

Qualitative study of a mobile health exercise intervention for older patients with myeloid neoplasms

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INTRODUCTION:Older patients with myeloid neoplasms experience decline in physical function and treatment-related side effects (e.g., fatigue). Exercise, complemented by a mobile health (mHealth) platform, may prevent and ameliorate these side effects.

OBJECTIVES:The objective of this two-phase study was to develop and adapt a mHealth exercise intervention by combining a home-based exercise program (EXCAP) and a mHealth delivery platform that incorporates symptom assessments for older patients with myeloid neoplasms. We herein present the findings from phase 1 of our mHealth exercise intervention (GO-EXCAP; see Figure).

METHODS:This was a qualitative study of 13 patients aged ≥60 years with myeloid neoplasms receiving hypomethylating agents. EXCAP is a low-to-moderate intensity progressive walking and resistance band exercise program. We elicited patient feedback, focusing on the content, format, and delivery of the intervention. Interviews were transcribed and analyzed using directed content analysis by two independent coders.

RESULTS and CONCLUSIONS:Mean age was 66.2 (SD 4.90); 63% were male, mean short physical performance battery score was 9.5 (SD 1.6). For intervention content, walking and resistance band exercises were feasible for patients and some also suggested biking, zumba, and Taichi. For intervention format, 1000-2000 steps/day for walking and 5-30 minutes/2-4 times per week for resistance band exercises were suggested as starting goals. Patients were willing to start the program during cycle 1 or 2 of chemotherapy. For intervention delivery, most were comfortable with using technology (smartphone/tablet). Interactions with an exercise physiologist either through a technology device and/or in-person were recommended. Patients also liked the instruction manual to be in both physical and video forms. Common patient-reported barriers to exercise included fatigue, lack of motivation, and not feeling well. Exercising with a friend/family member/community was suggested as a way to over barriers. In conclusion, findings from phase 1 will be used to tailor our GO-EXCAP intervention for this understudied vulnerable population.

Keywords: Mobile health, exercise intervention, older patients, myeloid neoplasms

Figure: GO-EXCAP intervention

