








Fistula Best Practices





ESRD Network 6 Facilities with $\geq 50\%$ Prevalent AV Fistulas







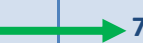
(July 2007 to July 2008 Progression)





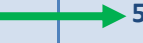


Progression From July 2007  July 2008		Best Practices
38.2%  58.3%		<ul style="list-style-type: none"> ▪ Ninety (90) day access plan. ▪ New corporate program which promotes fistula placement. ▪ Access Manager has increased education to patients and team members related to vascular access. ▪ Review access summary log on a weekly basis.
38.2%  58.1%		<ul style="list-style-type: none"> ▪ We have a Vascular Access Team. At least one of the team members is at the clinic each day. ▪ Members of the Vascular Access Team are the only ones allowed to stick patients still on a 16 gauge needle. ▪ We are committed to have all patients with a central venous catheter (CVC) scheduled for an appointment for vein mapping by the third week of every month. ▪ We have mobile vein mapping scheduled for patients with transportation issues.
38.2%  52.3%		<ul style="list-style-type: none"> ▪ Medical Director starting to require fistulas placed before starting home dialysis. ▪ Sending patients for vessel mapping with other types of accesses (i.e. grafts, catheters) to assess for fistula placements. ▪ Patient education by nurses and doctors. Giving patients educational material stressing pros and cons of all accesses. ▪ Follow up with surgeons and be proactive in preventing problems that cause loss of AV fistulas including patient and teammate education. ▪ Using buttonhole technique on all fistulas.
55.1%  58.1%		<ul style="list-style-type: none"> ▪ New corporate program which promotes fistula placement with a seven (7) step process of: <ul style="list-style-type: none"> ○ Patient education ○ Vessel mapping ○ Surgical evaluation ○ Surgery ○ Fistula Maturation Evaluation ○ First Cannulation ○ Catheter removal

Progression From July 2007  July 2008		Best Practices
		<ul style="list-style-type: none"> Core Vascular Access Team Relentless follow-up until all seven (7) steps are achieved – Goodbye Catheter – Hello Fistula!
35.6%	 52.9%	<ul style="list-style-type: none"> Have a new Vascular Surgeon. Vein mapping. New Access Coordinator pushing catheter replacement.
53.8%	 56.3%	<ul style="list-style-type: none"> Committed Vascular Access Coordinator Vascular Access Coordinator initiates Plan of Action for central venous catheter (CVC) removal upon admission to facility. Vascular Access Coordinator develops Plan of Action (POA) binder and is responsible for keeping it current for each patient. Vascular Access Coordinator communicates frequently with vascular surgeons, patients, and all members of the patient care team.
45.5%	 55.0%	<ul style="list-style-type: none"> Designated Vascular Access Manager that reports access information to the Facility Administrator on a regular basis. New corporate program which promotes fistula placement.
49.4%	 56.8%	<ul style="list-style-type: none"> Develop plan of care for all new patients with a catheter to obtain an AV fistula. Educate all patients with a newly placed AV fistula to check for thrill and to exercise AV fistula for development. Use consistent staff when starting to use AV fistula for needle placement. Develop buttonholes for patients with small AV fistulas.
54.4%	 56.3%	<ul style="list-style-type: none"> Full time Vascular Access Nurse Full time Treatment Options Educator Pre-ESRD fistula placement Prompt scheduling with Vascular Surgeon upon starting dialysis
53.1%	 59.6%	<ul style="list-style-type: none"> Use of new facility access center. Quality Assessment Performance Improvement (QAPI) set by Region 4A to address fistula placement and venous mapping. Involvement of medical staff. Address venous mapping as soon as client enters.
52.1%	 52.1%	<ul style="list-style-type: none"> Have two (2) dedicated Vascular Access Managers who monitor all patient accesses on a monthly basis. Improve communications with surgical intervention team through frequent telephone calls and faxes. Educate patients regarding their access and continue to reinforce throughout the year.




