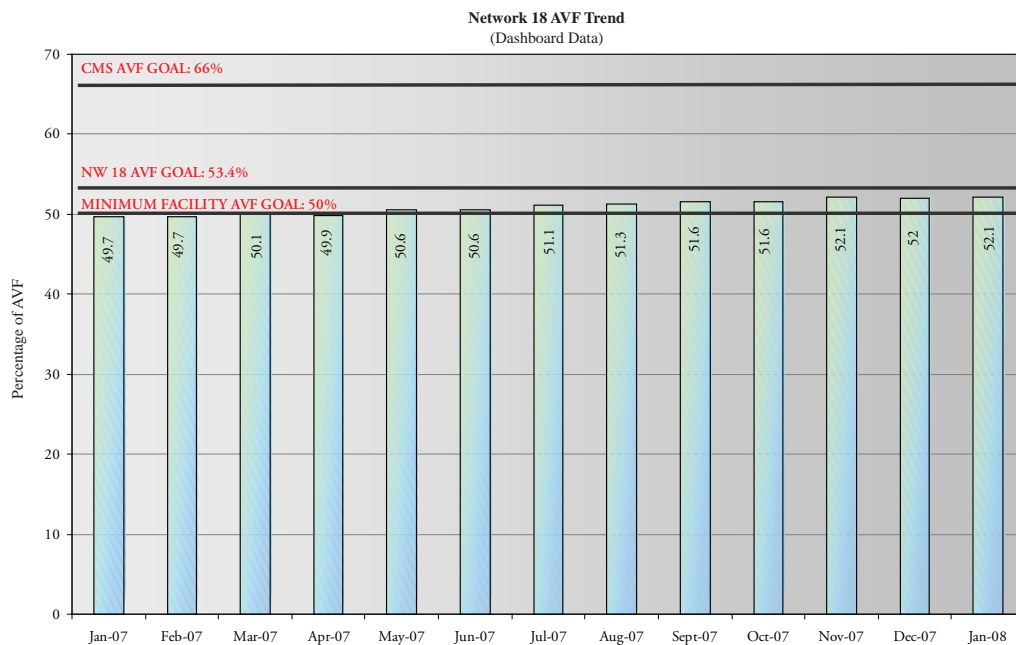


NETWORK 18 FISTULA FIRST UPDATES:

According to the latest Dashboard (January 2008), ESRD Network 18 has an AVF rate of 52.1%. Although we have made improvements in vascular access care, it is becoming more and more difficult to attain higher AV fistula rates. For the last three (3) months, Network 18 has maintained an AVF rate around 52.1%. We must

continuously search for new ways to improve the care we deliver. 53% of Network 18's eligible Fistula First facilities are achieving AVF rates of 50% or greater. To encourage continuous improvements, the *Medical Review Board will start monitoring all facilities with a prevalent AVF rate < 50%*. As a reminder, the CMS goal for prevalent AVFs is 66% by June 2009. The Network 18 current goal is 53.4%.



Within this mailing please find informative documents that will help your facility improve its vascular access program. Please refer to the “New Minimum AVF Rate Per Facility” memorandum for tips on Change Concept #6: Secondary AVF Placement in Patients with AV Grafts and Change Concept #9: Monitoring and Maintenance to Ensure Adequate Access Function. Within this newsletter, please find information on indications for evaluation, how to conduct a physical examination by look, listen, feel technique, and instructions on how patients perform a fistula hand-arm exercise.

The Network continues to support all facilities through participation and collaboration with renal organizations throughout Southern California.

