

# Cardiac Rehabilitation and Wellness in the Corporate Setting

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Healthcare systems throughout Europe are feeling the strain due to the ever increasing demands made upon them to provide treatments and solutions for many cardiovascular related diseases (CV). The corporate setting provides an ideal location for delivering both cardiac rehabilitation and preventative strategies that can help combat the ever increasing burden that cardiovascular illness is placing upon society.<sup>1</sup>

For cardiac rehabilitation to be successful in the corporate setting, it is highly desirable that it becomes an integrated part of a comprehensive cardiovascular and lifestyle intervention program. The focus of such a program should be to provide a "seamless care" model that provides clients with a choice of interventions depending upon their health profile. These should range from:

- Guidelines to maintain optimum health because no discernable CV risk factors are present (prevention)
- When CV risk factors are identified, the delivery of a lifestyle management program to control and reduce them
- Upon the clinical diagnosis of CV disease, the delivery a comprehensive cardiac rehabilitation program

Certain aspects of these interventions may be combined depending on individual circumstances and ideally all of the above should be capable of delivery within the same surroundings.

Employees who have suffered a cardiovascular event and/or intervention may not wish to receive attention through programs that solely highlight their plight. In contrast, such individuals may feel more comfortable and amenable to being involved

in an ongoing scheme for all employees, which attempts to look at a continuum that moves from prevention to rehabilitation (Figure 52-1). Positioning an employee's rehabilitation following a cardiac event/intervention so that there is a perception of moving back along the wellness continuum towards optimum health may also offer a more attractive proposition.

Providing such a service in the corporate setting can potentially offer great benefits to all employees and not just the cardiac patient. In order for such models to be successful "upstream medicine" should be the main focus where prevention (primary/secondary/tertiary) is the constant goal.<sup>1</sup> Such an approach will also encourage traditional models of "corporate occupational medicine" to move alongside "wellness" and prevention in order to create new models of healthcare.

## Background to Corporate Wellness/Cardiac Rehabilitation

There are many corporations that have developed effective work site health promotion, fitness, wellness, and cardiac rehabilitation programs. The Johnson & Johnson "Live for Life" program has been made available to more than 25,000 employees at 43 locations in the US, Puerto Rico, Canada and Europe.<sup>2</sup> The long-term aim of the program was to help contain healthcare costs attributable to unhealthy lifestyles that are amenable to modification in the work setting.<sup>2</sup> Specific program objectives were to improve health knowledge, physical fitness, and nutrition, to control weight, stress, blood pressure, and alcohol



from the IHRSA International Institute of Exercise and Health for "creating outcome based programs including initial testing data on compliance and follow up testing."

Goldman Sachs, the international investment bank, has invested substantial monies in creating a comprehensive wellness center in London and has similar centers in New York and Frankfurt. This company is also developing similar wellness initiatives in their Far Eastern branches. Unilever, Marks & Spencer, and other European based companies are also developing programs focused on preventing and treating disease. In Holland, Achmea, a large insurance group, have recently taken a significant interest in linking fitness centers with wellness initiatives that ultimately will reduce cardiovascular risk and healthcare costs.<sup>8</sup>

There are also a number of corporate based cardiac rehabilitation programs. The US based Coors Brewing Company opened their Wellness Center in 1981 and shortly afterwards opened a phase II early post-hospitalization cardiac rehabilitation program for employees, spouses, dependents, and retirees. This program contained exercise and conditioning, vocational, educational, psychosocial and follow-up components.<sup>7</sup> Direct savings on healthcare costs plus replacement employee cost avoidance produced annual savings of \$325,000.<sup>7</sup> The goals of the program were to keep the employee in a job, to provide them with an opportunity to learn secondary prevention strategies, and to make appropriate work site changes to accommodate the employee when necessary. Corporate cardiac rehabilitation programs have also been developed at the Boeing Company, in Seattle, dating back to 1974, which were a development from the original CAPRI cardiac rehabilitation community programs in 1968.<sup>8</sup> Their corporate experience shows that while cardiac arrest and myocardial infarction were prominent in those early years, these have been replaced by problems with early angioplasty closure and chronic heart failure with atrial fibrillation.<sup>8</sup> Many employees had already experienced phase I and II programs and were subsequently looking for phase III and/or phase IV schemes that focus on cardiac/lifestyle risk factor management. Such approaches clearly mirror the "seamless care" model discussed previously and show a

growing interest in corporate wellness that includes both prevention and rehabilitation.

