Coaching to Support Kidney Care Choices
Vascular Access Planning

April 2019

Expand skills. Share Knowledge. Empower Patients.
What will be covered in this Module?

Part 1: Review the benefits of each type of access

Part 2: Vascular access planning for professionals

Part 3: Using the vascular access resource toolkit

Part 4: Tips and suggestions
Learning Objectives

At the completion of this activity the learner will be able to:

- List the ESRD Network roles and responsibilities
- Understand the “Patient Health Coach” role in discussing vascular access planning and maintenance
- Describe the advantages and disadvantages of different access types
- Evaluate your internal processes for improvements in vascular access planning and monitoring
- Describe the steps in the vascular access placement process
- Support patients in creating a personal vascular access plan
- Utilize the training materials identified in this program to assist patients in the decision making process
- Share with other staff members information on vein preservation and vascular access monitoring.
Network Role and Responsibilities

ESRD Networks are critical to achieving CMS goals for healthcare transformation and improving the patients experience of care by:

- Being leaders, motivators, and organizers
- Producing partnerships and collaboration within the ESRD community
- Promoting outreach and education
- Collecting, analyzing and monitoring data to measure achievement
- Collecting and sharing best practices
- Providing emergency preparedness services for the ESRD community
- Support patients and facilities in resolving grievances

Long Term Catheter Reduction Goal:
- Reduce the use of long term catheters to less than 10%
Helping the patient make important choices

Renal patients need unbiased, factual information to make decisions that can affect their quality of life and experience of care.

Patients must be open and ready to process information

What is your role as a Patient Coach?

• Engage patients in discussion to determine knowledge of vascular accesses
• Provide resources
• Arrange an interaction with a current AVF/AVG patient to share their perspective
• Refer patients to a member of the healthcare team
• Be available when questions arise - BE POSITIVE
Why is the “Patient Health Coach” so Important?

YOU are in a unique position to be:

- Viewed as an expert
- A trusted partner in the patient’s care
- Have open discussions during the patient’s treatment
- Encourage patients to be engaged and active in his or her care decisions
- A resource provider
  - Printed educational materials
  - Referral to a vascular access expert or Healthcare Team Member
  - Review self care maintenance techniques with patient for their access types
Part 1: Vascular Access Types - Advantages and Disadvantages
What are the types of vascular access?

#1 Fistula
Your own blood vessels connect an artery to a vein.

#2 Graft
A piece of plastic-like material that connects an artery to a vein.

#3 Dialysis Catheter
A plastic tube is inserted through the skin into a large vein and ends in the heart.
Access at Start of Dialysis

Central venous catheters have been associated with the highest risk of death, infection, and cardiovascular events compared to other access types yet:

- 80% of patients who start dialysis, start with a dialysis catheter.
- 61.9% of patients who start dialysis do not have an AV Fistula or AV Graft in place or maturing at their first outpatient dialysis treatment.
- At 90 days after the initiation of dialysis, 68.5% of patients were still using catheters.

Reference: USRDS, Chapter 3: Vascular Access
https://www.usrds.org/2017/view/v2_03.aspx
Infection Risks for Vascular Access in Dialysis

According to the Centers for Disease Control and Prevention or CDC

- Vascular access infection is the most common infection in hemodialysis patients and is the second most common cause of death (15%)

- In 2008, the CDC estimated that 37,000 bloodstream infection occurred in patients with central lines. 1 in 4 of these patients may have died as a result of the infection

- Since 1993, hospitalization rates among hemodialysis patients have increased 47% for bloodstream infections and 87% for vascular access infection
Catheter
Advantages and Disadvantages

**Advantage**
- Can be used immediately after placement

**Disadvantage**
- Higher infections rates, which can be very serious or fatal
- Increased hospitalization
- Does not last long, usually less than one year
- May require longer treatment times
- Prolonged use may lead to inadequate dialysis
- Cannot show without special appliance
- High rate of clogging requiring frequent procedures
- Risk of destroying important vein
Graft
Advantages and Disadvantages

Advantage
• Permanent
• Beneath the skin
• May be used as early as 2 weeks after placement
• May work in patients with poor veins

Disadvantage
• 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
Fistula Advantages and Disadvantages

**Advantage**
- Permanent
- Beneath the skin
- Last longest, up to 20 years
- Provides greater blood flow for better treatment
- Fewer Infections and other complications
- Fewer hospitalizations
- Better survival (lower risk of dying than patients with catheters)

**Disadvantage**
- May not mature or develop
- Not possible for all patients
- Usually cannot be used for at least 6 to 8 weeks
Access at Start of Dialysis

An organized approach to the management of vascular access has been found to be effective in reducing the amount of time a patient has a catheter in place.