- **Incident Patient Referral Project:**

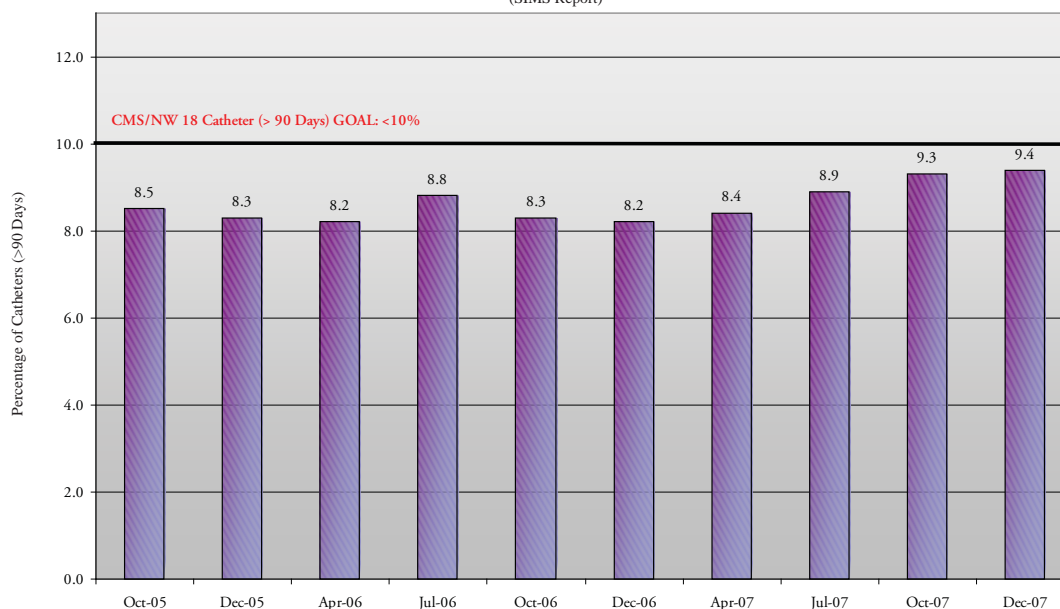
The Network mailed out Nephrologist-specific incident patient reports in January 2008 for the time period of April – September 2007. We distribute these reports on a semi-annual basis to encourage Nephrologists to become proactive in vascular access planning and placement with their CKD patients, promoting Change Concept #2- Timely Referral to Nephrologist and Change Concept #3- Early referral to surgeon for “AVF Only” evaluation and timely placement. Facilities can refer to this report when encouraging Nephrologists to refer patients for timely vascular access evaluation and placement. Below is the breakdown of Incident patients’ vascular access types for the period of April 2007 – September 2007.

	INCIDENT PATIENTS (04/07- 09/07)	NETWORK 18 DATA	FISTULA USED ON THE FIRST DAY OF DIALYSIS	FISTULA MATURING ON THE FIRST DAY OF DIALYSIS	AV GRAFT USED ON THE FIRST DAY OF DIALYSIS	CATHETER USED ON THE FIRST DAY OF DIALYSIS	OTHER ACCESS TYPE USED/ FIELD LEFT BLANK
# OF PATIENTS "UNDER CARE OF NEPHROLOGIST FOR 6 MONTHS OR MORE"	3,996	1,602 (40%)	390 (24%)	227 (14%)	75 (5%)	897 (56%)	13 (1%)
# OF PATIENTS "NOT UNDER CARE OF NEPHROLOGIST"		2,394 (60%)	107 (4%)	172 (7%)	46 (2%)	2,029 (85%)	40 (2%)

As mentioned above, as we continue with the Fistula First Project, it has become harder and harder to increase our prevalent AVF rates. Network 18 has noticed that there has been an increasing number of incident AVFs reported within the last several months. Although this is a great achievement, we have also noticed that the prevalent AVF rate has maintained the same. We can only conclude that many of these incident AVFs are NOT maturing. The MRB is stressing the importance of monitoring newly created AVFs to maturation by the Nephrologist and the

RN/staff. Please ensure that your facility has a policy and procedure in place to address all catheters > 90 days and all incident catheters. The Network distributed a Catheter Reduction Policy in December 2007 for facilities to use as a guideline in improving their policy or implementing it if their facility does not currently have a catheter reduction policy in place. Also, please refer to the "New Minimum AVF Rate Per Facility" memorandum for tips on monitoring and maintenance to ensure adequate access function.

