The Affordable Care Act

New Opportunities for Cardiac Rehabilitation in the Workplace?

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Many people affected by cardiovascular disease (CVD) are working age. Employers bear a large percentage of the costs associated with CVD. Employers pay 80 times more in diagnosis and treatment than in prevention, although there is evidence that 50% to 70% of all diseases are associated with preventable health risks. As a result, the worksite is an appealing location to deliver health care. Cardiac rehabilitation has developed a track record of delivering improved outcomes for patients with CVD. Partnerships between cardiac rehabilitation providers and worksite health programs have the potential to improve referral and participation rates of employees with CVD. The current era of health reform in the United States that has been stimulated by the Affordable Care Act provides an ideal opportunity to reconsider worksite health programs as an essential partner in the health care team.

Cardiovascular disease (CVD) remains the number one cause of death in the United States and is responsible for one of every three deaths. The number of Americans with some form of heart disease is staggering. In 2010, the prevalence of heart disease in the United States was nearly 84 million, and the prevalence of stroke was nearly 7 million. In 2010, the combined prevalence of diabetes and prediabetes was nearly 107 million. Although primarily a metabolic disorder, the leading cause of death in patients with diabetes is CVD. In 2009, CVD in the United States accounted for more than one third of all deaths, with almost 2200 each day.1

Many of those affected by CVD are still in their working years, and employers are bearing a large percentage of the costs associated with this noncommunicable disease. Research has shown that 10 common risk factors account for nearly a quarter of the health care costs covered by employers and that six of these are known to contribute significantly to CVD. Furthermore, when the most common risk factors for CVD were combined, the clustered group predicted increased health care costs on the order of more than 200%.2 Another study found that employers pay 80 times more in diagnosis and treatment charges than in prevention programs, but there is evidence that 50% to 70% of all diseases are associated with modificable and preventable health risks.3 Nevertheless, evidence suggests that not all components of worksite health programs (WHPs) are equally successful. For example, a recent study of PepsiCo’s wellness program determined that of the two components offered, lifestyle and disease management, only the latter resulted in cost savings to employers.4 This supports earlier similar findings.5,6 Despite this, the worksite has long been an appealing location to deliver health care services because of a mix of convenience for the employee and potential cost savings for the employer. In response, numerous employers have, for many years now, offered WHPs aimed at improving employee health and lowering direct and indirect health care costs.

Meanwhile, cardiac rehabilitation (CR) has developed a solid track record of delivering improved outcomes for patients with CVD.7–9 Indeed, it is a class I indication for several cardiovascular conditions. See Table 1 for a comprehensive list of indications and the positive health outcomes associated with CR. Despite this, CR has been hindered by low referral, enrollment, and compliance rates.10 Many attempts have been made to identify the cause and possible suggestions for these shortcomings associated with CR have been put forth, but with limited success.

In the era of health reform in the United States—with its emphasis on improving patient outcomes by integrating delivery and incentivizing the use of high-value interventions—an opportunity may exist to reconsider the employer health clinic not just as another location from which CR can be delivered, but as an essential partner in the health care team. To explore this possibility, a brief overview of both WHPs and CR is presented. Health promotion incentives for employers and health care providers under the new health reform law (the Patient Protection and Affordable Care Act) are described.12,13 Finally, there is a discussion of the emerging opportunities for worksite CR.

WORKSITE HEALTH PROGRAMS: HISTORY, GOALS, AND BARRIERS

Worksite health programs—which have also been referred to as worksite health clinics, worksite wellness programs, or employee health and productivity programs—are employer initiatives designed to improve the health and well-being of current employees and occasionally their dependents, and rarely, retired employees. Programs such as these have a history that dates to post–World War II. For many years, they were offered only to executives or well-paid employees. Starting in the 1970s, the number of programs grew, as did efforts to include all workers.14 Worksite health includes elements of primary, secondary, and tertiary care with the majority of services falling into the first two categories.15 Elements of each type of program are listed in Table 2.

