

Module 5, Session 3: Access Care – AVFs and AVGs



Preparation Checklist

Materials Required for this Session:

- ☐ Facility Trainer Binder - Module 5, Session 3
- ☐ Facility-specific material: Policies and procedures (P&Ps) relevant to the session, including vascular access-related training and audits, and audits results
- ☐ Copy of facility's most recently completed *CDC Infection Control Assessment and Response (ICAR) tool: Domain X*
- ☐ *Facility Trainer Assessment Tracker* (provided in Session Appendix)
- ☐ *Facility Trainer Attendance Log* (provided in Session Appendix)
- ☐ **Participant Notebooks** with Module 5, Session 3 handouts (provided in Session Appendix):
 - *Vascular Access Care Pre-Assessment*
 - *Vascular Access Care Post-Session Assessment*
 - *Module 5, Session 3: Participant Resources*
 - *Session Follow-Up Task List*
- ☐ Vascular Access Supplies – simulation mannequin arm (or “pretend arm” from materials such as paper towel tube, empty soda bottle), catheter device (secured to table or surface to simulate chest), hand hygiene station (ABHR or soap /water hand-washing station), gloves, dialysis tubing, antiseptic scrub, gauze/bandages, etc.
- ☐ Flip chart/white board and markers
- ☐ Blank name tags/tents and markers
- ☐ Extra pens

Resources used for this session:

- CDC Dialysis Safety: Core Interventions - *CDC Approach to BSI Prevention in Dialysis Facilities pdf*
 - <http://www.cdc.gov/dialysis/prevention-tools/core-interventions.html>
- CDC Dialysis Safety: Audit Tools and Checklists
 - <http://www.cdc.gov/dialysis/prevention-tools/audit-tools.html>
 - AV Fistula & Graft Cannulation and Decannulation Audit Tool
 - Arteriovenous Fistula & Graft Cannulation Checklist
 - Arteriovenous Fistula & Graft Decannulation Checklist
- CDC Dialysis Safety: Clinician Education - Areas for patient education
 - <http://www.cdc.gov/dialysis/prevention-tools/Key-areas-patient-education.html>
- AHRQ Safety Program for End-Stage Renal Disease Facilities-Toolkit: Clinical Care of the Hemodialysis Patient Presentation
 - <http://www.ahrq.gov/professionals/quality-patient-safety/patient-safety-resources/resources/esrd/clinicalcare.html>

Preparing for the Session:

Before the Facility Trainer begins this session, the following tasks should be completed:

- Notify participants about the session, at least two weeks prior, include the location, date, and time of the session.
- Assemble Module 5, Session 3 handouts for participants to add to their **Participant Notebook**.
- Assemble P&Ps needed for review.
- Gather demonstration equipment including: simulation mannequin arm (or “pretend arm” from materials such as paper towel tube, empty soda bottle), catheter device (secured to table or surface to simulate chest), hand hygiene station (ABHR or soap /water hand-washing station), gloves, dialysis tubing, antiseptic scrub, gauze/bandages, etc.
- Set up the classroom with handouts and blank name tags at each participant’s place.
- Have the Facility Trainer’s Binder ready before beginning the session.

Tasks to be done as participants arrive:

- Have participants sign in using the *Facility Trainer Attendance Log*.
- Give participants Module 5, Session 3 handouts to be inserted into their **Participant Notebook**.
- Prompt participants to complete the *Catheter Care Pre-Session Assessment*.

Tasks to be done after completion of the session:

- Write notes about the session on the “Notes and Homework” page. Include: which policies need to be developed or updated and any action plans that were developed and require follow-up.
- Complete the *Facility Trainer Assessment Tracker* with Pre- and Post-Session Assessment scores.
- Address areas of concerns, successes, questions, need for follow-up, staff members to check in with, etc.

Facility Trainer Brief

Learning Objectives

At the close of Module 5, Session 3 participants will be able to:

- Describe the CDC Core Interventions for infection prevention related to vascular access care.
- Understand the facility’s P&P related to vascular access care - training and auditing.
- Understand the facility-specific audit results and implications.
- Demonstrate proper vascular access care including cannulation and decannulation.

Module 5, Session 2: Overview

This session focuses on competency in vascular access care. The staff will review the vascular access-specific areas of Domain X from their facility-specific ICAR assessment. The trainer will lead a discussion

on best practices, aseptic technique, and site care related to CDC recommendations and Core Interventions. The participants will discuss the importance of staff education and site cleansing prior to dialysis treatment.

