AV Fistula First Breakthrough Initiative

An update on the background, progress, and challenges facing Fistula First.

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There is extensive medical evidence that provides support for the native (autogenous) arteriovenous fistula (AVF) as the optimal vascular access for the large majority of hemodialysis patients. The AVF is associated with a significantly lower rate of complications, hospitalizations, mortality, and costs when compared to other types of vascular access (ie, prosthetic grafts and catheters) for long-term hemodialysis. Despite such evidence, the US has lagged significantly behind other developed countries in AVF use.[1]

The National Kidney Foundation's original Dialysis Outcomes Quality Initiative (K/DOQI) produced a series of renal care guidelines, including practice recommendations and outcome goals for vascular access, in which the existing problems related to vascular access were underscored and evidence was presented in support of increasing AVF use.[2] Based on established national health goals (Healthy People 2010),[3] the Centers for Medicare & Medicaid Services (CMS) also recognized the importance of addressing the vascular access problem in the US.

To address this significant problem and health care improvement opportunity, CMS consulted with the End Stage Renal Disease (ESRD) Networks and representatives from the dialysis provider community. The result was a national project launched in 2003 to increase AVF use throughout the US, originally known as the National Vascular Access Improvement Initiative (NVAII), later to be known as Fistula First. A work group was assembled and, with the guidance of a leading health care quality improvement organization (Institute for Healthcare Improvement), developed a clinical change package consisting of 11 specific behavioral system changes considered crucial to improving AVF rates. These are behaviors that have been identified in clinical practice as providing the greatest success in optimizing AVF outcomes. The change package was intended to build on the existing K/DOQI practice guidelines, adding evidence-based guidelines and best practices identified by the NVAII work group. In addition, a robust toolkit was provided, which included literature, tools (eg, algorithms, slide programs, sample policies, and procedures) and resources needed to implement the recommendations and evidence-based guidelines at a local level (through the ESRD Networks) in the renal community. These supporting items were necessary to assist practitioners to move from guidelines to actual implementation. A data collection system designed especially for this project was also provided via a work group and CMS and now provides consistent, ongoing national and regional data on AVF placement in prevalent and incident patients.[4]

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Based on the success of this NVAII project (then known as Fistula First), CMS formally adopted it as an agency breakthrough initiative in 2005.[5] The resulting Fistula

First Breakthrough Initiative (FFBI) is also currently known as AV Fistula First. A broader spectrum of national associations and practitioner groups were invited to join, and the original project was expanded using a voluntary coalition model.[6] Physician groups such as the Society for Vascular Surgery, the American Society for Diagnostic and Interventional Nephrology, the Society of Interventional Radiology, the American Society of Nephrology, and the Renal Physicians Association have been actively involved in the initiative since 2005. Six task force groups covering all major aspects of project management (community education, practitioner education, clinical practice, quality measurement, program operations, and marketing) have actively worked during the past 2 years to harness the enthusiasm and commitment of multiple organizations and their representatives. Utilizing professional and social connections encourages practitioners to mentor and problem solve with each other to influence practice.

PROGRESS TO DATE

The original goal of the NVAII/Fistula First project was the same as the initial goal of the NKF K/DOQI (a 40% AVF rate in prevalent hemodialysis patients, with an endpoint of June 2006). When Fistula First was adopted as a CMS breakthrough initiative, a new more ambitious goal for AVF prevalence was set for June 2009 (66%). The most recent K/DOQI guidelines have also increased their recommendation on AVF prevalence rate to 65%.[7] Using December 2002 data as a baseline for the project, the national AVF rate was identified as 32.4% of all prevalent hemodialysis patients. The original goal of 40% AVF was achieved early (August 2005) and, as of April 2007, the AVF prevalence rate had risen to 46.1%. Additional progress will need to occur to reach the stretch goal of 66% within the next 2 years. An additional FFBI Coalition goal, based on the July 2006 K/DOQI guidelines update, is to reduce catheter use for permanent dialysis access (eg, not as a bridge) to less than 10% of patients.

The greatest improvement is occurring in centers where nephrologists are taking an active role in promoting AVFs in their facilities and communicating with their access surgeon and interventionist colleagues. Although overall success of an AVF performance improvement initiative is dependent upon the active participation of various disciplines, it is the nephrologists who play the most critical role because they control and direct management and referral of the patient. The proactive nephrologist is in a position to bring the various disciplines together and maximize the AVF opportunities for patients.[8]

In addition to the documented improvement in AVF rates, a number of other accomplishments by the FFBI Coalition include:

- a specific Web site to provide AVF information, resources, tools, and question follow-up (www.fistulafirst.org);
- a comprehensive surgical education and training program (video series) currently available on the Fistula First Web site and through the ESRD Networks, available at no charge;
- ongoing educational meetings for physician groups and an AVF surgical symposium sponsored by ESRD Networks throughout the country;
- a cannulation education and training video for dialysis staff, available at no charge through the ESRD Networks;
- a new billing code (G-0365) established by CMS specifically for reimbursement for AVF vessel mapping;
- a comprehensive listing of educational resources for chronic kidney disease patients and families, available on the Fistula First Web site;
- a series of position papers and recommendations for practitioners and organizations related to AVF improvement;
- a marketing package to spread the message of the initiative to patients and providers.