There are several models for WHPs, but most fall into three categories.16 They may contract out the entire operation, only the clinical portion, or partner with local health care providers to provide services as an extension of an existing non–employer-based center. Increasingly, health insurers are also developing WHPs on behalf of employers. Although not yet widespread, two or more small companies may partner to offer “near-site” health clinics, with the advantage that this helps to off-set the capital investment barriers to initiating a WHP. Mobile clinics are also used to deliver services to employees dispersed in many locations, but they are uncommon.

It is estimated that the return on investment in a comprehensive WHP is approximately $3.00, although there is wide variability.
in this number.15,17 The goal is to improve worker productivity by improving worker health. By most measures, confirmed in numerous studies, this goal is achieved by the vast majority of WHPs. From the employers’ standpoint, these favorable outcomes, beyond the return on investment, include reduced health insurance costs (for those employers who are self-insured),18 reduced sick time utilization and improved productivity,18 and improved employee job satisfaction.17

In terms of employee health, numerous studies have demonstrated the effectiveness of WHPs to include weight loss, tobacco reduction/cessation, and reduced cardiac risk factors.3,19 Some caution is warranted as WHPs are not homogenous entities. The offerings at each program can vary widely and, as stated earlier, it is unclear exactly which components of WHP are generating these positive outcomes.

Despite these successes, the National Worksite Health Promotion Survey found that only 6.9% of employers offer comprehensive WHPs, most of these at larger companies (>250 employees) with smaller employers facing a number of barriers in offering WHPs, the most significant of which is the substantial start-up capital required.20

Although successful, not all employees benefit equally. Employers face difficulties in reaching those in certain demographics such as blue-collar or service workers, and women.11 Moreover, these workers may have an increased disease burden. For example, jobs defined as “blue-collar” or service jobs tend to be on the lower end of the pay scale, feature higher levels of stress, increased job insecurity, are more likely to require shiftwork or long hours, and may be more sedentary in nature. Moreover, employees in these types of jobs have been shown to be more likely to smoke and less likely to take advantage of WHPs.7 For women or those who are primary care providers for children, family responsibilities may lead to lower participation rates in WHPs.

Cardiac rehabilitation is faced with a similar challenge in that those who have the greatest need for the services, have the least access or are the most reluctant to participate. By partnering, both CR and employers can attempt to overcome the barriers. For example, for employees who do not have sick time, an employer-sponsored WHP may offer greater scheduling flexibility by reducing travel time and not requiring the employee to use unpaid leave. For women, offering CR at the job site during the workday, and therefore not interfering with family care responsibilities that take place after work hours, may increase participation. From the employer’s perspective, having CR on-site will also mean additional resources to provide services to difficult-to-reach employees.

**CARDIAC REHABILITATION DELIVERY**

Cardiac rehabilitation is a comprehensive therapeutic approach to decreasing the risk factors associated with CVD. The core components of CR are included in Table 3. The initial stages of CR are medically supervised and prescribed by a qualifying health care provider, such as a physician or nurse practitioner. Four phases of CR are used covering the episode of care from acute care (phase I) to outpatient care (phases II to IV). The phases also imply the level of medical monitoring of the patient during the intervention. The American Association of Cardiovascular and Pulmonary Rehabilitation certifies programs that demonstrate that they are providing comprehensive interdisciplinary care with appropriate evaluation and assessment of outcomes. This certification is, however, not required to be in compliance with state and federal regulations with respect to operating and being reimbursed for CR services. The most common delivery model remains the clinic model, usually an outpatient center affiliated with a hospital. Outpatient CR can start any time after discharge from the hospital. Thirty-six visits of CR are covered by Medicare, with frequency of visits usually at two to three times per week for 12 to 18 weeks. Although the benefits of CR are numerous and well documented, a clear and ongoing underutilization of this important lifestyle intervention has been demonstrated.23–29

**THE AFFORDABLE CARE ACT: INCENTIVES WITH IMPLICATIONS FOR WHPs AND CR**

There are several features of the Patient Protection and Affordable Care Act (hereafter, ACA) that may provide incentives for employers to provide CR as part of their WHP.