Progression From July 2007  July 2008		Best Practices
50.0%	 51.7%	<ul style="list-style-type: none"> Assigned a Vascular Access Manager with sufficient time to coordinate appointments and evaluate accesses. Utilize a vascular access tracking tool to monitor maturing accesses and expedite central venous catheter (CVC) removal.
52.4%	 60.7%	<ul style="list-style-type: none"> Access flows done every month and reviewed by nurse practitioner. Aggressive referrals to Vascular Surgeon when BFR, KT/V's, arterial pressures, or venous pressures are continuously out of range. Communication with Vascular Surgeons.
47.6%	 53.6%	<ul style="list-style-type: none"> Proactive Vascular Access Manager that follows up with surgeons in regards to access placement. Medical Director is contacted immediately when new patients begin with catheter only; appointment then made with Vascular Access Surgeon.
46.8%	 50.0%	<ul style="list-style-type: none"> We work with the physicians to get an access placed prior to in center treatment. Pre ESRD education. Evaluate access needs weekly and follow the development of all placed accesses. We make the appointments and arrange for transportation of the patients and we remind the patient and family members of the appointments. If they are reluctant to have an access placement, we have a physician speak with them.
50.0%	 53.8%	<ul style="list-style-type: none"> Designated Vascular Access Coordinator Immediate patient education by staff Work with Case Manager of hospitals to start access process before discharge. Goal of facility is to have fistula placed within thirty (30) days of admission.
36.7%	 56.8%	<ul style="list-style-type: none"> Patient education using pamphlets and also by using information from the Network through corporate office. Open communication with the doctors and surgeons; plus having a trusting relationship with the patients. Informing patients of risks involved with a central venous catheter (CVC) while informing them of the advantages of an AV fistulas. Intervene if blood flows are decreased.
46.6%	 50.7%	<ul style="list-style-type: none"> Have two (2) designated access managers who participate on monthly calls and are active in reviewing information with the nephrologist and vascular surgeons






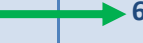
Progression From July 2007  July 2008		Best Practices
		<ul style="list-style-type: none"> Established a working relationship with local access center to ensure timely placement of access in patients. Ongoing patient education regarding access and options. New corporate program which promotes fistula placement.
44.0%	 50.0%	<ul style="list-style-type: none"> Assess all new patients for permanent access. Refer all patients needing permanent access to Vascular Surgeon as soon as possible for evaluation. Monitor patient for keeping appointments and follow-ups with Vascular Surgeon. Confer with Vascular Surgeon regarding plan for individual patients.
43.7%	 54.0%	<ul style="list-style-type: none"> Have a designated Vascular Access Manager. Weekly catheter report updates. Relentless follow up with patients to see Vascular Surgeon to get an AV fistula. New patients educated on getting an AV fistula.
8.0%	 54.0%	<ul style="list-style-type: none"> Nephrologist and Vascular Surgeon work together to have new patient fistula placement prior to hospital discharge whenever possible. Nursing staff encourage Vascular Surgeon to place a fistula first. Patient education on access choices relating to patient longevity of fistula versus graft; lower infection rate versus catheter. Patient with fistulas in place – longevity of life on access due to experienced staff utilizing length of fistulas and patient education of access care.
57.1%	 59.1%	<ul style="list-style-type: none"> Have a designated Vascular Access Coordinator. Our doctors have vein mapping done on new patients while in hospital before admission into clinic. We schedule the new patients with catheters for an appointment with Vascular Surgeon within a week of admission. Our Vascular Surgeons put in a fistula first before trying a graft.
54.8%	 56.5%	<ul style="list-style-type: none"> Quick referral if the patient does not have an AV fistula on admission. We attempt to get patient to Vascular Surgeon within first twelve (12) weeks of dialysis. Nephrologists refer patients for access placement during Stage 4 Chronic Kidney Disease so many patients have matured access on admission to Hemodialysis Clinic. Quick intervention when access problems are noted. This saves AV fistulas and grafts (AVG) – Access flow studies done monthly help with early detection of some problems. Strict adherence to Infection Control Policies & Procedures. This keeps access functioning well and our patients healthy.










