Global Charter on Cardiac Rehabilitation: A CALL FOR ACTION

PROPOSED VERSION 2

Primary Writing Panel: JA Stone\textsuperscript{1,2}; JP Buckley\textsuperscript{3,4}; DER Warburton\textsuperscript{1,5}; SL Grace\textsuperscript{1,6}

PREAMBLE

Cardiovascular disease remains the leading killer of adult women and men globally, and is a growing epidemic in low-income countries. However, as substantial gains in reducing acute cardiovascular mortality have been realized in the last few decades, the prevalence of people living with cardiovascular disease has increased significantly. Without systematic access to formal and informal programs of chronic cardiovascular prevention such as cardiac rehabilitation, these individuals will suffer multiple recurrent acute care events and/or unnecessarily premature death.

DEFINITION

The World Health Organization has defined cardiac rehabilitation as:

“The sum of activities required to influence favourably the underlying cause of the disease, as well as to provide the best possible physical, mental and social conditions, so that the patients may, by their own efforts, preserve or resume when lost as normal a place as possible in the community.”
Cardiac rehabilitation is the only proven chronic disease care process that significantly and substantially reduces the mortality and the morbidity (physical and psychological) associated with this insidious incessant disease. Despite the proven clinical and economic benefits of cardiac rehabilitation, it remains a chronically-underutilized resource (Candido et al., 2011; Suaya et al., 2007).

In addition to these improved clinical outcomes, cardiac rehabilitation is also highly cost effective, and in higher risk populations, may even be cost-saving (Brown et al., 2003; Papadakis et al., 2005). Furthermore, comprehensive programs of cardiac rehabilitation reach across the continuum of patient care between acute disease and chronic disease care, thus easing the transition of patients from life-threatening illness to lifelong productivity and well-being.

Cardiac rehabilitation programs are shown to significantly reduce mortality and repeat hospitalization (Davies et al., 2010; Heran et al., 2011; Martin et al., 2011). Of equivalent, and in some cases greater importance, is the significant improvement in the quality of life in persons with chronic cardiac disease (Davies et al., 2010). These benefits are demonstrated in patients with acute coronary syndromes, stable chronic angina, stable chronic heart failure, and post-percutaneous coronary intervention, coronary artery bypass surgery, cardiac valve surgery, cardiac transplantation and cardiac resynchronization therapy.

In addition to these improved clinical outcomes, cardiac rehabilitation is also highly cost effective, and in higher risk populations, may even be cost-saving (Brown et al., 2003; Papadakis et al., 2005). Furthermore, comprehensive programs of cardiac rehabilitation reach across the continuum of patient care between acute disease and chronic disease care, thus easing the transition of patients from life-threatening illness to lifelong productivity and well-being.

The strong evidence base for cardiac rehabilitation is such that any person diagnosed with cardiovascular disease should be offered a comprehensive program, which is respected in equal importance to the medical or surgical interventions they receive following such a diagnosis. For these reasons, proven mechanisms to facilitate universal access for indicated and eligible patients across sexes, age, ethnocultural and socioeconomic diversity should be instituted, such as systematic referral strategies (Grace et al., 2011).
Cardiac rehabilitation programs facilitate chronic cardiovascular disease care by specifically targeting patients’ cardio-metabolic health and psychosocial well-being. The core components of contemporary cardiac rehabilitation programs are therefore intended to mitigate, or even eliminate, the atherosclerotic disease processes that drive cardiovascular disease progression and the related effects this has on psychosocial health. These components include individualized programs of cardio-protective pharmacological therapies in conjunction with health behaviour and education interventions of physical activity and exercise, nutrition, weight management, psychological health, and smoking cessation that are sensitive to and reflective of the socio-economic and cultural mosaic in which they are offered (Stone et al., 2009; BACR, 2007; AACVPR, 2004). These parameters can be applied to primary prevention where appropriate.

Fully comprehensive CR service models may not be feasible in some middle and many low-income countries due to shortages of healthcare professionals and other resource constraints. However, non-equipment based, modified service delivery models are also shown to be effective, and should be tailored to the local context. Chronic disease care programs, such as cardiac rehabilitation, can be offered and are equally effective in institution-based, community-based and home-based settings diverse settings while ensuring a minimum care standard (Clark et al., 2010; Taylor et al., 2010; Dalal et al., 2010, Wood et al., 2008; Jolly et al., 2006). The Secondary Prevention of coronary heart disease for All in Need (SPAN) framework forwards a flexible model that can be adapted to diverse settings while ensuring a minimum care standard (Redfern et al., 2011).

Both government and private organizations responsible for the provision of patient care services can no longer deny patients with cardiovascular disease access to cardiac rehabilitation.

We call to action those responsible for administering patient care:

1. To establish cardiac rehabilitation as an obligatory, not optional service
2. To support both low-to-middle and high-income countries to establish and augment, respectively, programs of cardiac rehabilitation to ensure broader access to these proven services

We call to action CR organizations and associations in high-income countries to partner and collaborate with those in low-to-middle income countries to support capacity-building and provide tangible toolkits for CR program development, initiation and maintenance.

We aim to maintain and grow this global consortium through partnership with international organizations, to consider and communicate on-going consensus on evidence-based standards for cardiac rehabilitation.
ORIGINATING ADVISORY PANEL

*T Briffa (AUS), S Bredin (CA), L Carlyle (CA), C Chessex (CA), A Clark (CA), A Contractor (India), P Doherty (UK), G MeloGhisi (Brazil), J Harris (CA), S Hinton (UK), A Jones (China), AC Kentner (CA), R MunozSandoval (Mexico), B O’Neill (CA), J Redfern (AUS), B Sanderson (US), & S Shanmugasegaram (CA).

Primary Writing Panel: JA Stone¹,²; JP Buckley³,⁴; DER Warburton¹,⁵; SL Grace¹,⁶

1 Canadian Association for Cardiac Rehabilitation,
2 Libin Cardiovascular Institute of Alberta & University of Calgary, Canada,
3 British Association for Cardiovascular Prevention and Rehabilitation,
4 Department of Clinical Sciences, University of Chester, UK
5 Physical Activity Promotion and Chronic Disease Prevention Unit, University of British Columbia, Canada
6 York University, University Health Network & York Central Hospital, Canada

Preliminary Interest from the following Organizations:

American Association of Cardiovascular and Pulmonary Rehabilitation
The Australian Cardiovascular Health and Rehabilitation Association
The British Association for Cardiovascular Prevention and Rehabilitation
The Canadian Association of Cardiac Rehabilitation
The Centre for East-meets-West in Rehabilitation Sciences, Department of Rehabilitation Sciences, The Hong Kong Polytechnic University.
REFERENCES