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**TABLE 1. Clinical Indications for CR and Positive CV Outcomes Associated With Participation in CR**

<table>
<thead>
<tr>
<th>Clinical Indications</th>
<th>Evidence Supporting CR</th>
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<tbody>
<tr>
<td>Myocardial infarction</td>
<td>Decreases mortality up to 5 yrs postparticipation</td>
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<tr>
<td>Percutaneous coronary intervention</td>
<td>Decreases cardiovascular events</td>
</tr>
<tr>
<td>Coronary artery bypass graft</td>
<td>Improves modifiable risk factors</td>
</tr>
<tr>
<td>Chronic stable angina</td>
<td>Improves adherence with preventive medications</td>
</tr>
<tr>
<td>Heart failure</td>
<td>Improves function and exercise capacity</td>
</tr>
<tr>
<td>Peripheral artery disease</td>
<td>Improves QOL</td>
</tr>
<tr>
<td>Cardiovascular disease prevention in women</td>
<td>Fosters lifelong health behaviors</td>
</tr>
<tr>
<td></td>
<td>Decreases hospitalizations</td>
</tr>
</tbody>
</table>

Used with permission from AAVPR.10 CR, cardiac rehabilitation; CV, cardiovascular; QOL, quality of life.

**TABLE 2. Examples of Primary, Secondary, and Tertiary Care Provided by Worksite Health Programs**

<table>
<thead>
<tr>
<th>Component</th>
<th>Programs that emphasize public health measures such as helmet and seatbelt use, immunizations, safe sex, and weight control</th>
</tr>
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<tbody>
<tr>
<td>Primary care</td>
<td>Programs that emphasize reducing risk factors for disease such as weight loss, smoking cessation, healthy eating, moderate alcohol consumption, and reducing cholesterol levels. Cardiac rehabilitation is considered secondary care</td>
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**TABLE 3. Core Components of Cardiac Rehabilitation That Overlap With Common Interventions in WHP for Which There Is Evidence for Effectiveness**

<table>
<thead>
<tr>
<th>Cardiac Rehabilitation</th>
<th>WHPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking reduction cessation</td>
<td>✓</td>
</tr>
<tr>
<td>Weight management</td>
<td>✓</td>
</tr>
<tr>
<td>Glucose control/DM management</td>
<td>✓</td>
</tr>
<tr>
<td>Exercise participation/training</td>
<td>✓</td>
</tr>
<tr>
<td>Stress management/psychological well-being</td>
<td>✓</td>
</tr>
<tr>
<td>Lipid management</td>
<td>✓</td>
</tr>
</tbody>
</table>

Used with permission from Balady et al.21 and Arena et al.22 DM, diabetes mellitus; WHP, worksite health program.
Accountable Care Organizations and Payment Bundling

The promotion of accountable care organizations (ACOs) is a major initiative of the ACA. Accountable care organizations predate the ACA and until recently non-Medicare ACOs dominated the landscape.30 Their inclusion as a central component of health care reform has dramatically increased interest in and creation of additional entities. Both commercial ACOs and Medicare ACOs are making an increasingly bigger impact on how health care will be delivered. The defining feature of an ACO is a group of health care providers who accept the responsibility for the management of health care for a group of patients with a focus on measurable outcomes.31 Under the ACA, ACOs must include more than 5000 Medicare beneficiaries, a network of primary care physicians, and a legal and administrative structure to receive and distribute payments. It is hoped that ACOs will lower the cost and improve the quality of health care by integrating services throughout the episode of care.32 This model will move the payment structure away from fee for service toward a payment system where the quality and cost efficiency is rewarded.