BARRIERS AND CHALLENGES

Despite the steady improvement documented as a result of the FFBI, there are still a number of remaining challenges to achieving the lofty goals. A major focus of the FFBI in 2007 is to address the catheter epidemic in this country. Some of the increase in catheter use is a byproduct of an increased AVF rate because a significant proportion of the new, more complex AVFs will fail early on, thereby requiring longer use of tunneled catheters for dialysis treatment. This issue has created significant discussion in the medical community, and dissenting voices have been raised about the long-term efficacy of AVFs. However, the AV Fistula First initiative has successful, established strategies and tools to address both early recognition and management of AVF failure and other causes of prolonged catheter use. There is also a concerted effort to find data collection sources that will provide the type of evidence-based outcomes required to answer concerns and influence practice.

Another challenge being addressed by the FFBI program operations task force and CMS is the issue of reimbursement. The newer, more surgically complicated AVFs are not being reimbursed at a rate commensurate with the time and effort required to construct as well as to maintain them. A pay-for-performance model has been

developed by the FFBI Coalition, based on providing incentives for both placement as well as maintenance of functioning AVFs. Also, the hope is that private payers will be proactive and develop their own AV fistula financial incentive programs, which would represent a win-win-win for patients, providers, and payers alike.

The FFBI Coalition is also actively supporting other medical specialty organizations (ie, the Renal Physicians Association and the Society for Vascular Surgery) in their bids to add appropriate AVF referral and placement measures to the 2008 Physician Quality Reporting Initiative. Another planned activity is an educational outreach to private insurance plans in an effort to engage them in supporting AVF construction through improved reimbursement rates.

To achieve the goal of 66% prevalence for AVFs, there is also a movement toward engaging physicians further upstream along the patient care continuum. Specifically, the FFBI Coalition is planning a marketing/education campaign for more general practitioners, hospitalists, and hospital-based intensive care specialists. Care for actual and potential chronic kidney disease patients (eg, diabetics) should include early diagnosis (through the glomerular filtration rate) and awareness of the importance of vein preservation for possible future hemodialysis sites. Patients with Stage 3 and Stage 4 chronic kidney disease should be receiving information on vascular access planning and vein preservation.

WHAT PHYSICIANS CAN DO

Active involvement of all medical disciplines is crucial. Recommendations include:

- learning as much as possible about chronic kidney disease, the K/DOQI guidelines, and the importance of vascular access planning for patients in the later stages;
- establishing collaborative relationships with renal specialists to ensure appropriate communication about patient referral and care;
- learning and teaching the 11 key clinical change concepts for AVF improvement and vascular access management;
- establishing an AVF Continuous Quality Improvement program based on the FFBI change package;
- utilizing the AV Fistula First Web site for vascular access and AVF information (patients and professionals);
- maintaining contact with the local ESRD Network for current information about educational opportunities and local initiatives;
- utilizing learning tools such as those found on the CMS DOQ-IT University Web site (http://elearning.qualitynet.org) in the Diabetes/Chronic Kidney Disease module where guidelines for early detection of renal disease, monitoring of blood pressure, monitoring of estimated glomerular filtration rates, and early referral to a nephrologist can be found.

There is no question that we have the ability to reach the FFBI objectives, but to do so will require the ESRD and medical community at large to become engaged in this effort. For more information on the FFBI, including educational materials, literature, and references, visit the Fistula First Web site at www.fistulafirst.org. ■

The analyses upon which this publication is based were performed under Contract Number 500-03-NW18 entitled End Stage Renal Disease Network Organization for the region of Southern California, sponsored by CMS, Department of Health and Human Services. The content of this publication does not necessarily reflect the views or policies of the Department of Health and Human Services, nor does mention of trade names, commercial products, or organizations imply endorsement by the US Government. The author assumes full responsibility for the accuracy and completeness of the ideas presented. This article is a direct result of the Health Care Quality Improvement Program initiated by CMS, which has encouraged identification of quality improvement projects derived from analysis of patterns of care, and therefore required no special funding on the part of this contractor. Ideas and contributions to the author concerning experience in engaging with issues presented are welcome.

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