Network 18 Catheter Quarterly Trend (>90 Days)
(SIMS Report)

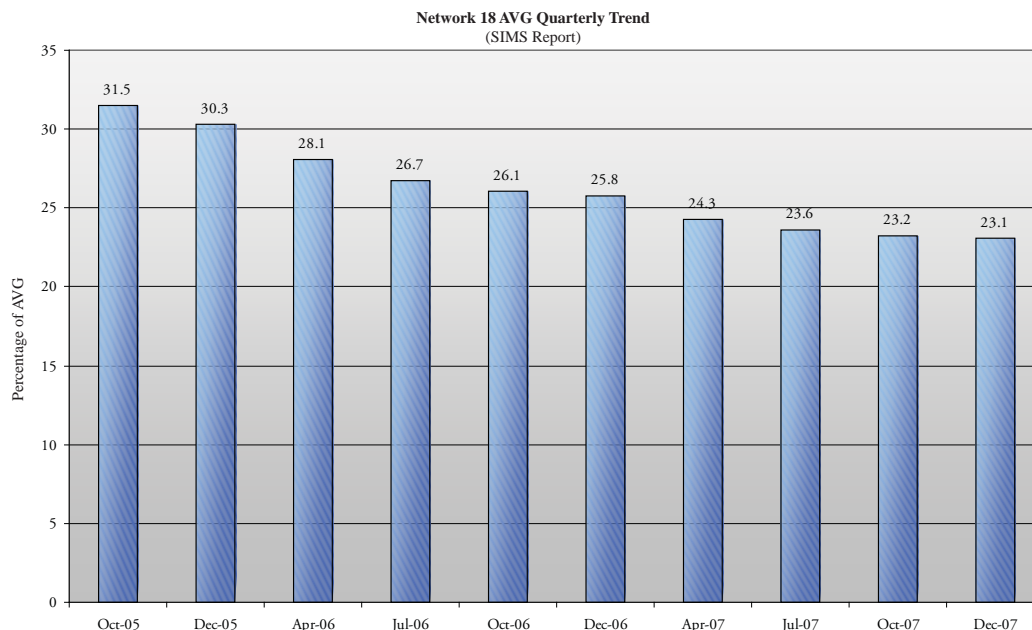


Another area with the greatest room for improvement is converting AV grafts to AV fistulas (Change Concept #6: Secondary AVF placement in patients with AV grafts). Please ensure that:

- All AVGs (and AVFs) are monitored for stenosis. Each facility should be conducting monitoring/surveillance of all AVGs and AVFs and recording results. Each facility should also be tracking all access problems. By doing this it will ensure that timely referral for intervention and/or conversion to AVF is made. Proactive interventions will improve

vascular access care given to patients. For AVGs, converting to an AVF will help improve patient care by decreasing missed treatment time for frequent interventions/revisions thus improving the patient's quality of life and increasing the performance of the access.

- All patients are educated about vascular access, in particular – AV fistulas. Please find patient education materials on the Fistula First website at www.fistulafirst.org



Indications For Evaluation (Common reasons to seek vascular access evaluation and intervention)		
AV Fistula	AV Graft	Catheter
<ul style="list-style-type: none"> ➤ Failure to mature (failure to develop within 4-6 weeks, investigate for possible inflow or outflow problems.) ➤ Difficult or painful cannulation ➤ Frequent blood pump flow difficulties (unable to achieve prescribed BFR) ➤ Increased venous pressure ➤ Prolonged bleeding after dialysis ➤ Arm/hand swelling ➤ Development of aneurysm ➤ Abnormal flow measurements through stenosis monitoring/surveillance ➤ Clot(s)/clotted fistula ➤ Re-circulation/ inadequate dialysis ➤ Increased negative arterial pressures ➤ Hyperpulsatility or water-hammer pulse ➤ Accessory vessels ➤ $Kt/V < 1.2$ or $URR < 65$ 	<ul style="list-style-type: none"> ➤ Clotted graft ➤ Abnormal flow measurements through stenosis monitoring/surveillance ➤ Difficult or painful cannulation ➤ Poor blood flow ➤ Recirculation/inadequate dialysis ➤ Increased negative arterial pressures ➤ Hyperpulsatility or water-hammer pulse ➤ Increased venous pressure ➤ Prolonged bleeding ➤ Arm/hand swelling ➤ Pseudoaneurysm ➤ $Kt/V < 1.2$ or $URR < 65$ 	<ul style="list-style-type: none"> ➤ Removal ➤ Insertion ➤ Poor BFR ➤ Recirculation/inadequate dialysis ➤ Catheter migrated in or out ➤ Positional flows ➤ Catheter exchange for catheter-related bacteremia
Vessel Mapping: <ul style="list-style-type: none"> ➤ Done for optimum creation of AVF 		

Look, Listen, Feel

Experienced staff should examine the fistula and the outflow vein each time the patient come to dialysis to monitor the maturation progress. Aspects of the physical examination are listed below. At a minimum, all newly

created fistulae must be physically examined by using a thorough systematic approach by a knowledgeable professional 4 to 6 weeks post-operatively to ensure appropriate maturation for cannulation.