There are other payment initiatives created under the ACA that may have an impact on CR. For example, the Acute Care Episode Demonstration Project was designed to test the bundling of payments for common medical procedures, four of which were cardiovascular and indications for referral to CR. Those are percutaneous coronary intervention, cardiac defibrillator implants and revisions, coronary artery bypass grafts, and cardiac valve procedures. For this project, the bundling of payments was tied to specific quality metrics. This program led into another initiative that began in January 2013, which expanded the list of conditions to 10.

Patient-Centered Medical Home

The patient-centered medical home (PCMH) is another attempt by the government to integrate and coordinate care more effectively to achieve cost savings and quality improvements. Although the ACO is primarily a payment mechanism, the PCMH is primarily a care delivery model whereby physicians take responsibility for a proactive and coordinated approach to an individual patient’s health care.34 The PCMH will create incentives for working with an interdisciplinary team to achieve optimal health outcomes. The PCMH model can be conceived in a broader context, some have called this a “medical neighborhood,”35 and could include employers providing health care through WHPs.

Medicare Readmissions Reduction Program

This program penalizes hospitals for readmissions occurring within 30 days for the some of the most common diagnoses, including myocardial infarction and congestive heart failure.33 CR programs can play a vital role on behalf of hospitals in meeting such expectations. A fundamental component of CR is patient education, particularly for medication awareness and compliance, a significant contributor to hospital readmission.34,35 Importantly, several studies have found that multidisciplinary, high-contact approaches—characteristics of CR programs—work in reducing hospital readmission.36–38

Furthermore, the transition from acute to postacute or outpatient care is often cited as one that can lead to deficiencies in the quality of care for patients with complex medical needs, but there is evidence for successful interventions to improve the transition and patient outcomes.39 Indeed, the ACA recognizes the importance of transitional care. The ACO and PCMH both emphasize coordination of care. Furthermore, the ACA encourages the use of paraprofessionals such as community health workers to deliver patient education about services and programs and assist in the coordination of health care.40

Incentives for WHPs

Beyond these major initiatives, the ACA also includes a number of smaller elements related to WHPs. For example, grants will be made available to small businesses to help implement comprehensive WHPs.40 In addition, there are two mechanisms by which employers can seek assistance from the Centers for Disease Control to evaluate—for the purpose of improving and program effectiveness.42 Finally, the ACA has made changes in the use of financial incentives aimed at improving employee participation in WHPs. Those changes include enabling employers to offer insurance premium discounts (at higher levels than was previously allowed) to employees who participate in WHPs.44 The premium discount may eventually reach 50%.

The Essential Benefits Package

The ACA mandates that general classifications of services be provided by health insurers. Among those is the category providing for rehabilitative and habilitative services.45 This may significantly improve access to CR for those who are low income or underinsured.

OPPORTUNITIES FOR WORKSITE CR PROGRAMS

Under the fee for service model, procedures and services tied to greater reimbursement rates are incentivized. Cardiac rehabilitation is a multidisciplinary, holistic approach that derives its strength from coordination of care between providers and addressing the multitude of factors that contribute to CVD. It is a resource-intensive service, which is poorly reimbursed, especially compared with invasive procedures. Accountable care organizations change the paradigm of provision of services. The ACA explicitly strives to incentivize exactly the type of evidence-based health care that is of high clinical value as CR is. As a result, because of the focus on improving patient outcomes, many of these initiatives represent an opportunity to improve the utilization of CR.

As one recent author pointed out, “There is growing emphasis on concepts that are second nature to cardiovascular rehabilitation . . . professionals, such as team-based and patient-centered care, accountability for outcomes, chronic disease management, prevention strategies, and care coordination.”46 Indeed, it has been demonstrated that many of the components of traditional CR programs have been successfully implemented in WHPs.47,48 See Table 3 for the core components of CR and the most commonly used interventions in WHPs.