## **Lifestyle/Exercise Studies and Their Application to the Corporate Setting**

The SCRIP trial (Stanford Coronary Risk Intervention Project) in 1994 showed the effectiveness of intermittent tracking on cardiac risk factor reduction in cardiac patients.<sup>9</sup> Significantly less progression of heart disease in the experimental group (29% progression) was noted when compared with those patients who were not treated (41% progression). Low-fat diets, moderate-intensity exercise (15-45 minutes every other day), smoking cessation/relapse prevention, weight management, and lipid therapy were the main interventions used. This home-based program used tracking led by nurse healthcare professionals to follow up patients at 2-3-month intervals and has since been successfully used by the Stanford group in the corporate setting.<sup>9</sup>

Using methods employed in the SCRIP trial, the Health Education and Risk Reduction Training (HEAR<sup>2</sup>T) program was developed to target risk reduction in the workplace and healthcare setting.<sup>10</sup> Some of the methods/instruments used in the HEAR<sup>2</sup>T program have been implemented into the corporate setting at adidas. Using this approach, recent unpublished data from the UK based "Adifit for LIFE" program revealed the top four highest cardiovascular risk appraisal scores all belonged to women within the company! This highlighted the urgency of promoting the "Adifit for LIFE" program to women within the company, and was accomplished through health promotion, tracking, and follow-up. It succeeded in achieving a higher enrollment of women onto the "Adifit for LIFE" program. Add to this, recent research findings from the Diabetes Prevention Project where medication (metformin) helped to improve glycemic control, reducing diabetic risk by 31%, but not as effectively as intensive lifestyle interventions (exercise and diet) which reduced the development of diabetes by 58%.<sup>11</sup> Such findings from "lifestyle-related studies" increasingly suggest the potential effectiveness of "lifestyle change" programs if they are successfully applied and tracked.

## Corporate Cardiac Rehabilitation

Within cardiac rehabilitation we are concerned with “return to work” following myocardial infarction and coronary artery surgery. The next logical step must be to increase the provision for corporate programs that deal with cardiac rehabilitation. The most successful models should not deal with this in isolation, bringing attention solely to the cardiac patient, but in combination with preventive and wellness strategies that are offered to the entire workforce. If achieved effectively such approaches should only benefit the return of the cardiac patient into the workforce with minimum disruption to the patient, their family, and the work setting.

The following represents a case study of cardiac rehabilitation within the workplace using the “Adifit for LIFE” program.

### Case Study 2 (Client X, Adidas Employee)

A 52-year-old male, body mass index, 32. First visit to the adidas Wellness Centre, May 2003, with symptomatic retrosternal chest pain. Resting ECG normal, blood pressure elevated at 210/140 mmHg. Immediate medication to lower blood pressure recommended. Client X returned within 3 to 4 days of this initial visit where blood pressure was extremely elevated at 278/168 mmHg. Further urgent medicated blood pressure control was recommended and immediately supplied with the full approval/cooperation of the patient's own family physician. Subsequent cardiorespiratory stress testing following effective blood pressure control revealed significant ECG changes (inferolateral ST-segment depression) at fairly light treadmill exercise (Borg scale of Perceived Exertion Rating: 11). Significant risk factor modification program recommended and undertaken. April 2004, coronary angiography revealed significant coronary artery stenosis (70% in all three major coronary arteries). Client X was recommended immediate coronary angioplasty. He began a “prehabilitation” program at the adidas Wellness Centre to further reduce risk factors and prepare himself for surgery. A clinically super-

vised treadmill ECG-monitored walking program was also undertaken daily, at intensity levels below the ischemic threshold. July 2004 saw Client X receive four drug eluting stents to his right coronary artery followed by daily cardiac rehabilitation at the adidas Wellness Centre. March 2005 saw Client X receive a further four drug eluting stents to his left main coronary artery followed by a second course of intensive cardiac rehabilitation. Following his successful rehabilitation by July 2005, Client X was exercising on the treadmill completely free of symptoms within the adidas activity center. After a gradual increase in working hours over a 6-week period, Client X is back in full-time work.

In review, it is essential that an initial close liaison is established between the cardiologist/medical team/health insurers and family of the cardiac patient returning to the corporate workplace. The role of a corporate healthcare professional as a cardiac liaison link cannot be overestimated in this situation. Graded exercise testing prior to entry into a corporate wellness/rehabilitation scheme with full cardiorespiratory analysis is desirable, especially if the patient is going to be given an “exercise prescription” and is taking medications that will modify heart rate response to exercise (e.g. beta blockade).