• Primary focus of vascular access planning is for patients who are new to dialysis
• Secondary focus is to work with all patients who are dialyzing with a catheter that is not medically necessary to do so

Developing, executing, and managing an access plan across the access continuum is vital to decrease the use of HD catheters and maintain existing accesses.
Part :2
Vascular Access Planning Guide for Professionals
A 8 step vascular access planning process to catheter freedom.

1. Develop an individualized access plan for each patient
2. Refer the patient for vessel mapping
3. Coordinate an appointment with a surgeon
4. Coordinate access surgery and follow up
5. Access AVF maturation / AVG readiness
6. Apply cannulation protocol
7. Arrange for catheter removal
8. Monitor the access
1. The Vascular Access Planning for Professionals is the companion plan to the patient guide “Lifeline for a Lifetime.

2. The patient guide is designed to meet the needs of patients and reinforce the essential role they have in the access planning process.

3. It is important to use both together.
Step 1: Develop Vascular Access Plan

What is a vascular access plan and why is it important?

• A description of the steps necessary to achieve catheter freedom and maintain a working fistula or graft
• It is individualized for each patient based on their unique needs and options
• Provides an organized approach for the management of a complex condition
• Guides across the continuum of care to minimize long term access planning risk and identify the action needed to achieve catheter freedom

REMINDER: Step 1 of the Companion Patient Guide assist patients in making an Access Plan and guides patients through the entire access planning process following a step by step approach
Step 2: Refer for Vessel Mapping / Surgical Consults

What is vessel mapping?
- A simple test done with an ultrasound machine
- Used to determine arterial inflow and venous outflow
- Not all surgeons perform vessel mapping, check if other agencies such as vessel mapping services or radiology is needed

How can you help the patient with their vessel mapping appointment?
- Assist with scheduling the appointment and arranging transportation
- Adjust the patients dialysis schedule if there is a conflict
- Ensure the results are shared with the surgeon prior to the surgical consult
- Focus the Healthcare team members on vein preservation

REMINDER: Step 2 of the Companion Patient Guide assist patients with understanding vessel mapping. Use the guide to teach patients to protect their veins while they wait to meet with the surgeon
Veins in both arms that could be used for an access MUST be preserved

Discuss with your facility if Fistula identification bracelets can be issued to patients

**Do**
- Rotate venipuncture sites.
- Use the dorsum of the hand of the non-access arm for venipuncture and IV infusions.
- Draw labs at the time of hemodialysis when possible.
- Coordinate with the surgeon and anesthesiologist when the non-access arm is the primary surgical site, to avoid using the patient's hemodialysis vascular access.

**Do Not**
- Use the hemodialysis access limb for blood pressure readings. (Use the other arm or a thigh or ankle cuff for blood pressure readings.)
- Use the hemodialysis access limb for blood draws, IV therapy, or an arterial line.
- Use the hemodialysis access for diagnostic studies or treatments.
- Use the cephalic veins of either arm for blood draws, IV fluids, or IV drug infusions.
- Place a subclavian catheter or a peripherally inserted central catheter (PICC). (Place an internal jugular line instead.)
Step 3: Working with the surgical team

It is important to have established bi-directional communication protocols with surgeons in your area to include:

- How they wish to receive patient information (phone, fax, email)
- What information they want from the dialysis clinic
- Whether they have a standard vascular access form or use forms you supply
- What post-surgery information they send to the dialysis center
- If they have a vascular access coordinator who arranges the schedule and provides follow-up to the patient after access surgery
Step 3: Coordinating the Surgeon Appointment

The surgeon should communicate to both the healthcare team and nephrology practitioner information on the type of surgery and follow-up plan. The communication should include:

- Access type and site
- Clinical explanation for access choice and site
- Possible identification of secondary sites for future access placement
- If LTC should continue as primary access, a detailed explanation should be provided

REMINDER: Step 3 “Going to see the surgeon” of the Companion Patient Guide has information and questions that will help prepare the patient to visit the surgeon. Use the guide to discuss these questions with your patients.
Step 4: Access Surgery and Follow-up Communications

Communication is important between the nephrology practitioner, the healthcare team and the surgeon so that information is shared immediately after the access surgery. The communication should include:

- Outline the type and site of surgery
- An anatomical drawing of the AVF or AVG
- Plans for follow-up
- Projected timeline for AVF maturity or AVF healing

If there are delays in the timelines, the surgeon should be asked to articulate his or her approach to evaluation, intervention, and follow-up.
Step 4: Access Surgery and Follow-up – Assisting the patient

When surgery is scheduled you can assist the patient by:

• Helping them prepare for surgery and what to expect after surgery
• Reviewing their dialysis schedule and making adjustments in the schedule to avoid conflicts with the scheduled surgery
• Assist the patient in making transportation arrangement to go to and from their appointment

REMININDER: Step 4 “Going for Surgery” in the Companion Guide includes information to help the patient prepare for surgery and explains what to expect after the surgery. Working with patients prior to surgery will help allay their concerns and prepare them for the surgery experience and follow-up.
Step 5: Assess Fistula (AVF) Maturation; Graft (AVG) Healing and Readiness

The “Ready, Set, Go” checking process should begin the first day your patient returns to the clinic for dialysis following access surgery

• “Ready” – Is the access maturing or healing as it should?
• “Set” – Are we moving toward cannulation and catheter freedom?
• “Go” – Are the “Go” signs checked off for each step on the timeline?

The benefits allow for:

• A consistent and coordinated approach to check the new fistula for maturity or the new graft for healing
• Helps to identify access maturity and healing problems early so action can be taken
  – Most AVF that “fail to mature” can be fixed if referred for intervention
  – AVFs that “fail to heal” must be addressed promptly to find the cause and treat
Step 5: Who should do the “Ready, Set, Go” checks?

Members of the healthcare team who are regarded as vascular access experts. These individuals provide an advanced level of expertise. These individuals have the ability to:

- Perform a comprehensive access check
- Identify access problems and dysfunction
- Determine whether the patient needs referral for further evaluation
- Participate in establishing the post-intervention baseline for the access
- Work with the other members of the team to modify the access plan
Step 5: Using the “Ready, Set, Go” steps to catheter freedom toolkit

There are four components in the toolkit. Each has a separate tool for professionals and for patients that compliment each other

- Staff AVF Maturity Check
- Patient AVF Maturity Check
- Staff AVG Healing and Readiness Check
- Patient AVG Healing and Readiness Check

These tools outline what to check for during the weeks of maturity for AVFs and healing for AVGs as well as abnormal indicators that can be reports to your clinician expert.
Step 5: Using the “Ready, Set, Go” Look, Listen, and Feel Techniques

REMEMBER: Step 5: “Waiting for my access to mature or heal” in the Companion Guide has information to help the patient understand the maturity and/or healing process as well as information on using the Patient “Ready, Set, Go” tools.
Step 6: Cannulation

The technique and process for cannulating an AVF is different from the technique and process for cannulating an AVG:

- It takes four to six weeks for most AVFs to mature and 2-3 weeks for most AVGs
- The dialysis facility should have a policy and procedure for cannulating each type of access
- If there are complications, you may need to let the arm rest and use the catheter until orders are given to resume the cannulation process
- Once cannulation is going smoothly, schedule an appointment for catheter removal
Step 6: Cannulation – Tips for Success

Arm Preparation:

- Teach the patient about the importance of washing their access before treatment
- Most experts recommend a gentle scrubbing with antibacterial soap

Using a Tourniquet:

- A tourniquet must be used when cannulating an AVF
- With rare exception, a tourniquet is not used when cannulating an AVG

Needle flipping or repositioning:

- Can damage the access by scooping away part of the vessel lining
- Repositioning, propping or re-taping may help if the needle is stuck against the wall of the access
Step 6: Cannulation – Tips for Success

Avoid “one-site-itis”

- An access repeatedly cannulated in the same small area can lead to a loss of access integrity, aneurysms, pseudo-aneurysms and stenosis
- Rotating sites or using the rope latter technique is preferred

Self Cannulation

- Training should be offered to patients
- May help patients gain a feeling of control, overcome needle fear and increase access longevity
Step 6: Cannulation – Preparing Patient

It is important to describe the cannulation process and talk to patient about preparing to use their AVF or AVF.

Below are questions that may help you gauge how to help the patient transition

• Do you have concerns about pain when the needles are inserted?
• Do you worry about problems with the needles during treatment?
• Have you considered learning to insert your own needles?
• Are you aware of what to do if your access starts to bleed when you are not at the clinic?