Physical Examination of AV Fistulae			
Exam Steps:	Fistula (Normal):	Stenosis or Poor Maturation (Abnormal)	Infection or Steal Syndrome (Abnormal)
LOOK	Well developed main venous outflow, no irregular/dilated areas or aneurysm formations, areas of straight vein that can be used for cannulation.	Fistula with poor maturation- multiple venous outflow veins (accessory veins), poorly defined cannulation areas. Stenosis can occur in artery or any of the venous outflow veins. Look for a narrowing of the outflow vein or aneurysm formations. Dilated neck veins or small surface collateral veins in the arm or neck above the vascular access.	<i>Infection:</i> Redness, swelling, broken skin, drainage, induration. <i>Steal Syndrome:</i> Hand of the access limb may appear discolored due to poor arterial blood flow to the hand. Check nail beds, fingers and hand for skin color changes.
LISTEN	Low pitch continuous diastolic and systolic.	High pitch discontinuous systolic only	<i>Steal Syndrome:</i> Fistula may have a very strong bruit.
FEEL (With your finger tips)	Thrill at the arterial anastomosis and throughout the entire outflow vein that is easy to compress.	Pulse at the site of a stenotic lesion. Pulse has a water-hammer feel.	<i>Infection:</i> Warm to touch, swelling. <i>Steal Syndrome:</i> Feel bilateral limbs (hands and fingers) and compare for the access limb to be the same as the non-access limb. Compare temperature, grip strength and range of motion, and any complaints of pain. If the access limb has any major differences than the non-access limb, consider steal syndrome.

*Adapted from KDOQI 2006 Updates

Fistula Hand-Arm Exercise

Strengthening the forearm by using isometric exercises to increase handgrip strength (e.g., squeezing a rubber ball with or without a lightly applied tourniquet) may increase flow, thereby enhancing vein maturation, and has been shown to significantly increase forearm vessel size, thereby potentially increasing flow through a fistula created using these vessels. The resulting muscle mass increase also may enhance vein prominence. Exercise also may decrease superficial fat. Correction of anemia also could increase cardiac output and decrease peripheral resistance, potentially resulting in increased flow through the fistula. -KDOQI 2006 Updates

“Champions Corner”

Top facilities with the highest AVF rates in Network 18 as of January 2008 are:

- ❖ Fresenius Medical Care – Irwindale = 88.9%
- ❖ Independent – Kidney Center of Thousand Oaks, Inc. = 82.2%
- ❖ DaVita – Westminster South Dialysis = 76.7%
- ❖ Renal Advantage, Inc. – Fletcher Parkway-El Cajon = 70.9%

Please see enclosed “Champion Vascular Access Facilities”. These facilities are acknowledged for

achieving CMS’ goal for prevalent AVFs (66% AVFs by June 2009). *These facilities have a prevalent AVF rate of 66% or greater!* Each facility was given a certificate for their achievement. We would also like to thank these facilities for their continuous effort in improving vascular access care given to their patients. We encourage all facilities to strive for the same success.

Network 18’s Vascular Access rates as of January 2008:

- ❖ AVF = 52.1%
- ❖ AVG = 22.7%
- ❖ Catheter > 90 days = 9.4%
- ❖ Catheter < 90 days = 16.7%

Should you need assistance with your facility’s vascular access program or have questions or concerns, please call Lana Kacherova or Lisle Mukai at the Network 18 office.

Success in improving your facility’s AVF rates is a team effort. We welcome your input and feedback - it helps all facilities in Network 18!

Lana Kacherova or Lisle Mukai may be reached at the Network 18 office at (323) 962-2020 or e-mail them at skacherova@nw18.esrd.net or lmukai@nw18.esrd.net.