The session will include a trainer-led discussion on the vascular access-related auditing process, as well as results of recent vascular access-related audits. If necessary, participants will work together to implement a plan to ensure timely auditing and improved performance based on facility audit results. This session will also include a simulation of appropriate vascular access care including aseptic technique, cannulation, and decannulation. Participants will demonstrate competency through return demonstrations.

Module 5, Session 3 is divided into five parts:

Part 1: Introduction (5 minutes)

Participants take the *Pre-Session Assessment* to determine their current knowledge. During this section the Facility Trainer introduces the session and identifies the objectives of the session.

Part 2: Vascular Access Basics (5 minutes)

The Facility Trainer provides an overview of vascular access. The discussion includes the recommendations and importance of patient education.

Part 3: Demonstration and Simulation (5-30 minutes)**

The Facility Trainer reviews and demonstrates proper vascular access cannulation and decannulation. The participants engage in simulations of both skills. The Facility Trainer verifies staff competency through return demonstrations.

Part 4: Audits and Facility Policy (10 minutes)

The Facility Trainer and participants review the facility's most recent ICAR Domain X and recent vascular access-related audits. The Facility Trainer summarizes the CDC recommendations for routine auditing, and participants engage in an open discussion to identify gaps between facility practices and CDC recommendations for audits. Together, participants and the Facility Trainer work on an action plan to mitigate any gaps.

Part 5: Wrap-Up and To-Do List (5 minutes)

The Facility Trainer summarizes the session, reinforces the key messages, emphasizes any action plans that were developed, and opens the floor for questions and discussion. Participants will complete a *Post-Session Assessment*.

***Time varies for this section depending on if the Facility trainer chooses to have participants return demonstrate during the session, or one by one after completion of the classroom session.*

Key messages




These are the key messages for this session. They should be reinforced from time to time throughout this program.

- Patient education and advocacy can improve infection control.
- Use of proper techniques during cannulation and decannulation can decrease BSI rates.
- Evaluation and training are essential to ensure staff members understand and implement proper vascular access techniques.
- Regular audits can help facilities identify gaps in practice and serve as a guide in determining needs for future training.

Classroom Presentation

Part 1: Introduction

Estimated Time: 10 Minutes

Welcome!	Notes
<p>As participants arrive, ask them to complete a Pre-Session Assessment and sign into the <i>Facility Trainer Attendance Log</i>.</p> <p>Welcome participants to the training session.</p> <p> Present: Welcome to Module 5, Session 3: <i>Access Care – AVF and AVGs</i>. During this session, we will discuss proper techniques for vascular access care, review the CDC recommendations for best practices and regular auditing, and discuss the facility's P&Ps related to CVCs. We will also engage in a simulation to demonstrate proper cannulation and decannulation.</p> <p> Ask participants to introduce themselves by stating their name, position within the facility, and goals for attending. Encourage participation of all attendees.</p>	
Objectives	Notes
<p> Present: Before we begin, I will highlight the key messages we will address throughout the session. Please keep these messages in mind during the session and as you implement what you have learned in your practice:</p> <ul style="list-style-type: none">• Patient education and advocacy can improve infection control.• Proper technique during use of vascular access can decrease BSI rates.• Evaluation and training are essential to ensure staff members understand and implement proper vascular access techniques.• Regular audits can help facilities identify gaps in practice and serve as a guide in determining needs for future training.	



Ask: Before we move on does anyone have any questions regarding the goals of this session?



Open Responses

Part 2: Vascular Access Basics

Estimated Time: 5 Minutes

AVFs and AVGs

Notes



Present: While CVC pose the highest risk for infection for patients, arteriovenous fistulas (AVFs) are considered the gold standard. An arteriovenous graft (AVG) is the second most favorable option, if the patient is unable to have an AVF. Even though vascular access is considered “safer” for patients in terms of infection control, these patients are still at high risk, and interventions can be implemented to decrease their risk for HAIs and BSIs.



Ask: What are some ways the facility can reduce the risk of infection for these patients?



Open Responses

Patient Education



Refer participants to CDC Dialysis Safety: Clinician Education - Areas for patient education
<http://www.cdc.gov/dialysis/prevention-tools/Key-areas-patient-education.html>



Present: Later in the session we will review detailed information regarding best practices for staff members, but it is important that patients are educated and involved with their care. Patient education about their vascular access is an important aspect of our infection control program.



Ask: What are some key areas of patient education we provide to patients? What can we improve?



Open Responses



Present: Per CDC recommendations, key areas of education for patients with vascular access include:

- Proper hand hygiene (when and how).
- Washing the access site prior to dialysis treatment.
- Access care at home – such as avoiding scratching or picking at the site or scabbing on the site.
- Signs and symptoms of infection – what to report.
- Responding to access problems when they occur outside of the dialysis facility.
- Basic infection control practices during cannulation and decannulation.