REMINDER: Step 6: “Using my access” in the Companion Guide has helpful information and a list of questions patients may want to review with their healthcare team.
Step 7: Catheter Removal & Catheter Freedom

Make an appointment for the patient to have the catheter removed within one to two weeks once the AVF / AVG:

- Has been cannulated successfully with two needles for a prescribed number of treatments (based on your facility protocol)
- Delivers the full dialysis prescription
- Provides adequate dialysis and
- Shows no sign or indication of complications

Remind the patient to notify the dialysis team when the catheter has been removed.

Celebrate with your patient and healthcare team this milestone!

REMINDER: Step 7: “Getting My Catheter Taken Out” in the Companion Guide celebrates the removals of the Catheter
Step 8: One Minute Access Check

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

The hum or buzz should sound like a “whoosh” or some may sounds like a drum beat.

Thrill: a vibration or buzz in the full length of the access or Pulse: slight beating like a heartbeat. 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.

Notify an expert clinician if you identify anything abnormal.
Step 8: One Minute Access Check

Teach the patient to use the one minute access check method. Identifying problems early may allow for an intervention to save the access.

- Perform access check at each treatment or when patient reports a change
- Reinforce importance of daily access checks to the patient
- Listen to the patient

REMINDER: Step 8: “Taking Care of My Lifeline for a Lifetime” in the Companion Guide will support and reinforce the teaching and learning process for patients
Part : 3
Using the Vascular Access Resource Toolkit
What materials are in the vascular access resource toolkit for patients?


“Questions or Concerns about a Permanent Access” Booklet

“Hemodialysis Vascular Access” Flyer
Tool # 1: “Hemodialysis Vascular Access” Flyer

Use the Hemodialysis Vascular Access Flyer to share the advantages and disadvantages of each access type.

**FISTULA**
- **BEST CHOICE**
- **PLACEMENT OPTIONS**
  - Forearm
  - Upper arm
  - Thigh
- **ADVANTAGES**
  - Lasts many years
  - Less chance of infection
  - Higher blood flow rates
  - Fewer complications
- **DISADVANTAGES**
  - Takes the longest to mature (develop)
  - May fail to mature, due to other health issues

**GRAFT**
- **ALTERNATE CHOICE**
- **PLACEMENT OPTIONS**
  - Forearm
  - Upper Arm
  - Straight or Loop
- **ADVANTAGES**
  - Can be used in two weeks after placement
  - Can be used when a fistula does not work
  - Can be used for patients with special health issues
- **DISADVANTAGES**
  - Clotting
  - Infection
  - Swelling
  - Frequent interventions required
  - May affect blood flow to the hand (Steal Syndrome)

**CATHETER**
- **EMERGENCY OR TEMPORARY ONLY**
- **PLACEMENT OPTIONS**
  - Neck (jugular vein)
  - Groin (femoral vein)
  - Chest (subclavian vein) should be avoided
- **ADVANTAGES**
  - Can be used in an emergency (must have chest x-ray for placement prior to initial use)
  - Can be used while other access types are maturing
- **DISADVANTAGES**
  - Clotting
  - Infection
  - Lower blood flow rates
  - Vascular damage
  - Designed for short-term use only
Tool #1: Assess your patients needs

Ask open ended questions
• What do you know about planning for a vascular access?
• How much were you told about the different access types?
• What other information do you need?

Share information based on the patient’s needs:
• Patient: Wants to think about the advantages and disadvantages
  – You: Leave the Hemodialysis Vascular Access Flyer and ask them to think about their options
• Patient: Received information, but has medical questions
  – You: Connect the patient with the vascular access clinical expert in your facility
• Patient: Knows this information, but has concerns about a permanent access.
  – You: Share Conquering Access Concerns, Tool #2, in the Vascular Access Planning Toolkit which addresses frequently asked questions
Tool #2: “Questions or Concerns about a Permanent Access” Booklet

A tool to help your patient identify and work through concerns about permanent access placement.

Concerns about getting a permanent access might include:

- Uncertainty of surgery
- Worried about having needles each treatment
- Concerned about how an access will look
- Nervous about complications
Tool #2: What’s covered?

