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Commentary OMICS International

EXPERT: Did We Get Lastly the Tool

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Abstract

A comprehensive training and decision support system (the EXPERT tool) had been recently developed. The tool integrates risk factors, types appropriate, medications and many other tools with the hope to make it easier and accessible to many healthcare providers in the field of cardiac rehabilitation.

Keywords: EXPERT; Interactive algorithm; Cardiac rehabilitation

Commentary

Cardiac rehabilitation was given class 1 indication but still under prescribed [1,2]. Many reasons lie behind including physician's ability to prescribe the appropriate frequency, time, duration, intensity, and the concern of safety. The issue is complicated even more by having many risk factors that influence the quality and quantity of exercise. European 2016 guidelines for cardiovascular prevention had recommended 1000–2000 kcal per week of energy expenditure of and recommended that resistance exercise to compliment exercise training of moderate intensity twice per week [1]. Neuromotor training is also recommended in specific indications.

With this complexity, having different guidelines and cardiac rehabilitation (CR) of different types, the idea of a digital system was a dream that seems had come to be a fact, and the so called EXPERT had been recently published [3]. European Association of Preventive Cardiology Exercise Prescription in Everyday Practice and Rehabilitative Training tool (EXPERT) Group started this tool by defining the diagnostic criteria for different cardiac diseases, risk factors, and exercise intervention goals. The tool had also incorporated in addition to patient characteristics, cardiovascular disease/risk factors, common cardiac medications, and its adverse events that might occurred during exercise. An interactive algorithm was generated to prescribe cardiac exercise based on the above model by 33 experts in the rehabilitation and three computer specialists from 11 European countries. The algorithm developed over 3-year period that addresses different ranges of exercise intensity (Figure 1).

It was noticed that the prescribed exercise intensities by the clinicians were very often not match the recommended intensity, strength-training exercises, and additional exercise training strategies were prescribed less frequently, and the rehabilitation program duration was often shorter when compared to the EXPERT tool advice. EXPERT validated among 18 cardiologists and physiotherapists expert in CV rehabilitation who agreed to propose exercise training modalities for 5 simulated cases.

It will be in addition, a tool to collect large amount of data on exercise prescription and behavioral changes in cardiovascular risk factors from different countries who might use the system in their daily clinical practice and benefited from its unique decision support system.

What is left is to study the benefits in daily practice and to see if it is a cost effective tool. The cost saving might become more pronounced when it is applied on outpatient/home-based CR programs.

Another model but uses a human factor is the Project Leonardo that evaluated the introduction of "care manager" nurses, trained in this specialized role into the primary healthcare system. The central targeted 1,160 patients living with cardiovascular disease, diabetes, heart failure, and/or at risk of cardiovascular disease to take a more active role in their health. With the support of dedicated software for data collection and care management decision making, Leonardo showed the positive impact of integrated software on patient health in the primary health care system [4].

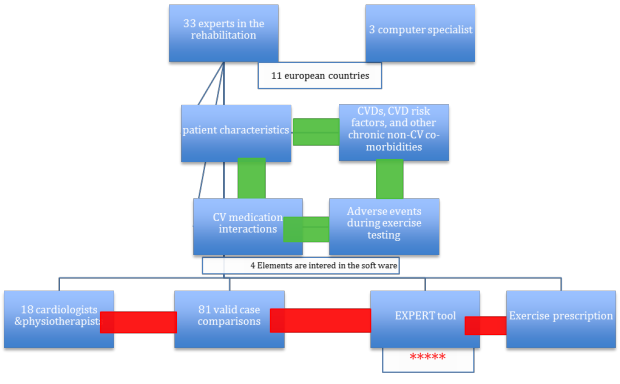

Figure 1: Diagram explaining the flow of EXPERT.

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