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Session Title: **Joint American College of Cardiology/Journal of the American Medical Association
Late-Breaking Clinical Trials**

Session Time: Sunday, May 16, 2021, 8:00 am - 9:30 am

Presentation Number: 406-09

Topic 1: Heart Failure and Cardiomyopathies

Patients Enrolled: 349

Published Acronym: REHAB-HF

Published Name of Trial: Rehabilitation Therapy in Older Acute Heart Failure Patients

Trial Type: Smaller study/randomized clinical trial (RCT)

Publishing Title: A Novel Physical Rehabilitation Intervention For Older Patients With Acute
Decompensated Heart Failure: The REHAB-HF Trial

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Background: Older patients hospitalized for acute decompensated heart failure (ADHF)
have high rates of physical frailty, poor quality of life, delayed recovery, and frequent
rehospitalizations. However, physical frailty is not addressed in ADHF care pathways.

Methods: NIH-funded, multi-center, randomized, controlled trial of a novel, transitional,
tailored, progressive, multi-domain (strength, balance, mobility, endurance) rehabilitation
intervention beginning early after hospital admission for ADHF and continuing for 36
sessions after discharge. The primary outcome was the Short Physical Performance Battery
(SPPB) score, a standard, validated measure of physical function in frail older persons,
assessed at 3 months by blinded observers. The main secondary outcome was 6-month all-
cause rehospitalizations.

Results: Total 349 patients were enrolled: age 60-99 years; 52% women; 49% non-white;
53% preserved ejection fraction (EF). At baseline, patients had markedly impaired physical
function, averaged 5 co-morbidities, and 97% were frail or pre-frail. Intervention adherence
(87%) and retention (91%) were excellent. At 3-month follow-up in the intervention group
relative to control, there were relatively large increases in SPPB of 1.5 ± 0.4 units ($p < 0.001$),
as well as in other clinically meaningful outcomes: 6-minute walk distance ($+34 \pm 11$ m;
 $p = 0.003$); Fried frailty criteria (-0.3 ± 0.1 ; $p = 0.03$); Kansas City Cardiomyopathy
Questionnaire overall score ($+7 \pm 3$ units; $p = 0.007$), and Geriatric Depression Survey-15
score (-0.7 ± 0.3 units; $p = 0.018$). Significant improvements were observed for both
preserved and reduced EF. At 6-month follow-up vs. control, there were no significant
differences in all-cause rehospitalizations (194 vs 213; $p = 0.32$), HF rehospitalizations (94
vs 110; $p = 0.69$), or deaths (21 vs 16; $p = 0.64$). There were 3 possibly related serious
adverse events, all self-limited.

Abstract Body:

Conclusion: A novel, early, tailored, progressive, multi-domain physical rehabilitation
intervention was safe and resulted in large improvements in physical function, frailty,
quality of life, and depression in a diverse population of older patients hospitalized for
ADHF, regardless of EF.