

## Nurse Manager VA Barriers Assessment Tool

1. These statements describe VA processes used in NW #14 AVF Benchmark Facilities
2. Read each statement and determine if process/practice is used in YOUR facility
3. Put a check mark (✓) in the **YES** or **NO** column next to **each statement**:
  - ✓ **YES if process/practice is routinely & consistently used in your facility by most staff**
  - ✓ **NO if process/practice is not used or is not used consistently at your facility:**
4. Add # of **YES** and **NO** answers for each section & enter totals in boxes → → →
5. The section with the highest score in the **NO** box is your facility's Primary Internal Barrier

### Medical Director/Nephrologist Leadership

**YES**   **NO**

### QAPI Program/Facility Processes

**YES**   **NO**

### AVF Maturation & Maintenance

**YES**   **NO**

<b>Medical Director and Facility Nephrologist Leadership in VA Outcomes</b>		<b>YES (✓)</b>	<b>NO (✓)</b>
<b>Medical Director</b>	• Functions as Vascular Access Team Leader (or delegates role to a “Fistula First Champion” Nephrologist)		
	• Is actively involved in reviewing Quality Assessment and Performance Improvement (VA - QAPI)		
	• Facilitates collection, review and analysis of surgeon-specific VA data among nephrologists and QAPI team		
	• Communicates/reinforces with facility nephrologists the importance of using vessel mapping to <b>EVALUATE:</b> <ul style="list-style-type: none"> <li>▪ If patient referred for permanent access is a candidate for an AVF (1<sup>st</sup> choice) or an AVG (2<sup>nd</sup> choice)</li> <li>▪ If catheter-only patients are candidates for permanent access (AVF if eligible; AVG if not AVF candidate)</li> </ul>		
	• Tracks Nephrologist-Specific VA Rates and Outcomes and reviews this data with each Nephrologist		
	• Educates hospital CFO, surgeons and anesthesiologists about Texas Kidney Health (TKH) reimbursement for VA placement in TKH-eligible patients, including: <ul style="list-style-type: none"> <li>▪ Retrospective VA placement surgery performed within 180 days of 1st day of dialysis</li> <li>▪ VA placement surgery performed during first 90 days following initiation of dialysis</li> </ul>		
	• Collaborates with community hospital(s), Urgent Care clinics, EMS agencies, physician offices and independent labs to institute a vein preservation program for local CKD patients		
	• Require mandatory vessel mapping for all patients referred for new VA placement and refer patients to VA surgeons with expertise in performing/interpreting ultrasound vessel mapping to facilitate selection of optimal vessels, access location, AVF procedure and identify possible need for more complex AVF construction (2-3 step transposition procedure and/or BAM - balloon assisted maturation)		

		<b>YES</b> (✓)	<b>NO</b> (✓)
<b>Facility Nephrologist</b>	<ul style="list-style-type: none"> <li>Emphasize to their patients the risks of using an HD catheter</li> </ul>		
	<ul style="list-style-type: none"> <li>Emphasize to their patents the benefits of using a permanent VA (AVF – 1<sup>st</sup> choice &amp; AVG 2<sup>nd</sup> choice)</li> </ul>		
	<ul style="list-style-type: none"> <li>Refer AVF-eligible patients needing a new access for “AVF Only”</li> </ul>		
	<ul style="list-style-type: none"> <li>Refer patients to VA surgeons with a demonstrated ability to create AVFs that require minimal post-surgical radiologic and/or or surgical intervention(s) to attain optimal maturation and functionality</li> </ul>		
	<ul style="list-style-type: none"> <li>Performs monthly “Sleeves Up” procedure during HD treatment on all AVG patients to identify viable outflow vein above AVG that could be converted to a secondary AVF if AVG graft becomes dysfunctional</li> </ul>		
	<ul style="list-style-type: none"> <li>Refer patients with failing AVG to surgeons with experience converting AVGs to functioning secondary AVFs</li> </ul>		
	<ul style="list-style-type: none"> <li>Refer “catheter only” patients being evaluated for kidney transplant for vessel mapping and permanent access placement as soon as possible to decrease catheter exposure time</li> </ul>		
	<ul style="list-style-type: none"> <li>Utilizes physical assessment and vessel mapping data to determine potential for permanent access placement in catheter-only patients that have previously been identified as end stage access</li> </ul>		
	<ul style="list-style-type: none"> <li>Collaborate with interventional radiologists/interventional nephrologists and surgeons to determine criteria for allowable degree of intervention on current dysfunctional before new access is considering</li> </ul>		
	<ul style="list-style-type: none"> <li>Communicate preferred VA type and location to VA surgeon</li> </ul>		
	<ul style="list-style-type: none"> <li>Refer “urgent start” catheter-only patients to VA surgeon for vessel mapping, permanent access evaluation and if possible, permanent access placement prior to discharge from hospital</li> </ul>		
	<ul style="list-style-type: none"> <li>Refer PD patients for evaluation/placement of back-up AVF</li> </ul>		
	<ul style="list-style-type: none"> <li>Encourage PD as a viable option for:               <ul style="list-style-type: none"> <li>• Catheter-only patients that refuse permanent VA</li> <li>• Catheter-only patients with end-stage access failure</li> <li>• “Urgent start:” hospitalized ESRD patients</li> <li>• New catheter-only HD patients</li> </ul> </li> </ul>		
	<ul style="list-style-type: none"> <li>Assess new AVF maturation no later than 4 weeks post-op and refer patients with non-maturing or poorly maturing AVFs to surgeon or radiologist to evaluate need for surgical/interventional procedures to correct problems preventing AVF maturation</li> </ul>		

