Vascular Access Surveillance Healthcare & Cost Savings

Cost Savings

Two studies demonstrate that proactive vascular access management translates into substantial cost savings for the clinic and the insurer. The clinic benefits through increased staff efficiency and fewer missed dialysis days. The insurer benefits because expensive hospitalizations due to access failure are replaced with less costly out-patient interventions.

Joint Dialysis Centers and University Study

A study[1,2] of 132 patients,"Monthly Vascular Access Blood Flow Monitoring (VABFM) Reduces A-V Graft Thrombosis Rate and Associated Costs," from Dialysis Clinics, Renal Care Group and Vanderbilt University Medical Ctr. of Nashville, TN concludes:

- Thrombosis rate and related morbid events were significantly reduced with vascular access blood flow monitoring (VABFM) compared to no monitoring or venous pressure monitoring.
- Total access-related costs were reduced by 48.5% with VABFM
- VABFM results in graft thrombosis rates that approach those of arteriovenous fistulas.
- "An aggressive screening and intervention program of monthly vascular access blood flow monitoring significantly reduces vascular access thrombosis-related morbidity and costs."

Vanderbilt Medical Center (Dialysis Clinics Inc.; Renal Care Group, Inc.)			
Pts & Events/Pt/Year	# Surveillance	Venous Pressure	Flow
Patients	72	68	59
Grafts	78	75	62
Thomboses	0.71	0.67	0.16
Missed Treatment	0.98	0.86	0.26
Catheters	0.29	0.17	0.07
New Access + Revisions	0.20	0.31	0.14
Declots	0.51	0.36	0.05
Hospital Days	1.8	1.6	0.4
Angioplasties	0.09	0.32	0.54
Adjusted Costs/Yr	$308,000	$345,000	$158,000

Conclusion: Vascular Access Surveillance Reduces AV Graft Thrombosis Rate and Associated Costs

Gambro 16-Month Study of Oucomes

An 16-month Gambro study[3] compared outcomes from a control group of 274 patients to an experimental group of 302 patients undergoing surveillance from six dialysis facilities and one tertiary referral hospital in Southeast Georgia. Results showed that a multidisciplinary approach to vascular access care resulted in a 44% decrease in thrombosis, significant improvements in clinical outcomes, and a decrease in hospitalizations.

Gambro Outcomes 16-Month Study)			
Pts & Events/Pt/Month	Control Group	Experimental Group	Difference
# Patients	254	254<302	
# Grafts	71%	61.5%	-9.5%
# Fistulae	14.6%	25.2%	+10.6%
Incidence Thrombosis	0.087	0.049	-0.038
VA Hospital Admission	0.1	0.07	-0.03
VA Hospital Days	0.53	0.27	-0.26
VA Missed Outpatient Treatment	0.29	0.16	-0.13
Missed Outpatient Treatments due to VA	0.20	0.31	0.14
Declots/Pt/Yr	0.51	0.36	0.05
Hospital Days/Pt/Yr	1.8	1.6	0.4
Angioplasties/Pt/Yr	0.09	0.32	0.54

Conclusion: A multidisciplinary approach to VA care resulted in a 44% reduction in thrombosis incidence and significantly improved clinical outcomes.

References:

[1] McCarley PB, Wingard Y, Shyr W, Pettus TA, Ikizler TA, "Monthly Vascular Access Blood Flow Monitoring (VABFM) Reduces A-V Graft Thrombosis Rate and Associated Costs," JASN Abstracts, 1999; 10: 211A. (Transonic Reference # HD114A)

[2] McCarley PB, Wingard Y, Shyr W, Pettus TA, Hakim M, Ikizler TA, "Vascular Access Blood Flow Monitoring Access Morbidity and Costs," Kid Int'l 2001; 60: 1164-1172. (Transonic Reference # HD202A)

[3] Duda CR, Spergel LM, Holland J, Tucker T, Bosch JP, Bander SJ, "A Multidisciplinary Vascular Access Care Program (VACS) enables Implementation of Dialysis Outcomes Quality Initiative (DOQI)," J. Am Soc Nephrol Abstracts 1999; 10: 206A. (Transonic Reference # HD116A)

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