What remains to be accomplished then is (1) bridging the gap between the health care provider and the employer and (2) finding innovative solutions that will allow for all of the necessary components of CR to be delivered in a non-hospital setting. Regarding the first challenge, there are some professionals who have an interest and an expertise in doing this. There are also some successful models. First, occupational and environmental physicians are trained in the development and delivery of workplace health initiatives.49 Because of their training as medical doctors and their expertise in issues related to the workplace, they may provide the bridge between the two that will allow coordination of services to be accomplished. Second, there has been interest among physicians to better coordinate care, even before the ACA.46 Direct contracting exists on the far end of the continuum of employer-sponsored health care. Two large companies, Perdue Farms and Quad Graphics, have both successfully implemented direct contracting models of health care delivery. Therefore the second challenge of delivering CR in a worksite setting, there is already good evidence to support the delivery of CR in nontraditional settings.47-49 A recent study found that a remote CR program delivered to patients via telemedicine had higher completion rates and comparable costs compared with in-clinic programs.41 Moreover, Milani and Lavi5 utilized health professionals qualified to deliver CR services (ie, nurses, dietitians, health educators, and exercise physiologists and psychologists) to operate a CR program.
TABLE 4. Factors Associated With Limited Referral and Enrollment in CR Programs1 and How the ACA and WHPs Uniquely Address Each

<table>
<thead>
<tr>
<th>Factor</th>
<th>How ACA and WHPs May Address Limited Referral and Enrollment in CR Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of or limited health insurance</td>
<td>The ACA mandates that all Americans obtain health insurance with few exceptions; for those employees who still do not have coverage, an employee-sponsored WHP would be even more valuable.</td>
</tr>
<tr>
<td>Work-related factors (job flexibility, loss of salary, self-employment, and lack of health care/disability benefits)</td>
<td>WHPs directly address these barriers. Employers would be incentivized to allow employees to attend sessions on-site, reducing the total time needed for these appointments.</td>
</tr>
<tr>
<td>Multiple comorbidities</td>
<td>The ACA incentivizes (through ACOs, PCMHs) efficient and effective care to patients who have multiple comorbidities.</td>
</tr>
<tr>
<td>Limited facilitation of enrollment after referral</td>
<td>• WHP clinic personnel have closer ties to patients and better access to those patients. • The ACO and PCMH incentivize care coordination. • Employees develop social support systems at work, which may improve participation in and compliance with CR interventions.</td>
</tr>
<tr>
<td>Lack of programs that serve specific geographic areas, including rural areas and low-income communities</td>
<td>WHPs reach employees where they spend a large fraction of their time—work.</td>
</tr>
<tr>
<td>Distance of CR from the patient’s home</td>
<td></td>
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<tr>
<td>Hours of operation of CR facilities</td>
<td></td>
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<tr>
<td>Parking and public transport access</td>
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</table>

1 Used with permission from Balady et al.11

CONCLUSIONS

Reform efforts are changing the paradigm of health care delivery in the United States. Among the many changes, the ACA is incentivizing health and wellness programming and disease management. Employers and health care providers may now have more reasons than ever before to partner to reach individuals who can benefit from services such as CR. For each, the potential to engage a captive audience over a long period increases the likelihood of a lasting adoption of a healthier lifestyle and improved health care outcomes for patients with established disease. Fuller integration and widespread implementation of WHP with CR should be a priority for both employers and health care providers given the burden of CVD and the proven track record of CR. Where feasible and appropriate, WHPs should adopt this proven model of disease management. Research efforts should aggressively continue in parallel. Gaining greater clarity on optimal models for program delivery, both for the improvement in participant health profiles and defining what components contribute to return on investment, is a priority. Given that we may be at the forefront of these innovations, there is an opportunity to construct prospective registries that, in conjunction with randomized trials, will be able to answer many questions.

REFERENCES