<b>Quality Assessment and Performance Improvement (QAPI) Program and Facility Processes Support Improved VA Outcomes</b>		<b>YES</b> (✓)	<b>NO</b> (✓)
	<ul style="list-style-type: none"> <li>▪ Facility uses Quality Assessment and Performance Improvement (QAPI) VA data to assess effectiveness of VA processes and protocols</li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility has assigned vascular access coordinator or manager with sufficient time allotted to position to assist facility in achieving VA goals</li> </ul>		
	<ul style="list-style-type: none"> <li>▪ QAPI Program monitors, tracks and trends facility VA placement and utilization data including:               <ul style="list-style-type: none"> <li>▪ Number and percent of patients using AVG, catheter and AVF as primary access</li> <li>▪ Facility’s Stenosis Monitoring Program outcomes and interventions based on monitoring</li> <li>▪ Nephrologist specific VA placement types as a reflection of surgical referral patterns</li> </ul> </li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility has standardized process/protocol for stenosis monitoring and mechanism for auditing frequency and accuracy of stenosis monitoring</li> </ul>		
	<ul style="list-style-type: none"> <li>▪ QAPI Program monitors, tracks and trends facility VA complication rates including:               <ul style="list-style-type: none"> <li>▪ AVG Intervention Rate</li> <li>▪ AVF Thrombosis Rate</li> </ul> </li> </ul>		
	<ul style="list-style-type: none"> <li>▪ QAPI Program tracks and trends surgeon-specific VA outcomes, including:               <ul style="list-style-type: none"> <li>▪ VA placements by access type</li> <li>▪ VA complications by access type</li> <li>▪ AVF Maturation Rate – Primary and Secondary</li> <li>▪ Number and type of nterventions required for non-maturing AVF Number and type of interventions for primary AVF failure</li> <li>▪ Number of days post AVF placement for initial cannulation of new AVFs</li> </ul> </li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility VA team develops proactive VA back-up plan with every patient that includes vessel mapping to identify patient’s future access options and facilitates timely transition to new access without use of CVD whenever possible</li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility has protocol/’process for assessing new AVF maturity that includes:               <ul style="list-style-type: none"> <li>▪ Assessment of AVF maturation at every treatment</li> <li>▪ Using indelible marker to “mark” margins of new AVF following surgery to allow objective assessment of vein dilatation</li> <li>▪ Criteria for symptoms of non-maturing access that need to be documented and reported</li> <li>▪ Nephrologist and nurse assess new AVF 4 weeks post-op to assess maturation</li> <li>▪ If patient requires intervention at 4 weeks, AVF is assessed 2 weeks post-intervention for evidence that intervention has facilitated access maturation</li> <li>▪ Routine staff inservices on how to assess AVF maturation</li> </ul> </li> </ul>		