Progression From July 2007  July 2008		Best Practices
22.0% 	57.6%	<ul style="list-style-type: none"> ▪ New corporate program which promotes fistula placement. ▪ Each patient with a catheter is discussed and reviewed at monthly Continuous Quality Improvement (CQI) meeting. ▪ Refer patients who have “exhausted all access” to Vascular Access Surgeon that performs the “HERO” access. ▪ Vascular Access Coordinators that are allowed sufficient time to manage access placement and catheter removal.
48.9% 	59.3%	<ul style="list-style-type: none"> ▪ New patients are immediately referred to a Vascular Surgeon for AV fistula placement. ▪ Work closely with Vascular Surgeons Group. ▪ Assure fistulas are mature prior to cannulating for the first time. ▪ Encourage patient to use exercise balls to work the new fistulas.
54.4% 	60.0%	<ul style="list-style-type: none"> ▪ All patients will be assessed for access placement in the first thirty (30) days of admission to clinic. ▪ All patients with a central venous catheter (CVC) on admission will be placed on an access report with current status of access placement. This report is updated every Thursday. ▪ Access Manager works closely with all teammates to educate patients on the importance of getting a permanent access.
37.1% 	54.4%	<ul style="list-style-type: none"> ▪ All patients are referred for vein mapping within four (4) weeks of admission when a catheter is the only access in place. ▪ All staff members must report any abnormal findings or abnormal pressures when cannulating to charge nurse. ▪ All staff members are knowledgeable in the Buttonhole Cannulation process and all patients are encourage to self-cannulate. ▪ Vascular Access Coordinator responsible for monthly surveillance and access option education.
50.0% 	50.0%	<ul style="list-style-type: none"> ▪ Educate catheter patients during every monthly clinic visit with a different aspect of the importance of fistulas (i.e. infections, clearance, etc.). ▪ Assign a Vascular Access Coordinator who is responsible to monitor progress and report results twice monthly to team. ▪ Set-up consultations with access center for patients who need further evaluation or additional education. ▪ Enlist doctor’s assistance in education and promotion of fistulas – especially with new patients.
70.0% 	70.0%	<ul style="list-style-type: none"> ▪ Designated an Access Manager (with back up) to coordinate placement of fistula in new patients. ▪ All members of clinical team educate patient regarding the importance of fistula placement from day one of admission.


Progression From July 2007  July 2008		Best Practices
		<ul style="list-style-type: none"> ▪ Frequent transonic monitoring – every six (6) to eight (8) weeks – and intervene if there are issues.
52.9%	 56.0%	<ul style="list-style-type: none"> ▪ Access Coordinator speaks with each patient and encourages AV Fistula placement within thirty (30) days of admission to the facility. ▪ “Fistula First” is discussed and reviewed at all monthly Quality Assurance Performance Improvement (QAPI) meetings. ▪ Appointments and transportation to the appointments are arranged with the assistance of our Social Worker.
72.0%	 72.2%	<ul style="list-style-type: none"> ▪ Medical Administrator and admitting Nephrologist works with Vascular Surgeon regarding AV Fistula placement. ▪ Patients scheduled for permanent access placement within one (1) week of admission. ▪ Facility to implement “Sleeves Up” initiative. ▪ Utilize tracking for compliance with fistula placement for all Vascular Surgeons
33.3%	 50.0%	<ul style="list-style-type: none"> ▪ Encourage nephrologists to refer patients at Stage IV for fistula placement. ▪ Refer patients to Vascular Surgeons who participate in “Fistula First” initiatives. ▪ Utilize “early” interventions to salvage permanent accesses. ▪ Patients scheduled for permanent access within two (2) weeks of start.
51.1%	 51.1%	<ul style="list-style-type: none"> ▪ Utilization of transonic readings. ▪ Communication between the team and the Vascular Access Coordinator. ▪ With the first sign of elevated venous pressures, the patient is sent to the surgeon for evaluation. ▪ Utilization of Buttonhole Cannulation process ▪ Best cannulators utilized for new AV fistulas.
59.7%	 59.8%	<ul style="list-style-type: none"> ▪ Vascular Access Manager has two (2) days a month off the floor to evaluate lab results and schedule appointments with Vascular Surgeon. ▪ Vascular Access notebook for all pertinent information. ▪ Vascular Surgeon invited to monthly CQI meetings. ▪ Vascular Access Manager communicates with surgeon.
58.1%	 59.7%	<ul style="list-style-type: none"> ▪ Vascular Access Manager that does the following: <ul style="list-style-type: none"> ○ Makes appointments for patients who have “exhausted all sites” for re-evaluation ○ Participates in Vascular Access Corporate calls and project.
		<ul style="list-style-type: none"> ▪ Vascular Access Manager that does the following:

Progression From July 2007  July 2008		Best Practices
52.5%	 57.1%	<ul style="list-style-type: none"> ○ Makes appointments ○ In service and reports to the team ○ Attends monthly access meeting ○ Meets with administrator weekly
50.6%	 64.0%	<ul style="list-style-type: none"> ▪ Vascular Access Manager is given approximately four (4) hours weekly away from regular duties for access evaluation, to make appointments, and to complete necessary paperwork. ▪ Appointments are made for vein mapping and access placement within the first two weeks of patients' admission to clinic. ▪ Patients are sent to access center closest to their homes to encourage compliance with timely access placement.
45.5%	 50.8%	<ul style="list-style-type: none"> ▪ Open communication between Nephrologist and surgeon. ▪ Patient education related to access options by Nephrologist and nurses.
56.0%	 58.3%	<ul style="list-style-type: none"> ▪ Designated Vascular Access Coordinator that tracks catheters and does education to all new patients to encourage AV Fistula placement. ▪ Utilization of Buttonhole Cannulation process on new AV Fistulas to prevent complications and prolong life of AV Fistula. ▪ Dynamic Venous Pressure Monitoring weekly. If DVP increased for three (3) consecutive treatments, patient is referred to vascular access surgeon for evaluation and intervention. ▪ MOST IMPORTANT: Nephrologists are strong advocates of AV fistula placement and try to have access placed before the patient starts dialysis.
42.1%	 53.1%	<ul style="list-style-type: none"> ▪ Will have ninety (90) day access plan implemented by January 2009. ▪ Facility is participating in corporate Quality Improvement Initiative. ▪ Access Manager has increased education to patients and teammates. ▪ Access Manager reviews summary log on a weekly basis and as needed.
42.7%	 50.7%	<ul style="list-style-type: none"> ▪ Talking and educating each patient about the advantages of a fistula. ▪ Coordinating with physicians the number of catheters and appointments made. ▪ Assign a nurse and practitioner to evaluate access progression. ▪ Have an education day related to access improvement with staff. ▪ Have an education day for patients filled with fun, short small games, and visual aids.
		<ul style="list-style-type: none"> ▪ Pre-ESRD education by Nephrologist.

Progression From July 2007  July 2008		Best Practices
35.7%	 60.5%	<ul style="list-style-type: none"> ▪ Clinical Manager provides patient education, analyzes data, and presents at Continuous Quality Improvement (CQI) meetings. ▪ Unit Coordinator schedules appointments for patients with the Vascular Access surgeon and the Social Worker assists with transportation. ▪ Patients are given “Vascular Access Options” booklet and Social Worker discusses options with patients.
63.5%	 66.0%	<ul style="list-style-type: none"> ▪ Charge nurse responsible for referrals and appointments. ▪ Clinic Manager follows up monthly to ensure that all access related issues have been addressed, completes the Fistula First report, and notifies the Charge Nurse if an access has not been addressed. ▪ Refer to local access group for placement and evaluations of existing accesses with noted elevated or rising dynamic venous pressures or cannulation issues.
48.5%	 56.5%	<ul style="list-style-type: none"> ▪ Early referral for permanent vascular access. ▪ Ongoing patient education. ▪ Work closely with vascular access center.
53.0%	 55.7%	<ul style="list-style-type: none"> ▪ All new patients start in one specific bay that is staffed with the most experienced cannulators. ▪ Kidney Disease Outcomes Quality Initiative (KDOQI) Assessment – each treatment has helped to catch problems and have earlier interventions. ▪ Transonic studies help us with identifying problems with accesses before they clot.
58.0%	 58.2%	<ul style="list-style-type: none"> ▪ Designated Regional Vascular Access Coordinator dedicated to access monitoring and interventions. ▪ Referral made on first date of dialysis to surgeons for access placement and a four (4) week follow up with surgeons after placement. ▪ Vascular Access Manager in clinic who oversees vascular access issues. ▪ Have a dedicated team of Patient Care Technicians assigned to cannulate new fistulas.
43.1%	 55.9%	<ul style="list-style-type: none"> ▪ Have a Vascular Access Nurse who reviews the information monthly. She talks with patients and Medical Directors to find out when they will be referred; how long until we can use; etc. ▪ Using catheter tracking log and present monthly to CQI committee. ▪ Referring patient to champion surgeon who is great with patients who have “exhausted all areas”.

