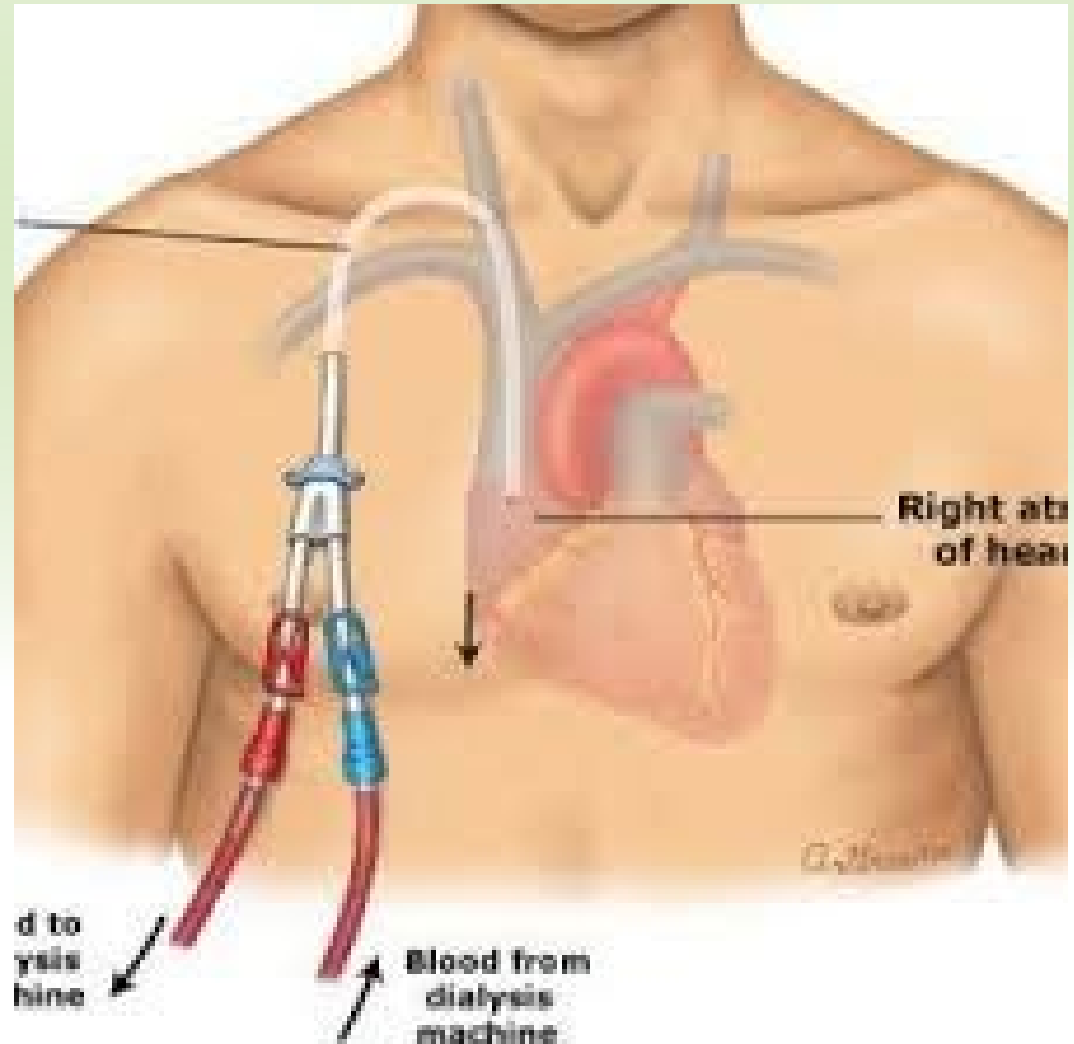


"With a catheter, my wife cared for me at home. Even her nursing skills could not keep me free from infections. I don't worry about that now that I have a fistula."

# Patient Education

This visual educational tool for patients to see exactly where the catheter tip goes is one.

Print one out for IP dialysis unit.