	<ul style="list-style-type: none"> <li>▪ Facility has protocol/’process for ensuring patient has follow-up surgeon appointment 4 weeks post AVF placement for assessment of AVF maturity. <ul style="list-style-type: none"> <li>▪ If patient requires intervention at 4 weeks, AVF is assessed 2 weeks post-intervention for evidence that intervention has facilitated access maturation</li> </ul> </li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility has protocols/processes for cannulation of new AVF that include: <ul style="list-style-type: none"> <li>▪ Modification in needle gauge and blood flow for new AVF, with guidelines for increasing needle size and blood flow</li> <li>▪ Holding needle sites post-treatment one at a time to ensure both needle exit sites are covered</li> <li>▪ Management of infiltrations, multiple needle sticks, etc. to prevent loss/thrombosis of new AVF</li> <li>▪ Treatment of infiltration procedure that includes written instructions for patients to take home to assist patient in caring for infiltrated AVF properly at home</li> </ul> </li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility has protocols/processes for cannulation of new AVF that include mandatory use of tourniquet or hand compression to dilate fistula for cannulation</li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility has protocols/processes for cannulation of new AVF that include using both catheter and new AVF for several treatments, with catheter connected to venous side (return) and one needle in AVF connected to arterial tubing (pull)</li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility protocol/process for cannulating both new and mature AVFs prohibits the use of clamps to apply compression to needle sites post dialysis</li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Protocol for use of pre-pump arterial pressure chamber dialysis tubing to facilitate arterial pressure monitoring of new AVF that includes: <ul style="list-style-type: none"> <li>▪ Emphasis on keeping pressure monitoring line free of saline or blood</li> <li>▪ Emphasis on keeping external transducers dry and free of saline or blood</li> <li>▪ Staff education on the danger of clamping/occluding pressure monitoring lines to avoid frequent machine alarms</li> <li>▪ Staff education on the danger of “pegging” machine alarm settings to avoid machine alarms</li> </ul> </li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility has protocols/processes for cannulation of mature AVF that include: <ul style="list-style-type: none"> <li>▪ Mandatory use of tourniquet or hand compression to dilate fistula for cannulation</li> <li>▪ Optimal angle of cannulation</li> <li>▪ Avoiding use of tourniquet between needles during treatment to increase arterial flow</li> <li>▪ Rotating sites OR use of Buttonhole cannulation</li> <li>▪ Avoiding cannulation of aneurysms or stenotic areas of AVF</li> <li>▪ Distance that needs to be maintained between lumen of arterial and venous needles to prevent recirculation</li> <li>▪ Matching needle gauge to blood pump speed</li> <li>▪ Holding needle sites post-treatment one at a time to ensure both needle exit sites are covered</li> </ul> </li> </ul>		

	<ul style="list-style-type: none"> <li>▪ Management of infiltrations, multiple needle sticks, etc. to prevent loss/thrombosis of AVF</li> <li>▪ Treatment of infiltration procedure that includes written instructions for patients to take home to assist patient in caring for infiltrated AVF properly at home</li> </ul>		
	<ul style="list-style-type: none"> <li>▪ If facility does not do Buttonhole cannulation, facility has protocols/processes for how to safely cannulate a buttonhole access with sharp needles to avoid damaging Buttonhole tracts and causing infection in tract</li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility has protocol/process for educating patients about care of new VA: <ul style="list-style-type: none"> <li>▪ Written instructions on how to care for new VA (stitches, swelling, etc.)</li> <li>▪ Routine monitoring of VA function on a daily basis</li> <li>▪ Keeping access extremity clean</li> </ul> </li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility has protocol/process for educating patients about care and at-home monitoring of VA that includes: <ul style="list-style-type: none"> <li>▪ Written instructions on how to care for VA</li> <li>▪ How to protect VA from sharp objects</li> <li>▪ Avoiding carrying heavy objects with access arm</li> <li>▪ Avoiding putting sustained pressure on access arm (i.e., while sleeping)</li> <li>▪ Symptoms to watch for that should be communicated to facility</li> <li>▪ Routine monitoring of VA function on a daily basis (presence, strength and pitch of bruit)</li> <li>▪ Keeping access extremity clean</li> </ul> </li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility has protocol/process for educating patients about care of VA at facility/during dialysis that includes: <ul style="list-style-type: none"> <li>▪ Washing VA extremity with soap and water at the facility before every dialysis treatment</li> <li>▪ Keeping access extremity uncovered</li> </ul> </li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility has protocol/process for assessing patients with AVG for upper arm outflow vein suitability for conversion to secondary AVF if patient’s AVG becomes dysfunctional that includes documentation of patient-specific assessment on Sleeves Up chart form</li> </ul>		
	<ul style="list-style-type: none"> <li>▪ QAPI Program includes monthly monitoring of aggregate AVG outcome data: <ul style="list-style-type: none"> <li>▪ Number of AVG patients receiving “Sleeves Up” assessment</li> <li>▪ Number of AVG patients with “suitable” upper arm outflow vein</li> <li>▪ Number of AVG patients with less than suitable upper arm outflow vein at current observation</li> <li>▪ Number of AVG patients requiring an AVG intervention</li> <li>▪ Number of AVG patients requiring an AVG intervention that received vessel mapping</li> <li>▪ Number of patients that had a dysfunctional AVG converted to a secondary AVF</li> </ul> </li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility has protocols/process that support self-cannulation, including: <ul style="list-style-type: none"> <li>▪ Use of self-cannulation procedure</li> <li>▪ Collaborating with Home HD nurse (if feasible) to instruct staff on how to teach self-cannulation</li> <li>▪ Scheduling patient on shift with adequate time for cannulation</li> </ul> </li> </ul>		