Preferentially a full lifestyle/cardiovascular risk reduction program should be tailored to each employee. Getting an individual to contract into a cardiac rehabilitation and/or cardiovascular risk reduction/preventative program also helps adherence to goals that have been set. All employee records should be stored in a confidential/secure area preferably within the Wellness Centre. Also a close relationship with an employee's family physician, regularly supplying them with updated clinical documentation/information, will help promote more effective “case management.” Having a registered doctor/cardiologist linked with corporate wellness programs also offers a distinct advantage here. Similarly, such links should be generated with corporate human resource (HR) departments but only with the employee's signed consent to share information and with complete confidentiality guaranteed.

Program components should include those recognized as essential to the effective delivery of cardiac rehabilitation services and those recom-

mended by the appropriate national/international cardiac rehabilitation organizations (i.e. the European Society of Cardiology Guidelines on Cardiac Rehabilitation and Secondary Prevention), notably: exercise/conditioning, nutritional/dietary counseling, cardiac risk factor management, smoking cessation/relapse prevention, stress management, vocational, educational and psychosocial aspects, quality of life measurements specific to cardiac populations, and evaluation/outcome measures for the program. In addition, it is highly desirable that a behavioral counseling approach is taken when delivering cardiac rehabilitation/wellness/preventive services to employees, promoting a client-centered approach towards lifestyle change and cardiovascular risk reduction/management.

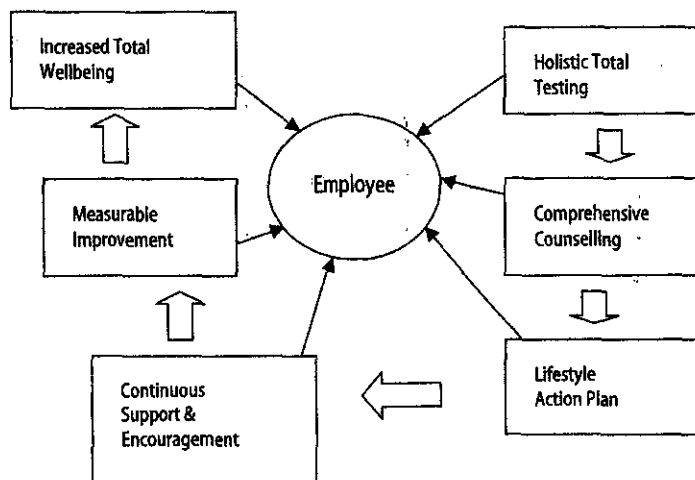
## The Wellness/Cardiac Rehabilitation Corporate Facility

Ideally such a facility should be multipurpose in design and cater for both wellness/preventive and cardiac rehabilitation programs. In an ideal setting the following may be envisaged; a resting metabolism measurement laboratory, a stress testing/clinical evaluation laboratory, essential

cardiac resuscitation/life support equipment, lifestyle counseling facilities, a physical activity center, and health education/resource facilities. Consequently new and innovative models for corporate wellness/cardiac rehabilitation service provision should be created. These should include comprehensive "needs assessment profiling" detailing a company's specific requirements before final programs are designed. In addition, together with creating data-based programs that cover health profiling and economic benefits (e.g. reduced absenteeism, reduced employee turnover, improved productivity), efforts to make such programs increasingly cost-effective in terms of capital investment and revenue generation over the medium to long term are essential for corporate wellness to develop and reach its true potential.

## Case Study 3 (the "Adidas/Wellness International Model For Corporate Wellness")

This model uses a "seamless care" approach to provide both cardiac rehabilitation and preventive medicine services within the corporate setting (Figure 52-2). Initially adidas UK, one of the



Proactive; Prediction, Intervention, Prevention & Improvement

FIGURE 52-2. The adidas/Wellness International model for corporate wellness.

world's leading sporting goods brands, provided substantial funding to create a unique wellness center in their Area North headquarters in Stockport, England. Following substantial capital investment and an initial "lead in" time to create the center, and its programs, adidas entered into a strategic partnership with Wellness International. The latter were contracted to provide wellness/preventive and cardiac rehabilitation services to adidas employees. The success of the center and its programs has attracted other corporate and sporting agencies to purchase the services of Wellness International using its international staff of healthcare professionals. Through a profit share arrangement, adidas are now able to recover a significant proportion of the costs for providing wellness/cardiac rehabilitation services to their employees and work strategically with Wellness International to further develop their programs. This has resulted in close links with several international partners including the HEAR<sup>T</sup> program at Stanford University, Palo Alto, California and the "Life Wellness Institute" in San Diego, California. This example serves to demonstrate an innovative approach to making wellness work in the corporate setting and fits perfectly into the adidas philosophy of being a world leading sports brand and "the performance company."