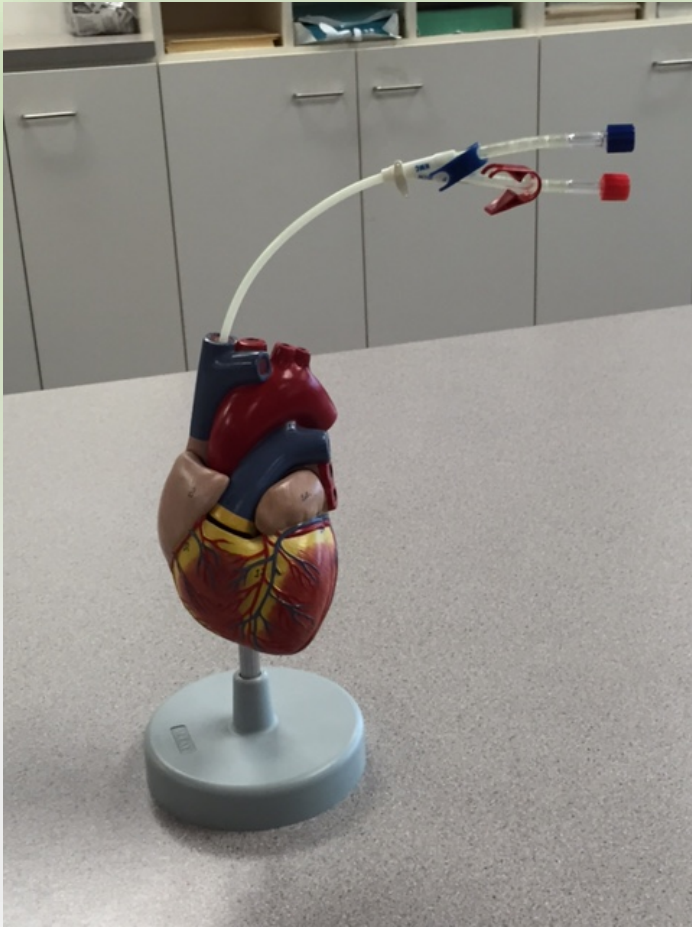
# A Unique Idea

## Model Heart for patient to hold

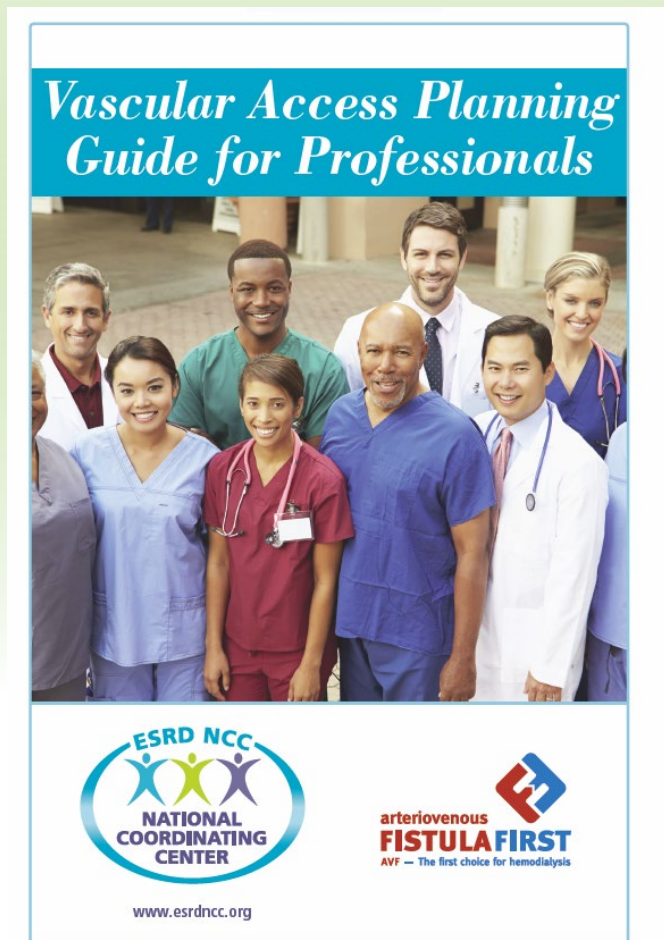
Link to purchase

<https://www.anatomywarehouse.com/budget-life-size-heart-anatomy-model-a-102490>

- Buy one for your favorite acute unit staff to use and one for OP use.



# Staff Education



- This tool goes through the steps for staff to educate their patients on vascular access planning.
- Acute dialysis nursing staff should be familiar with this process also.

# Staff Education on Access Assessment

7-page picture document available



## It only takes a minute to save your patient's lifeline.

**GO**

**The skin over the access is all one color and looks like the skin around it.**

**Bruit** - the hum or buzz should sound like a "whoosh," or for some may sound like a drum beat. The sound should be the same along the access.

**Thrill**: a vibration or buzz in the full length of the access.

**Pulse**: slight beating like a heart-beat. Fingers placed lightly on the access should move slightly.

**Upper Arm AVF**

The AVF outflow vein **partially collapses** when the arm is raised above the level of the heart. It may feel "flabby" when palpated.