Ask: Does the facility regularly provide education on these matters to the patients?



Write on white board/flip chart ideas and action plans for decreasing barriers to providing education to patients. Have participants write on their *Session Follow-Up Task List* any tasks they need to accomplish including involvement in patient education and advocacy.







Notes to the Facility Trainer

If an action plan is needed, include personnel, specific tasks, and deadlines to implement action plan and improve patient education.

Cannulation	Notes
<div data-bbox="203 485 316 598" data-label="Image"> </div> <div data-bbox="505 329 849 359" data-label="Section-Header"> <p>Notes to the Facility Trainer</p> </div> <div data-bbox="342 369 1008 541" data-label="Text"> <p>The time variation is due to simulation. The Facility Trainer performs a demonstration of skills and each participant must perform a return demonstration/simulation of the skills in order to verify competency.</p> </div> <div data-bbox="342 548 1008 751" data-label="Text"> <p>If the Facility Trainer chooses, the return demonstration can be held until after completion of the presentation, when the Facility Trainer can dismiss staff. Participants can be taken aside one by one to demonstrate competency of the skill. However, this must be completed immediately after the session.</p> </div>	<div data-bbox="190 789 254 861" data-label="Image"> </div> <div data-bbox="185 833 938 898" data-label="Text"> <p>Refer participants to CDC Dialysis Safety: Audit Tools and Checklists</p> </div> <div data-bbox="185 905 941 936" data-label="Text"> <p>http://www.cdc.gov/dialysis/prevention-tools/audit-tools.html</p> </div> <div data-bbox="251 940 769 972" data-label="List-Group"> <ul style="list-style-type: none"> • <i>Arteriovenous fistula/graft cannulation</i> </div> <div data-bbox="190 1014 254 1077" data-label="Image"> </div> <div data-bbox="181 1054 1019 1190" data-label="Text"> <p>Present: Cannulation of a vascular access site (AVF or AVG) involves detailed steps that must be performed in proper order, using aseptic technique to ensure infection control. The steps for proper hemodialysis vascular access cannulation include:</p> </div> <div data-bbox="251 1194 954 1476" data-label="List-Group"> <ol style="list-style-type: none"> 1. Clean site with soap and water, 2. Perform hand hygiene, 3. Put on new, clean gloves, 4. Apply skin antiseptic to site, 5. Allow hub antiseptic to dry (it is not okay to “fan” dry), 6. Insert needles aseptically, 7. Remove gloves, and 8. Perform hand hygiene. </div> <div data-bbox="181 1514 1019 1652" data-label="Text"> <p>If at any point during the above process, staff soils their gloves by touching the patient or other items (such as spray lidocaine), their gloves must be changed and hand hygiene must be performed before continuing the process.</p> </div> <div data-bbox="181 1686 1029 1791" data-label="Text"> <p><i>**Demonstrate proper cannulation technique with simulation vascular access set-up, and guide staff members through the process step by step</i></p> </div> <div data-bbox="190 1822 245 1883" data-label="Image"> </div> <div data-bbox="245 1854 956 1887" data-label="Text"> <p>Ask participants to return-demonstrate proper cannulation</p> </div>

technique. *Have participants take turns coming up to the simulation station. Observe their technique, make recommendations, and give reminders of the previously mentioned recommendations.*





	<p>Notes to the Facility Trainer</p> <p>Assist participants when needed and reinforce proper technique. Make note of any participants who will need follow-up and reinforcement.</p>
---	---







Decannulation	Notes
<p> Refer participants to CDC Dialysis Safety: Audits and Checklists http://www.cdc.gov/dialysis/prevention-tools/audit-tools.html</p> <ul style="list-style-type: none"> • Arteriovenous fistula/graft decannulation <p> Present: Decannulation of a vascular access site (AVF or AVG) involves detailed steps that must be performed in proper order, using aseptic technique to ensure infection control. The steps to proper hemodialysis vascular access cannulation include:</p> <ol style="list-style-type: none"> 1. Perform hand hygiene, 2. Put on new, clean gloves, 3. Disconnect from blood lines aseptically, 4. Remove needles aseptically and activate needle retraction device simultaneously, 5. Clean gloved hand to compress site (patient or staff can apply compression), 6. Apply clean gauze or bandage to site, 7. Remove gloves, and 8. Perform hand hygiene. <p>If at any point during the above process, staff soils their gloves by touching the patient or other items, their gloves must be changed and hand hygiene must be performed before continuing the process.</p> <p><i>**Demonstrate proper decannulation technique with simulation vascular access set-up, and guide staff members through the process step by step.</i></p> <p> Ask participants to return-demonstrate proper decannulation technique. <i>Have participants take turns coming up to the simulation station. Observe their technique, make recommendations, and give reminders of the previously mentioned recommendations.</i></p>	

