



EDITORIAL COMMENT

How healthy is cardiac rehabilitation in Portugal?

Quão saudável é a reabilitação cardíaca em Portugal?

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The picture of cardiac rehabilitation (CR) in Portugal has been periodically framed by the Portuguese Society of Cardiology (SPC) through a survey carried out by the SPC's Working Group on Exercise Physiology and Cardiac Rehabilitation. Surveys are fundamental to measure the status of CR and are especially useful to define strategies that can fill the gaps in CR at the national level. It has long been known that CR is effective but underutilized due to already identified barriers.¹ The next step, besides implementing a national CR registry, which will be most helpful, is to define a plan for action, involving advocacy and other strategies to improve CR implementation.

The latest CR national survey, for 2019, published in the current issue of the *Journal*,² states that CR programs have a central role in cardiovascular (CV) medicine, but I would rather say, instead, that they should have such a role, because in practice they in fact do not. This remains a chronic issue in many countries, and in particular in Portugal.³

Looking at the present results of the 2019 survey² and comparing them to those of the previous survey (2013),⁴ there was an increase of 5% in the number of CR centers (n=25) and of 13% in the number of patients (n=2182) included in phase II programs. This increase has been progressive over time, since 1998, but always small. In fact, the issue is not only to have more centers, but also to improve their capacity in terms of numbers of rehabilitated patients,

which depends on the availability of material and human resources, as well on appropriate and systematic referral.

As in most countries,² ischemic heart disease, with 67%, represents the largest slice of rehabilitated patients, with 50% of the total for ACS.² The small increase in ACS patients referred to CR of 1.3% in absolute terms (9.3% vs. 8% in 2013) is clearly inadequate. The reported increase in the referral rate for phase II programs, planned or scheduled at discharge, revealed by the Portuguese Registry of ACS (ProACS),⁴ was certainly insufficient to significantly increase CR uptake among ACS patients. Planning and scheduling are different processes. Planning without effectively performing registration in a phase II program, without obtaining the patient's commitment, is obviously not enough. Increasing phase I CR programs with a structured discharge plan including a signed consent registration for phase II and pre-discharge schedule could improve the situation. At the national level, more initiatives for implementation of CR after ACS are needed. Advocacy measures and strategies on the part of medical societies, medical and patient organizations and universities need urgently to be adopted. It is not acceptable that there is solid scientific evidence for the benefits of CR, especially on total and CV mortality,^{5,6} but that clinical practice does not follow this evidence.

Regarding heart failure, the number of rehabilitated patients reached 14.5%² with a slight absolute increase of 1.8% (relative to the previous 12.7%),⁷ which is not surprising. For many reasons, heart failure patients are less often referred for CR than ACS patients. Barriers including age, depression, low level of education and lack of resources are responsible for this underuse of CR in HF.⁸ In addition,

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patients with implantable cardioverter-defibrillators or cardiac resynchronization therapy devices need to be referred for CR more frequently; the referral rate for these patients is only 4.2% in Portugal.²

What is really unacceptable is that only 10.2% of patients undergoing coronary artery bypass graft surgery and fewer than 6% of those undergoing surgical or percutaneous valvular intervention are included in CR programs,² when these patients could benefit significantly, especially in functional terms.¹ Cardiac surgeons need to be involved in the CR process, but this can be difficult since they spend most of their time inside the operating room, without time or availability for medical issues like CR. Motivation and demonstration of the benefits of CR in surgical patients need to be promoted among surgical teams, including nurses, an important professional group in rehabilitation teams.

The good news is the 33% increase in the number of phase I CR programs. These are particularly important, particularly in increasing referral for and uptake of phase II CR. Apparently easier at first sight, phase I programs are in fact challenging, since most centers do not have the means to create a dedicated team, and must use multi-tasking healthcare professionals, mainly nurses, sometimes physiotherapists and cardiologists, who are already involved in many other activities inside the hospital.

In contrast to the trend in phase II, the number of patients included in phase III CR programs fell by 37%.² Structured phase III programs are less standardized and frequently more difficult to define. At the same time, patients find it easier to participate in phase II programs, since they are closely attached in time to the CV event and are limited in duration. Many patients do not maintain long-term CR, even though the benefits of CR are known to be rapidly lost.⁹ It would be helpful if CR centers with phase II programs could also provide phase III programs or transfer the patient directly to a connected phase III program, as already happens in some Portuguese centers.²

Another encouraging sign is that 91% of the centers had a drop-out rate compatible with the quality indicators proposed by the European Association of Preventive Cardiology and other medical societies.¹⁰ However, drop-out rates of 26-68% in 9% of the centers² are completely unacceptable, necessitating investigation of the reasons for these figures. A drop-out rate of <25% is an accepted quality indicator, and so higher rates suggest that the programs need to be modified.

It is still the case that in several centers, phase II CR programs remain essentially exercise-based. It is necessary to reinforce the importance of the other components besides exercise, including risk factor control, nutritional and psychological assessment and intervention, and structured education, all of which are part of secondary prevention.¹⁰ It is not a good result when only 32% of programs offer a nutritional component and 68% offer psychosocial assessment to all CR patients.²

As a final comment, CR in Portugal is slowly improving, but the same barriers remain as in previous surveys. This could give rise to the development of new proposals for strategies to enable CR to be more effectively implemented. Additionally, new models of CR such as telerehabilitation and hybrid models, and more flexible programs, are needed to adapt to contemporary circumstances.

Conflicts of interest

The author has no conflicts of interest to declare.

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