

Editorial

The Need to Change our View on Pulmonary Rehabilitation

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Due to worldwide improved economical and Public Health conditions leading to increase in life expectancy, the proportion of older than 80 years EU population is expected to rise from 4.7% in 2010 to 12.1% in 2060. Patients often suffer from acute exacerbations of their chronic diseases resulting in frequent hospitalizations, as well as in General Practitioner visits. As result, the EU average health expenditure rose up from 5.9% in 1990 to 7.2% of Gross Domestic Product in 2010, and the projections show that it may further grow up to 8.5% in 2060 due also to other socio-economic and cultural factors. The impact of these changes is already being perceived and is worsened by increased pressure on public budgets, progressive government cuts in the number of health personnel, and growing requests and expectations from citizens for higher quality services and social care. As a consequence health systems will have to face increasing burden and different approaches compared to the past [1,2].

At the same time in the last decades Pulmonary Rehabilitation has become a corner stone of comprehensive management of Chronic Obstructive Pulmonary Disease (COPD) and, with less but increasing evidence, of other respiratory and non respiratory diseases. The positive effects of pulmonary rehabilitation on symptom control, exercise tolerance, activity of daily life and quality of life are undiscussed and do not need any further randomized controlled trial [3,4]. We need only a direct demonstration of positive effects on survival.

As in other field of medicine the present mean knowledge, abilities and training processes by doctors and physiotherapists are not enough anymore to face challenges posed by evolving Scientific, Economic and Political conditions. Clinicians and physiotherapists caring for respiratory patients, while maintaining their present and historical skills, must change their view and add new knowledge in these issues at least:

1. A more global approach to the patient, leaving the “disease-centered” toward a new “patient-centered paradigm of care” [5]. This task requires a cultural revolution and an effort to improve and increase personal knowledge. In other words we have to face a greater effort to keep into account the evolving pathologies which lead to a patient with multimorbidities requiring different skills and training needs [6]. As a consequence we propose not to speak about “Pulmonary Rehabilitation” anymore, but rather about “Rehabilitation of patients with (also) respiratory problems”.

2. The care of the “chronically critical” patient requiring skills in the care of long-term critical conditions like the “ICU induced neuro-myopathy” and associated cognitive problems [7].

3. The end-of-life and palliative care involving ethical issues. This task requires a new approach to diseases including a deeper empathy with patients in the frame of the different religious uses and traditions of each society [8].

4. Use of technology. Recent development of tools, like non-invasive ventilation-aided exercise training and neuromuscular electrical stimulation, may allow sequential levels of intervention [9,10].

5. All these challenging task may find help by the use of new technologies and tele-rehabilitation programs [11]. Tele-rehabilitation has been performed by means of phone calls and messages, email, video phones, websites or mobile phones, video-conferencing; biological electronic sensors; medical devices programmed at distance; dedicated Internet softwares. Application was after hospital discharge or to maintain benefits. Video-conferencing can reach patients in rural/remote areas with difficult access to services [12]. The training to technology should be directed to physiotherapists in order to make them able to act in accordance with predefined protocols [13].

6. Personalised programs of rehabilitation. The term “personalised medicine” has been used to describe the use of genomics, proteomics and biomarkers to precisely tailor therapy according to phenotypic characteristics of an individual patient. Although Pulmonary Rehabilitation is still far from this level of knowledge, we can plan personalised programmes according to individual patient’s clinical, functional, environmental and social factors. We believe that this would be also a useful field of research [14]. This approach would allow resource savings for poor responders or first-stage patients and optimal treatment for responders and more severe patients.

Pulmonary rehabilitation has travelled a long way from the initial condition of “art” toward science, and there is still a long and winding road to do.

References

1. 2012 Ageing Report: Economic and budgetary projections for the 27 EU Member States (2010-2060), chapter 3.

2. 2012 Ageing Report: Economic and budgetary projections for the 27 EU Member States (2010-2060), chapter 4.
3. McCarthy B, Casey D, Devane D, Murphy K, Murphy E, Lacasse Y. Pulmonary rehabilitation for chronic obstructive pulmonary disease (Review). *Cochrane Database Syst Rev*. 2015; 2: CD003793.
4. Spruit M, Singh SJ, Garvey C, Zulwalack R, Nici L, Rochester C, et al. An official American Thoracic Society/European Respiratory Society statement: key concept and advances in pulmonary rehabilitation. *Am J Respir Crit Care Med*. 2013;188:13-64.
5. Reuben DB, Tinetti ME. Goal-oriented patient care--an alternative health outcomes paradigm. *N Engl J Med*. 2012; 366: 777-779.
6. Mesquita R, Vanfleteren LE, Franssen FM, Sarv J, Taib Z, Groenen MT, et al. Objectively identified comorbidities in COPD: impact on pulmonary rehabilitation outcomes. *Eur Respir J*. 2015; 46: 545-548.
7. Ambrosino N, Makhbah DN. Comprehensive physiotherapy management in ARDS. *Minerva Anesthesiol*. 2013; 79: 554-563.
8. Ambrosino N. Babylon tower. *Rev Port Pneumol*. 2014; 20: 119-120.
9. Ambrosino N, Cigni P. Non invasive ventilation as an additional tool for exercise training. *Multidiscip Respir Med*. 2015; 10: 14.
10. Mazzoleni S, Montagnani G, Vagheggini G, Buono L, Moretti F, Dario P, et al. Interactive videogame as rehabilitation tool of patients with chronic respiratory diseases: preliminary results of a feasibility study. *Resp Med*. 2014; 108: 1516-1524.
11. Ambrosino N, Vitacca M, Dreher M, Isetta V, Montserrat JM, Tonia T, et al. On behalf of the ERS "Tele-monitoring of ventilator-dependent patients" Task Force. Tele-monitoring of ventilator-dependent patients: a European Respiratory Society Statement. *Eur Respir J*. 2016; 48 in press.
12. Vitacca M, Bianchi L, Guerra A, Fracchia C, Spanevello A, Balbi B, et al. Tele-assistance in chronic respiratory failure patients: a randomised clinical trial. *Eur Respir J*. 2009; 33: 411-418.
13. Brennan DM, Barker LM. Human factors in the development and implementation of telerehabilitation systems. *J Telemed Telecare*. 2008; 14: 55-58.
14. Ambrosino N, Cigni EM. Response to pulmonary rehabilitation: toward personalised programmes? *Eur Respir J*. 2015; 46: 1538-1540.