	Notes to the Facility Trainer Assist participants when needed and reinforce proper technique. Make note of any participants who will need follow-up and reinforcement.	
--	--	--

Part 4: Audits and Facility Policy


Estimated Time: 10 Minutes

CDC Recommendations	Notes		
 <p>Refer CDC Dialysis Safety: Core Interventions http://www.cdc.gov/dialysis/prevention-tools/core-interventions.html</p> <ul style="list-style-type: none"> • <i>CDC Approach to BSI Prevention in Dialysis Facilities pdf</i> <p>CDC Dialysis Safety: Audits and Checklists http://www.cdc.gov/dialysis/prevention-tools/audit-tools.html</p> <ul style="list-style-type: none"> • AV Fistula & Graft Cannulation and Decannulation Audit Tool  <p>Present: The CDC provides a comprehensive audit tool for vascular access cannulation and decannulation. These audits should be performed quarterly and reflect the “regular” facility conditions. The facility should maintain records of all audits and audit results. The results should be shared regularly with the staff in order to provide feedback and opportunities for improvement.</p>			
Facility Practice			
 <p>Refer participants to the facilities P&Ps related to auditing, facility ICAR Domain X, and any recent audits.</p>  <p>Present: In order to improve our infection control we need to review the practices already in place. This will allow us to identify gaps in our audits as compared with CDC recommendations as well as any gaps in practice.</p> <table border="1" data-bbox="191 1675 1015 1881"> <tr> <td data-bbox="203 1724 332 1850"></td><td data-bbox="349 1675 1015 1881"> Notes to the Facility Trainer Open the floor for a live Q&A with open responses to evaluate what is occurring at the facility and/or what needs to occur. Lead an open discussion using the questions below. The following section highlights the questions to be discussed and the text in <i>italics</i> serve </td></tr> </table>		Notes to the Facility Trainer Open the floor for a live Q&A with open responses to evaluate what is occurring at the facility and/or what needs to occur. Lead an open discussion using the questions below. The following section highlights the questions to be discussed and the text in <i>italics</i> serve	
	Notes to the Facility Trainer Open the floor for a live Q&A with open responses to evaluate what is occurring at the facility and/or what needs to occur. Lead an open discussion using the questions below. The following section highlights the questions to be discussed and the text in <i>italics</i> serve		

	as directives and suggestions to be addressed to mitigate gaps.	
	Write main points, audit results, any gaps identified on white board or flip chart throughout the discussion.	
	Ask: Are we performing quarterly cannulation and decannulation audits? Are we using the CDC tool? Do we have a record of the data collected? Who performs these audits? Who is reviewing the results? <i>If gaps are identified develop a plan to implement monthly audits, utilize the CDC, and create a system to track results obtained from data.</i>	
	Open Responses	
	Ask: How are we performing on these audits? What did we do well? Where is there room for improvement? What are some barriers preventing optimal scores on the audits? <i>Discuss where the staff excelled and where gaps were identified. Provide data from the audits, and help participants to notice trends – improvements or set-backs.</i>	
	Open Responses	
	Notes to the Facility Trainer If action is required after the previous discussion, refer to Module 2, Session 2 and consider developing an action plan to update or create new P&P).	

Part 5: Wrap up and To-Do List

Estimated Time: 5 Minutes

To-Do	Notes
 Present: Hemodialysis patients are at an increased risk for infection. Facility staff should work together with patients to decrease rates of infection by improving our techniques, following evidence based practices, and continuing to education and engage the patients.	



Ask: Does anyone have any questions regarding the session content?



Open Responses

Closing

Notes



Present and Summarize key points:

- Patient education and advocacy can improve infection control.
- Proper technique during use of vascular access can decrease BSI rates.
- Evaluation and training is essential to ensure that staff members understand proper vascular access techniques and put them into practice.
- Regular audits can help staff identify gaps in practice and determine needs for future training.



Address questions or concerns.



Present: Thank you all for coming and for your continuing commitment to the facility and to our infection control program. Please complete the *Post-Session Assessment* before leaving.



Refer participants to *Vascular Access Care – AVF & AVGs Post-Session Assessment* – have each participant complete and hand into Facility Trainer.

Dismiss the group.

