

# The Dialysis Outcomes Quality Initiative: Get Your Copy Now!

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INTERVENTIONAL radiologists play an important role in the overall management of patients undergoing hemodialysis, and this role has increased dramatically during the past few years. Often, we have been frustrated by roadblocks to our providing what we believe to be optimal care for these patients (ie, disagreements as to the appropriate [surgical versus percutaneous] management of failed and failing access, as well as repeated rejections of our procedures by third party payers, in particular Medicare). As with many other areas in interventional radiology, often it was a lack of published literature that contributed to these impediments. However, our contributions to this area of patient management have gradually found their way into the interventional radiology and nephrology literature and we have seen the tide begin to turn.

Interventional radiology's contributions to access creation and management have not gone unnoticed in the Nephrology community. Accompanying the September and October issues of the *American Journal of Kidney Dis-*

*eases* are two supplements which contain the National Kidney Foundation Dialysis Outcomes Quality Initiative Clinical Practice Guidelines (1-4), a set of documents long awaited by the nephrology community. These guidelines, more than 2 years in the making, encompass four areas of dialysis: Anemia, Peritoneal Dialysis Adequacy, Hemodialysis Adequacy, and Vascular Access. It is the latter document which should be of greatest interest to interventional radiology: our place in the management of vascular access is firmly entrenched in these guidelines. The Vascular Access document contains 38 separate guidelines, each carefully referenced and justified by published literature, expert opinion, or both. There are over 200 references, culled from an initial list of more than 3,000. The guidelines cover all aspects of dialysis access creation and management, and the majority of them have direct bearing on interventional radiology.

Anyone with current or anticipated involvement in the care of hemodialysis patients must obtain a copy of the Vascular Access Guidelines and read it carefully. It will have a far-reaching impact on dialysis access management as we move into the 21<sup>st</sup> century: already, HCFA policy has been altered in response to some of the guidelines even before their official publication. Areas of specific interest to interventional radiologists include a thrust toward increasing the percentage of native fistulas in this country, avoiding central venous stenosis by using ultrasound and fluoroscopically guided internal jugular dialysis catheter placement, increased use of preoperative

venography and postoperative fistulography, and the firm support of the National Kidney Foundation for the practice of prophylactic intervention for failing hemodialysis access, to name but a few.

Some might be surprised to learn that the document falls short of recommending percutaneous procedures such as percutaneous transluminal angioplasty (PTA) and declotting over surgical alternatives. However, in preparing the document the Vascular Access Workgroup (made up of five nephrologists, two surgeons, two dialysis nurses, and an interventional radiologist) was simply unable to make such a recommendation due to the lack of prospective randomized trials in those areas. In the end, the Workgroup recommended that each center decide what worked best for their patients based on local expertise and interest.

What does the DOQI mean to practicing interventional radiologists? Simply reading the document will make this eminently clear, but here are a few of the repercussions. Because we will see more native fistulas (the goal is 40% up from the current 15%), it is not too early to begin studying the role of our interventions in such accesses, and learning from our counterparts in Europe, Canada and the Far East, where the majority of accesses are native fistulas. We will almost certainly see an increased role of interventional radiology in tunneled dialysis catheter placement, and we will probably see less of the vexing problem of central venous stenosis as a widespread shift to internal jugular catheters occurs. Those interventional radiologists who

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express a strong interest in caring for these patients and participating in multidisciplinary vascular access conferences will be rewarded with an increase in prophylactic PTA detected by the screening mandated in the guidelines. This could be associated with a decrease in the number of de-clotting procedures. Conversely, if the nephrologist detects an unwillingness to participate in the overall management of these patients on the part of the interventional radiologist, they will refer their patients to surgeons for prophylactic revisions and de-clotting. The hemodialysis patient can no longer be relegated to the "last case" but rather will need to be given the same level of attention as those patients with peripheral vascular disease. Further, we are going to be held accountable for the results of our procedures: the guidelines set target success rates and long term patencies for PTA and de-clotting as well as surgical revision. While these targets are achievable based on the literature, they will require a concerted effort on the part of the interventional radiologist as well as accurate record keeping. Last but certainly not least, the overall doctrine of vein preservation will need to be applied to the interventional radiology suite as everywhere else in the hospital: patients on any form of dialysis or heading toward dialysis must not have venipuncture, intravenous catheters, or PICCs placed in veins to be used for future access. Everyone involved with the hemodialysis patient will need to participate in this doctrine if we are to achieve the goal of increasing the number of native fistulas.

The DOQI also opens up a whole host of research opportunities for interventional radiologists. Any guideline that is based on opinion only is so noted because there was little or no available literature to support it, thus the DOQI can almost be used as a handbook by researchers interested in determining what questions have yet to be answered in vascular access. For example: One of the biggest questions is whether PTA or surgical revision is preferable in failing access. With the exception of two studies that are more than a decade old, which yielded conflicting results (5,6), this question has

lain fallow, waiting for someone to come along and answer it. Because surgeons were unwilling to accept the practice of prophylactic surgical revision of failing access, however, actually carrying out such a study has proved impossible. The DOQI changes all that, allowing this much-needed trial to be performed by anyone interested in doing so. There are many other examples within the pages of the document.

In summary, the DOQI Vascular Access Guidelines are required reading for anyone participating in the management of hemodialysis patients. A copy can be obtained from the National Kidney Foundation at (800) 622-9010; they also appears as a supplement to the October American Journal of Kidney Diseases (4). Get your copy now.

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#### DOQI Guidelines Update, June 2003

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The National Kidney Foundation (NKF) in 1995 established the Dialysis Outcomes Quality Initiative (DOQI). This was a literature-based effort using teams of recognized experts to de-

velop practice guidelines for multiple aspects of dialysis. The aim of this effort was to improve patient outcomes. Over a period of two years, four workgroups (Peritoneal Dialysis Adequacy, Anemia Management, Hemodialysis Adequacy, and Vascular Access) met intermittently to create the guidelines using the available literature and where literature was lacking, expert opinion. The guidelines were then subjected to peer review by more than 50 professional organizations, and the final versions were published as supplements to the September and October 1997 issues of the American Journal of Kidney Diseases, and updated in 2000 (3-6). They are also available from the NKF at (800) 622-9010 or [http://www.kidney.org/professionals/doqi/guidelines/doqi\\_uptoc.html#va](http://www.kidney.org/professionals/doqi/guidelines/doqi_uptoc.html#va)

Virtually every aspect of intervention in hemodialysis access from temporary catheters to graft thrombolysis is addressed in this document. One of the principal goals of the DOQI Vascular Access guidelines is to increase the number of native fistulae in this country. This goal is set at 40%. Other guidelines address preoperative screening for occult central venous stenosis and occlusion prior to vascular access creation in the ipsilateral arm using a variety of techniques including ultrasound, magnetic resonance venography, and contrast venography. The intended outcome is to avoid having venous access created in the ipsilateral extremity if a central venous stenosis or occlusion exists. The document strongly supports prophylactic intervention in failing grafts, because of documented improvements in thrombosis rates and graft survival when such a practice is implemented. The DOQI defines circumstances under which PTA or revision should be performed and sets recommended technical success rates as well as long-term results. The guidelines also address the percentage of patients who should be using catheters for long-term dialysis and set standards for success rates, immediate and late complications. Overall, the document clearly defines where concrete data do and do not exist. This can guide future research in this area, including issues of imaging and intervention.