Addresses typical patients concerns about getting a permanent access and provides a list of common questions

• Patient Uncertainty about surgery or worried about complications
  – You: Help create questions that he or she can ask the surgeon that would help address their concerns

• Worried about having needles each treatment
  – You: Discuss some techniques that can make a difference when the needles are used such as relaxation and distraction techniques or taking control and being trained to put in their own needles

• Concerned about how an access will look
  – You: Encourage them to remind themselves that dialysis is life-saving. Some patients consider their access their “badge of honor” or “lifeline” others cover their access with loose wraps or flowing sleeves.
Tool #2: Support the patient’s needs

What if the patient is still having trouble overcoming concerns?
• Remain supportive even if the patient is not willing to consider a permanent access
• Remember it may take time for the patient to consider all the options and determine the best option for them
• Revisit the conversation at a later time

What if the patient is ready to start making a vascular access plan?
• Share Tool #3: Planning your Vascular Access Manual
Tool #3: “Planning for your Vascular Access” Manual

**Lifeline for a Lifetime:**

*Planning for Your Vascular Access*

Detailed information on creating a vascular access plan

Once your patient is ready, review the Planning for Your Vascular Access manual and assist them with creating an access plan with their healthcare team and following the steps to catheter freedom!
Part 4: Tips and Suggestions
Tips for being successful

Educate patients on Vascular Access Planning

• Share educational resources and tools with patients
• Encourage patients to be engaged and active in his or her care decisions
• Refer patients to a member of the healthcare team for more information

Communicate with Facility leadership regularly about your discussions with patients

• Share with others at your facility information on the vein preservation and one minute access checks
• Identify barriers in vascular access planning steps and assist the patient with overcoming these barriers

Share best practice models and lessons learned with team members
Tips for Success

• Know your role as a Patient Health Coach, and keep your conversations focused on topics related to your role.
• Avoid talking about confidential issues, and respect others’ rights to confidentiality.
• Keep private all information you know about a patient.
• Accept people for who they are, and do not try to change what they believe or choose.
• Keep an open mind to differences and avoid judgment of others.
• Always suggest that the patient talk with their healthcare team if they have medical questions.
Support the patient’s understanding of creating their own vascular access plan

**Patient:** Doesn’t have enough information
- **You:** Share and review vascular access hemodialysis flyer

**Patient:** Is asking for more clinical information
- **You:** Share and review the Lifeline for a Lifetime Vascular Access planning guide

**Patient:** Indicates that he or she needs more time to think it over.
- **You:** Provide materials and set time frame to revisit information and allow for questions. Refer the patient to other members of the healthcare team as needed
Following Up

Check in with the patient to see if he or she has questions or concerns about the information you reviewed.

- Discuss patients interest or concerns with their Nephrologist.
- Direct medical questions to the healthcare team.
- Provide additional resources.
- Follow-up every 15 – 30 – 45 – 60 days.
- Re-evaluate your approach on how to improve your follow-up system.
- BE POSITIVE!
Vascular Access Planning Education

• Engage patients in discussion to determine knowledge of vascular access options.
• Refer patient to talk with a vascular access expert or Healthcare Team Member
• Discuss patients interest or concerns with their Nephrologist.
• Have a patient peer mentor discuss with the patient their transition to a permanent access to present their perspective.
• Touch base with patient at regular intervals to support interest, or provide additional resources as needed.
• Provide patient testimonials to share successes with in-center staff members.
Final Thoughts...

- All new and established dialysis patients should have an access plan specific to their access status
- Removing catheter access reduces a patient's risk for infection
- Using the One Minute Access Check will help maintain a permanent access

A patient's vascular access is their Lifeline for a Lifetime!
Important Additional Resources

Below are some of the organizations that have additional resources that can help you and the patients learn more about creating a vascular access plan.

• Your ESRD Network – http://esrd.ipro.org/

• The ESRD National Coordinating Center - https://esrdncc.org/

Next Steps

• Complete the Vascular Access Planning Module Review Quiz
• Share your success with your facility management
• Take additional modules to improve your knowledge on other topics and grow your Patient Health Coach status.
  – Home Dialysis Options, Transplant as a Treatment Option, Incorporating Patients into QAPI, Patient Support Groups
  – Print educational resources from each module
  – Familiarize yourself with the resources
• Develop a plan to share your knowledge with patients.
  – Attend Vascular Access educational opportunities when they arise
  – Utilize the toolkit resources
  – Talk with a patient that has successfully transitioned from a catheter to a permanent access
Celebrate each success you have in talking with your patients, because with each interaction you are making a difference.

Thank you for your hard work and commitment to helping others!
You have completed training to coach on the topic of Vascular Access Planning!