Cardiac Rehabilitation/Secondary Prevention Programs

A Raft for the Rapids: Why Have We Missed the Boat?

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“There are risks and costs to a program of action. But they are far less than the long-range risks and costs of comfortable inaction.”

John Fitzgerald Kennedy

Every year, hundreds of thousands of patients experience a coronary heart disease (CHD) event and enter a period of time that is high risk, life threatening, and life altering—the medical equivalent of a ride down the turbulent and dangerous whitewater-rapids portion of a river. Fortunately, most patients survive these events, thanks in part to the prompt application of life-saving therapies in the home, ambulance, and hospital settings. However, for those patients who leave the hospital after a CHD event, the ride in the whitewater rapids has not ended. They remain at increased risk for future CHD events. Effective secondary prevention therapies are available in the posthospital setting, but unfortunately, some of those therapies, including cardiac rehabilitation/secondary prevention (CRSP) services, are underused. In fact, most patients who survive a CHD event do not receive CRSP services and can be compared with a group of people who are crossing the whitewater rapids of a river without a raft.

In this issue of Circulation, Suaya and colleagues present a landmark study that helps increase our understanding of the underuse of CRSP services: its severity, causes, and potential solutions. In their study, the authors report that only 50,000 (18.7%) of 267,427 Medicare-eligible patients among all eligible patients who survived a CHD event in 1997 actually participated in a CRSP program, a number that probably has not improved much over the past 15 years. Using Medicare billing data, the authors identified the percentage of patients who participated in a CRSP program from among all eligible patients who survived a CHD event in 1997. An assessment of patient, hospital, and community characteristics revealed that in all patient subtypes and in all hospital and community settings, only a minority of patients participated in a CRSP program within the year after their CHD event. Participation was particularly low when ≥1 of the following characteristics was present: older age, female gender, nonwhite racial/ethnic status, lower socioeconomic status, significant comorbid conditions, and long distance from the patient’s home to a CRSP center. Considerable geographical variation in CRSP participation rates also was noted, generally showing the highest rates of participation in the midwestern United States and the lowest in the southern United States. The reason behind this geographic variation is unknown, but at first glance, it appears that CRSP programs in the midwestern United States have already begun implementing effective ways to improve CRSP participation rates. Further investigation is warranted in this area.

The study by Suaya et al gives rise to several important questions about CRSP programs.

Is Underuse of CRSP Really as Big a Problem as It Seems?

The underuse of CRSP services has been documented consistently during the past decade. Published reports also have documented that CRSP improves patient outcomes, in a magnitude similar to the reduction in CHD mortality and morbidity rates obtained from aspirin, ß-blocker, and statin therapy, and probably with similar cost-to-benefit ratios. Furthermore, studies have shown that CRSP results in superior patient outcomes compared with the usual care provided in a clinical practice setting, with evidence that these benefits perhaps have been greatest in more recent years. These benefits probably occur because CRSP programs focus specialized resources and attention on lifestyle, medication, and other secondary prevention therapies and thereby improve the degree of lifestyle changes and use of preventive medications. With >80% of eligible patients ≥65 years of age lacking CRSP services and their associated benefits, it is clear that the underuse of CRSP is indeed a problem. The limited use of CRSP services by persons <65 years of age also has been reported and likewise appears to be a significant problem.

Why Is CRSP Underused?

Reasons for the underuse of CRSP are probably multiple and complex but generally center around barriers at the patient, provider, healthcare system, and community levels.

- Patient barriers. A significant portion of the barriers to CRSP participation revolve around patients themselves. One study, in fact, found that <50% of patients referred to a CRSP program actually enrolled in the program. Factors behind these barriers are multiple. Patients often...
are unaware of the need for and the benefits of CRSP. Others perceive it negatively as a gymnasium-based group exercise program that is not for them and is too far from home, too expensive, too inconvenient, and too time consuming. Some patients are unsure whether CRSP is covered by their insurance. Still others do not see the incremental value of a CRSP program above and beyond what they can do by themselves or with the help of their healthcare provider. Finally, some patients may not enroll in a CRSP program simply because of the perceived complexity of the referral and enrollment process, a process that can augment the already-formidable complexities of their medical care concerns (eg, patients often have been given a new, life-altering diagnosis, multiple new medications, and numerous anxiety-provoking tests, among other things).