**Lower Arm AVF**

The AVF outflow vein **collapses** when arm is raised above the level of the heart.


**Look**



**Listen**



**Feel**



**STOP**

**There is redness, swelling or drainage. There are skin bulges with shiny, bleeding, or peeling skin.**

**There is no sound, decreased sound or a change in sound. Sound is different from what a normal Bruit should sound like.**

**Pulsatile**: The beat is **stronger than a normal pulse**. Fingers placed lightly on the access will **rise and fall with each beat**.

**Arm Elevation**



**Upper Arm AVF**

The AVF outflow vein **does not** partially collapse or become "flabby" after being raised above the level of the heart. This finding should be reported to an expert clinician.

**Lower Arm AVF**

The AVF outflow vein **does not** collapse after being raised above the level of the heart. This finding should be reported to an expert clinician.

**Distended**

**Collapsed**


**Stenosis**

**Upper Arm AVF**

The AVF outflow vein **does not** partially collapse or become "flabby" after being raised above the level of the heart. This finding should be reported to an expert clinician.

**Lower Arm AVF**

The AVF outflow vein **does not** collapse after being raised above the level of the heart. This finding should be reported to an expert clinician.



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**arteriovenous FISTULA FIRST**

AVF - The first choice for hemodialysis



# Elipsys AVF Option

- New method for AVF creation
- Get this info to your surgeons and medical directors as an option for AVF creation.
- <https://avenumedical.com/ellipsys/>
- Brochure link  
[https://seureservercdn.net/198.71.233.7/f5c.0bd.myftpuplo ad.com/wp-content/uploads/2019/04/avnu-7856\\_ellipsysdatasheet\\_revb\\_1.pdf](https://seureservercdn.net/198.71.233.7/f5c.0bd.myftpuplo ad.com/wp-content/uploads/2019/04/avnu-7856_ellipsysdatasheet_revb_1.pdf)

- MKN does not endorse any specific product

# WavelinQ™ EndoAVF Option

- New method of AVF creation using magnets
- Get this info to your surgeons and medical directors as an option for AVF creation.
- Link to the product
- <https://www.crbard.com/Peripheral-Vascular/en-US/Products/WavelinQ-EndoAVF-system#SpecificationTable>

- MKN does not endorse any specific product

# Vascular Access Practice Arm for Cannulation available



Available for use: Call us at  
651-644-9877.

Or email Alli Bailey at

[Alli.bailey@midwestkidneynetwork.org](mailto:Alli.bailey@midwestkidneynetwork.org)

# Cannulation Information

Items available from Midwest Kidney Network:

1. Sample Competency tool for Cannulation and Guidelines for Rating & Improving Staff Cannulation Skills
2. Cannulation of New Fistula Policy and Procedure – Sample
3. Staff Complete Guide to Access Assessment

# Here are Some Things YOU Can Do Right Away

- Develop a tracking program for reducing catheters or USE the one you have.
- Make sure you are using all your staff to discuss strategies to reduce catheters
- Develop a plan for every catheter patient with the goal to transition to a permanent access.
- Think of PD for those patients who cannot have a permanent access.

# More...

- Assign a Vascular Access Manager (Has the MOST impact)
- Consider making vascular access management a team process, use all members of your team (SW, dietitian, secretary, etc.)
- Use patients as mentors
- Review monthly Network Access Reports in your QAPI meetings
- Plan to sustain improved access data:
  - Monitor access flow regularly
  - Assign expert cannulators
  - Track/trend patient accesses
  - Track access interventions (declots, angioplasties)

# Items Available from Slides

Please contact the Midwest Kidney Network if you would like to use the cannulation arm or want a link to any of this handouts shown here.

Send an email to:

[Deborah.bowe@midwestkidneynetwork.org](mailto:Deborah.bowe@midwestkidneynetwork.org)

# Thank you!

For questions about the Catheter or Bloodstream infection project,  
contact Deb Bowe

[Deborah.Bowe@midwestkidneynetwork.org](mailto:Deborah.Bowe@midwestkidneynetwork.org)

For questions about the Home and Transplant projects, contact  
Candace Kohls

[Candace.Kohls@midwestkidneynetwork.org](mailto:Candace.Kohls@midwestkidneynetwork.org)

For questions about the Data, contact Kristen Ward

[Kristen.Ward@midwestkidneynetwork.org](mailto:Kristen.Ward@midwestkidneynetwork.org)

For question about the Resource Center, contact Alli Bailey

[Alli.Bailey@midwestkidneynetwork.org](mailto:Alli.Bailey@midwestkidneynetwork.org)