<b>Knowledge and Skills That Support Optimal AVF Placement, Maturation and Maintenance</b>		<b>YES</b> (✓)	<b>NO</b> (✓)
	<ul style="list-style-type: none"> <li>▪ Vascular access coordinator or manager mentors facility staff on VA best demonstrated practices</li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility staff perform routine stenosis monitoring</li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility staff understand purpose of routine stenosis monitoring and are knowledgeable of mechanisms that cause abnormal findings</li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility staff monitor AVG for physical signs and symptoms indicating developing AVG dysfunction</li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility staff are educated on facility’s QAPI Program, including type of data tracked, rationale for why data is tracked and correlation between data tracking and trending and improved VA outcomes</li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Direct care staff assist in developing proactive VA back-up plan with every patient that includes vessel mapping to identify patient’s future access options and facilitates timely transition to new access without use of CVD whenever possible</li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility staff are educated on rationale for and methods for performing new AVF maturation assessment that includes:               <ul style="list-style-type: none"> <li>▪ Assessing AVF maturation at every treatment</li> <li>▪ Using indelible marker to “mark” margins of new AVF following surgery to allow objective assessment of vein dilatation</li> <li>▪ What symptoms of non-maturing access need to be documented and reported</li> <li>▪ Assisting nephrologist and nurse to assess new AVF on their assigned patients at 4 weeks post-op to assess maturation and if patient requires intervention at 2 weeks post-intervention</li> <li>▪ Mandatory staff inservices on how to assess AVF maturation</li> </ul> </li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility staff remind patients with new AVF of follow-up surgeon appointment at 4 weeks for AVF maturation assessment and reinforce importance of keeping the appointment</li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility staff are educated on, verbalize understanding rationale for new AVF cannulation procedures and utilize these procedures to consistently cannulating new AVF . Procedure includes:               <ul style="list-style-type: none"> <li>▪ Modification in needle gauge and blood flow for new AVF, using guidelines for increasing needle size and blood flow</li> <li>▪ Holding needle sites post-treatment one at a time to ensure both needle exit sites are covered</li> <li>▪ Understanding of how/why infiltrations occur, precautions to take to decrease likelihood of infiltration in new AVF and a clear understanding of facility’s policy on number of “sticks” one staff member can attempt before seeking assistance.</li> <li>▪ Providing Medical Director approved written instructions to patients for at-home care of infiltrated VA</li> </ul> </li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility staff always use tourniquet or hand compression to dilate vessel when cannulating new AVF</li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility staff are educated on, verbalize understanding of rationale for cannulation of new AVF with one needle and using catheter as other “needle” and utilize these procedures to accurately access catheter and new AVF, with catheter connected to venous side (return) and needle in AVF connected to arterial side (pull)</li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility staff are educated on, verbalize understanding of rationale for NOT using clamps to apply compression to needle sites post-dialysis and consistently abide by this procedure.</li> </ul>		