## The New Wellness/Cardiac Rehabilitation Professional

With the development of new "seamless" care corporate wellness/rehabilitation programs, there is an emerging need to create a new "brand" of healthcare professional. It would be highly desirable that such a "wellness professional" develops a "skills set" that combines the essential elements of clinical medicine, cardiac rehabilitation, nutrition, health/fitness, and behavioral counseling. This mirrors, but on a broader scale, the "nurse/healthcare practitioner" model already used in family practice in both North America and certain areas of Europe. Corporately this has already been recognized in the UK, with adidas, Wellness International and Technogym (Italy) all taking an interest in promoting the emergence of this new "Wellness Professional." Most recently, a new and innovative

Master of Science (MSc) university degree course in Preventative Medicine and Wellness has been launched in the Northwest of England, its inspiration coming to a large degree from the success of the adidas/Wellness International corporate programs.

This new "Wellness Professional", in addition to the skills described previously, should be competent and certified in basic/intermediate cardiac life support, phlebotomy and have attended/received training in clinical ECG interpretation and behavioral counseling techniques. As corporate wellness grows, exciting opportunities are on the horizon for this new "wellness professional."

## Summary

To emphasize the potential need for a "seamless care" corporate wellness model that includes cardiac rehabilitation, the following comment relating to the WHO MONICA Project and cardiovascular disease is very apt:

In the light of shrinking resources for healthcare worldwide, the preventative approach is the only way to stop the growing epidemic and deal with the problem in future generations.

(Dr Ingrid Martin, Head, WHO Cardiovascular Diseases Programme, February 2000)

Add to this comment, recent findings from the last 3 years of the UK *Sunday Times* review to find the top 100 companies in Britain.<sup>12</sup> This reported a worrying and consistent finding from employees who work for these companies, notably, "work interferes with my health" (Jonathan Austin, CEO Best Companies). The picture is becoming clearer, the workplace represents a captive arena to cater for people's health and deal with cardiovascular risk and/or disease. Corporate organizations should be encouraged to look at the "profit and loss" of their employees' health together with the profit and loss of their company's financial performance. "If a corporate business places a great emphasis on the performance of its people, it follows, that helping to look after their health makes perfect sense" (Neil Snowball, International Director of Wellness for Goldman Sachs).

However, convincing corporate organizations to provide wellness/cardiovascular risk management interventions for their employees still remains a significant challenge. There is still a paucity of real data on a large scale to substantiate such programs, especially in Europe. There is certainly a need to develop corporate wellness/cardiovascular strategies that match the philosophy of the business world in that they make "good business sense." Fading rapidly are the days when corporate organizations provide wellness interventions in the workplace to "feel good about themselves." In such situations these interventions are so often the first things to go, when in business terms "the going gets tough." In other words, they may have been perceived as a business luxury and not an essential. However, if they start to pay for themselves with data to prove it, then the climate will hopefully change and they will become "essential" to the business.

There are still many challenges and unanswered questions. What about smaller companies who simply cannot afford corporate wellness programs and/or facilities? Can they combine with other smaller companies to purchase these services on a periodic basis? Can government agencies be persuaded to consider tax relief for companies that provide wellness "upstream" initiatives for their employees? Can insurance premiums be reduced for companies and employees who demonstrate improved cardiovascular risk profiles? Especially when private healthcare costs are rising in Europe and more employees at senior/management levels expect this cover as part of an employment benefits package.<sup>13</sup>

Perhaps we should realize that "health promotion" in the workplace is no longer a sufficient label under which to provide cardiovascular risk reduction and management programs and health intervention should be incorporated into a new and improved "corporate wellness concept."

The potential for corporate wellness and cardiovascular risk factor management in the workplace is enormous, hence the forecast by many experts that "wellness" is the next "trillion dollar" business.<sup>1</sup> Equally many business leaders are recognizing that "successful companies of the millennium will have a wellness plan to go alongside their business plan."

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