Progression From July 2007  July 2008		Best Practices
51.8%	 55.9%	<ul style="list-style-type: none"> Timely referrals to Access Surgeons. Cannulation Algorithm adopted in standing orders.
50.3%	 56.0%	<ul style="list-style-type: none"> Designated staff member is given ten (10) hours each month to review accesses. A log is kept of hours spent on access review and a report is printed indicating the types of accesses per patient. Review percentage of fistulas each month. Continue to encourage patients to get fistulas and recognize the need early and make arrangements for surgical consult.
55.0%	 55.1%	<ul style="list-style-type: none"> Maintaining a vascular access log; updating log daily to assure all patients have permanent accesses placed and catheters are removed. Physicians made aware monthly of catheter, AV fistula, and graft prevalence. Referrals for new patients made within thirty (30) days of first treatment if patient has no permanent access.
48.7%	 55.7%	<ul style="list-style-type: none"> Physician/Extender reviews access monthly along with Clinical Nurse Manager. Designated Vascular Access Coordinator. Patient education every 3 months related to vascular access.
55.6%	 56.0%	<ul style="list-style-type: none"> Have designated a Vascular Access Manager who is given two (2) to three (3) days off the floor for access evaluations and paper work. Area Vascular Access Coordinator is in every six (6) weeks for transonic and education of teammates. Promoting "Fistula First" to physicians, staff and patients. Ongoing patient and staff education by Vascular Access Manager.
57.6%	 66.1%	<ul style="list-style-type: none"> Medical Director to make timely referrals for AV fistulas placement. Ideally before the patient begins hemodialysis. Vascular Access Coordinator to coordinate with Vascular Surgeon for cannulation of new AV fistulas and central venous catheter (CVC) removal.
47.1%	 51.0%	<ul style="list-style-type: none"> We have a Vascular Access Manager in place that gets four (4) to six (6) hours per week off the floor to handle vascular access issues. She makes all appointment and referrals for vascular access. We discuss monthly in our medical director meetings all central venous catheter patients and our plan of care for them. We are meeting with the local surgeons and nephrologists to discuss placing fistulas in patients pre-ESRD.
		<ul style="list-style-type: none"> Have designated a Vascular Access Manager who is given two (2)

Progression From July 2007  July 2008	Best Practices
51.3%  55.2%	<p>to three (3) days off the floor for access evaluations and paper work.</p> <ul style="list-style-type: none"> ▪ Area Vascular Access Coordinator is in every six (6) weeks for transonic and education of teammates. ▪ Promoting “Fistula First” to physicians, staff and patients. ▪ Ongoing patient and staff education by Vascular Access Manager.
49.1%  49.5%	<ul style="list-style-type: none"> ▪ Continuous Quality Improvement (CQI) project that focuses on AV fistula placement. ▪ Designate a Vascular Access Coordinator that is given time off the floor each month to work on access evaluations. ▪ Review “Fistula First” reports monthly with Medical Director and all patients with catheters.
43.4%  56.3%	<ul style="list-style-type: none"> ▪ Vascular Access Coordinator maintains and updates logs daily to ensure all patients have permanent access placed and catheters removed. ▪ Inform physician at monthly Continuous Quality Improvement (CQI) meeting of patients who have catheters and plans for removal. ▪ Referrals for new patients made within thirty (30) days of first treatment.
49.3%  51.5%	<ul style="list-style-type: none"> ▪ Monthly access flow testing with interventions scheduled as necessary. ▪ Bi-monthly visits by Vascular Access Coordinator.
62.0%  62.3%	<ul style="list-style-type: none"> ▪ Access Coordinator for the clinic maintains a vascular access log. Log is updated daily to assure all patients have permanent accesses placed and P/Cs removed. ▪ Inform physicians monthly of all patients who have a P/C and their status of catheter prevalence. ▪ Referrals for new patients made within thirty (30) days of first treatment if no permanent access.
56.0%  62.1%	<ul style="list-style-type: none"> ▪ Designated vascular access person (charge nurse). ▪ Access logs reviewed monthly with Medical Director. ▪ Frequent discussions with team daily in homeroom meetings.
45.0%  53.5%	<ul style="list-style-type: none"> ▪ Access Coordinator for the clinic maintains a vascular access log. Log is updated daily to assure all patients have a permanent access placed and catheters removed. ▪ Inform physicians monthly of all patients who have a permanent catheter and status of catheter prevalence. ▪ Referrals for new patients made within thirty (30) days.
34.0%  36.1%	<ul style="list-style-type: none"> ▪ Initiated vascular access PCT (VAC-PCT) and RN (VAC-RN). VAC-PCT is given several half days to view accesses and follow up with

Progression From July 2007  July 2008		Best Practices
		<p>appointments and review catheter book. The VAC-PCT meets with the VAC-RN weekly to discuss findings.</p> <ul style="list-style-type: none">▪ Notes are being left in rounding books for FN-P to discuss accesses with the patients who are refusing access placement or are having access complications.▪ Educated all nurses in getting appointments with the goal to have mapping appointments done within 30 days of admission. VAC-PCT is also able to assist with calling for appointments.▪ Coordinating with the Medical Director regarding a list of new patients brought to QAI meetings so that he could see where his practice was sending new patients to the facility with catheters to attempt to initiate involvement with his office.