	<ul style="list-style-type: none"> <li>▪ Facility staff are educated on and verbalize understanding of rationale for proper set-up, observation and maintenance of pre-pump arterial pressure chamber dialysis tubing to facilitate arterial pressure monitoring of new AVF, including emphasis on: <ul style="list-style-type: none"> <li>▪ Keeping pressure monitoring line free of saline or blood</li> <li>▪ Keeping external transducers dry and free of saline or blood <ul style="list-style-type: none"> <li>▪ Danger of clamping/occluding pressure monitoring lines to avoid frequent machine alarms</li> </ul> </li> </ul> </li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility staff are educated on and verbalize understanding of rationale for maintaining arterial and venous machine alarm settings per facility policy.</li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility staff are educated on, verbalize understanding of, and consistently perform cannulation of mature AVF according to facility policy including: <ul style="list-style-type: none"> <li>▪ Mandatory use of tourniquet or hand compression to dilate fistula for cannulation</li> <li>▪ Avoiding multiple needle sticks, etc. to prevent loss/thrombosis of AVF</li> <li>▪ Difference in cannulation angle between AVG and AVF</li> <li>▪ Avoiding use of tourniquet between needles during treatment to increase arterial flow</li> <li>▪ Rotating sites OR use of Buttonhole cannulation</li> <li>▪ Avoiding cannulation of aneurysms or stenotic areas of AVF</li> <li>▪ Maintaining required distance between lumen of arterial and venous needles per facility policy to prevent recirculation</li> <li>▪ Matching needle gauge to blood pump speed</li> <li>▪ Holding needle sites post-treatment one at a time to ensure both needle exit sites are covered</li> </ul> </li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility staff are educated on, verbalize understanding of, and consistently manage VA infiltration of mature AVF or AVG according to facility policy</li> </ul>		
	<ul style="list-style-type: none"> <li>▪ If facility does not do Buttonhole cannulation, facility are trained on how to safely cannulate a buttonhole access with sharp needles to avoid damaging Buttonhole tracts and causing infection in tract</li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility staff are educated on, verbalize understanding of, and review and reinforce education for patients on how to care for a new VA, including: <ul style="list-style-type: none"> <li>▪ Written instructions on how to care for new VA (stitches, swelling, etc.)</li> <li>▪ Routine monitoring of VA function on a daily basis</li> <li>▪ Keeping access extremity clean</li> </ul> </li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility staff are educated on, verbalize understanding of, and review and reinforce patient education on home care and monitoring of their VA, includes: <ul style="list-style-type: none"> <li>▪ Written instructions on how to care for VA</li> <li>▪ How to protect VA from sharp objects</li> <li>▪ Avoiding carrying heavy objects with access arm</li> <li>▪ Avoiding putting sustained pressure on access arm (i.e., while sleeping)</li> <li>▪ Symptoms to watch for that should be communicated to facility</li> <li>▪ Routine monitoring of VA function on a daily basis (presence, strength and pitch of bruit)</li> <li>▪ Keeping access extremity clean</li> </ul> </li> </ul>		

	<ul style="list-style-type: none"> <li>▪ Facility staff are educated on, verbalize understanding of, and consistently ensure that patients: <ul style="list-style-type: none"> <li>▪ Wash VA extremity with soap and water at the facility before every dialysis treatment</li> <li>▪ Keep access extremity uncovered</li> </ul> </li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility staff are educated on, verbalize understanding of, and participate in assessing patients with AVG for upper arm outflow vein suitability for conversion to secondary AVF if patient’s AVG becomes dysfunctional, including documentation of patient-specific assessment on Sleeves Up chart form</li> </ul>		
	<ul style="list-style-type: none"> <li>▪ Facility staff are educated on and verbalize understanding of QAPI Program that monitors monthly aggregate AVG Sleeves Up data, including: <ul style="list-style-type: none"> <li>▪ Number of AVG patients receiving “Sleeves Up” assessment</li> <li>▪ Number of AVG patients with “suitable” upper arm outflow vein</li> <li>▪ Number of AVG patients with less than suitable upper arm outflow vein at current observation</li> <li>▪ Number of AVG patients requiring an AVG intervention</li> <li>▪ Number of AVG patients requiring an AVG intervention that received vessel mapping</li> <li>▪ Number of patients that had a dysfunctional AVG converted to a secondary AVF</li> </ul> </li> </ul>		