Home-based Cardiac Rehabilitation - the real barriers of programs at distance

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Introduction: Despite the established benefits of cardiac rehabilitation (CR), it remains significantly underutilized. Home-based CR (CR-HB) programs should offer the same core CR components as Centre-based programs (CR-CB) but several aspects need to be adapted, communication and supervision must be improved. Although CR-HB has been successfully deployed and is a valuable alternative to CR-CB, there is less structured experience with these non-uniform programs and further studies are needed to understand which patients (pts) are indicated to this type of program.

Purpose: To investigate pt-perceived facilitators and barriers to home-based rehabilitation exercise.

Methods: Prospective cohort study which included pts who were participating in a CR-CB program and accepted to participate in a CR-HB program after CR-CB closure due to COVID-19. The CR-HB consisted in a multidisciplinary digital CR program, including pt risk evaluation and regular assessment, exercise, educational and psychological sessions. The online exercise training sessions consisted of recorded videos and real time online supervised exercise training group sessions. It was recommended to do each session 3 times per week, during 60 min. A pictorial exercise training guidebook was available to all participants including instructions regarding safety, clothing and warm-up, and a detailed illustrated description of each exercise sessions. Also, for questions or difficulties regarding the exercises, an e-mail and telephone was provided. Once a month, real time CR exercise sessions was provided with a duration of 60min.

Results: 116 cardiovascular disease pts (62.6 ± 8.9years, 95 males) who were attending a face-to-face CR program were included in a CR-HB program. The majority of the pts had coronary artery disease (89%) and 5% valvular disease. Regarding risk factors, obesity was the most common (75%) followed by hypertension (60%), family history (42%), dyslipidaemia (38%), diabetes (18%), and smoking (13%). Almost half (47%) of the participants did at least one online exercise training session per week: 58% did 2-3 times per week, 27% once per week and 15% more than 4 times per week. Participants who did less than one exercise session per week reported as cause: lack of motivation (38%), preference of a different mode of exercise training such as exercise in the exterior space (26%), technology barrier such as impossibility to stream online videos (11%), fear of performing exercise without supervision (4%), and limited space at home (4%).

Conclusions: Our study based on real-life results of a CR-HB program shows a sub-optimal rate of participation in exercise sessions due to different causes, but mainly for the lack of motivation to exercise alone or preference for walking in exterior space. The knowledge of the CR-HB program barriers will facilitate to find out strategies to increase the participation rate and to select the best candidates for this type of programs.