• **Provider barriers.** Current policies specify that for patients to participate in a CRSP program, they must be referred by their healthcare provider. Because of competing demands on their time and attention, many clinicians may not remember to refer their patients to a CRSP program even if they are supportive of CRSP programs in theory. Some clinicians may be unsure which of their patients are eligible or appropriate for CRSP. Still other clinicians may not refer patients to CRSP programs because they do not perceive any incremental benefits of CRSP for their patients above and beyond the benefits their patients receive from the care already provided to them in their office setting.

• **System barriers.** Many leaders in healthcare systems, insurance companies, and policy-making organizations understand the importance of secondary prevention services such as CRSP but have difficulty seeing how they can promote their implementation. Other leaders may fail to see the incremental value of CRSP but rather view it as an added expense with limited short-term results. At the healthcare-system level, competing demands for resources in acute care settings often take priority over resource needs for chronic care and preventive services like CRSP. Last but not least, an important system-oriented barrier to CRSP use is that CRSP programs generally lack a strong “voice” in their support. Although CRSP staff members generally are quite passionate about their work locally, CRSP proponents have generally lagged behind other healthcare organizations in building a strong network of “lobbying” partners at the state and national levels. However, this deficit is gradually improving with the help of leaders in the American Association of Cardiovascular and Pulmonary Rehabilitation, American College of Cardiology, and American Heart Association. Until these efforts become more fruitful and unified with efforts from other healthcare organizations, however, supporters of CRSP will continue to come up short in the competitive push for resources and supportive policies that will help CRSP grow in stature and impact in the spectrum of cardiovascular care.

• **Community barriers.** The perceived need and actual demand for CRSP services can be affected by many influences that run through society, sometimes in conjunction with and sometimes in opposition to each other. Commu-
would participate in CRSP if the participation rate increased from the current national level of 18.7% to that seen in Nebraska (53.5%). Because only ≈50,000 Medicare patients currently participate in CRSP programs in the United States, such an increase in CRSP participants would nearly triple the number of Medicare patients who participate in CRSP programs. An increase in patients <65 years of age would likewise stress the current capacities of CRSP programs. Undoubtedly, such an increase in demand for services would create an enormous challenge for CRSP programs.

- Programs could potentially meet an increased demand for servicing by increasing their capacities (increasing personnel, space, and related services). Nevertheless, to realistically expand the delivery of CRSP to include all eligible patients, including those subgroups that cannot or will not participate in a traditional center-based CRSP program, CRSP programs must combine traditional and novel approaches to CRSP services.

- Third-party payers should link CRSP reimbursement with the implementation of a CRSP program of practice standards and its achievement of high levels of performance measures. The recently published AACVPR/ACC/AHA 2007 Performance Measures on Cardiac Rehabilitation for Referral to and Delivery of Cardiac Rehabilitation/Secondary Prevention Services, if fully implemented by clinicians, healthcare systems, cardiac rehabilitation/secondary prevention centers, and third party payers, will stimulate improvement in CRSP service delivery and will also provide a standardized method to measure, track, and report those improvements over time.

Suaya and coauthors4 should be congratulated for their efforts to point out our continuing deficiencies in providing CRSP services and related benefits to our patients with CHD. Their study is a wake-up call to all providers of cardiovascular health care to find solutions to this problem to help our patients maneuver more safely through the whitewater rapids of the rehabilitative and preventative stages of post-CHD event care. We have been missing this boat for too long. It is time for us all to find better ways to help our patients climb aboard.

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