Session Appendix

- *Facility Trainer Attendance Log*
- *Facility Trainer Assessment Tracker*
- *Access Care – AVFs and AVGs Pre-Session Assessment*
- *Access Care – AVFs and AVGs Post-Session Assessment*
- *Module 5, Session 3: Participant Resources*
- *Session Follow-Up Task List*

Infection Control in Hemodialysis

Training Curriculum: Module 5, Session 3

Access Care – AVFs and AVGs Pre-Assessment

Date:	
Participant Name:	
Facility:	

1. Arteriovenous grafts (AVGs) are considered the gold standard of hemodialysis patients.
 - a. True
 - b. False
2. Prior to accessing an AVF or AVG for hemodialysis, what is the first thing that should be performed?
 - a. Apply goggles or face mask
 - b. Use skin antiseptic on site to disinfect
 - c. Put on gloves
 - d. Clean the site with soap and water
3. The CDC recommends quarterly audits related to vascular access care. Which of the following vascular access-related skills require auditing?
 - a. Cannulation
 - b. Patient education
 - c. Fistula site care
 - d. Decannulation
4. Patient education on vascular access care is important to infection control and quality of care. The following statements are true regarding patients education: (select all that apply)
 - a. Patients should wait until their next dialysis treatment to speak to someone if they notice signs or symptoms of infection
 - b. If the site “itches” it is okay to scratch as long as they do not scratch or pick off scabs
 - c. Patients should be encouraged to perform hand hygiene and encourage staff members to perform hand hygiene prior to accessing the site
 - d. Understanding the signs and symptoms of an infection as well as basic infection control principles are important aspects of vascular access care
5. It is acceptable to “fan” dry the access site after antiseptic has been applied, as long as you are using sterile gauze.
 - a. True
 - b. False

Infection Control in Hemodialysis

Training Curriculum: Module 5, Session 3

Access Care – AVFs and AVGs Post-Assessment

Date:	
Participant Name:	
Facility:	

1. Arteriovenous grafts (AVGs) are considered the gold standard of hemodialysis patients.
 - a. True
 - b. False
2. Prior to accessing an AVF or AVG for hemodialysis, what is the first thing that should be performed?
 - a. Apply goggles or face mask
 - b. Use skin antiseptic on site to disinfect
 - c. Put on gloves
 - d. Clean the site with soap and water
3. The CDC recommends quarterly audits related to vascular access care. Which of the following vascular access-related skills require auditing?
 - a. Cannulation
 - b. Patient education
 - c. Fistula site care
 - d. Decannulation
4. Patient education on vascular access care is important to infection control and quality of care. The following statements are true regarding patients education: (select all that apply)
 - a. Patients should wait until their next dialysis treatment to speak to someone if they notice signs or symptoms of infection
 - b. If the site “itches” it is okay to scratch as long as they do not scratch or pick off scabs
 - c. Patients should be encouraged to perform hand hygiene and encourage staff members to perform hand hygiene prior to accessing the site
 - d. Understanding the signs and symptoms of an infection as well as basic infection control principles are important aspects of vascular access care
5. It is acceptable to “fan” dry the access site after antiseptic has been applied, as long as you are using sterile gauze.
 - a. True
 - b. False

Infection Control in Hemodialysis

Training Curriculum: Module 5, Session 3

Participant Resources

Date:	
Participant Name:	
Facility:	

- CDC Dialysis Safety: Core Interventions – *CDC Approach to BSI Prevention in Dialysis Facilities pdf*
 - <http://www.cdc.gov/dialysis/prevention-tools/core-interventions.html#sites>
- CDC Dialysis Safety: Audit Tools and Checklists
 - <http://www.cdc.gov/dialysis/prevention-tools/audit-tools.html>
 - *AV Fistula & Graft Cannulation and Decannulation Audit Tool*
 - *Arteriovenous Fistula & Graft Cannulation Checklist*
 - *Arteriovenous Fistula & Graft Decannulation Checklist*
- AHRQ Safety Program for End-Stage Renal Disease Facilities-Toolkit: *Clinical Care of the Hemodialysis Patient Presentation*
 - <http://www.ahrq.gov/professionals/quality-patient-safety/patient-safety-resources/resources/esrd/clinicalcare.html>
- CDC Dialysis Safety: Clinician Education - Areas for Patient Education
 - <http://www.cdc.gov/dialysis/clinician/index.html>

Infection Control in Hemodialysis

Training Curriculum: Module 5, Session 3

Session Follow- Up Task List

Date:	
Participant Name:	
Facility:	

Personal To-Do Items:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Facility-Wide To-Do Items:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Additional Comments:
