



THE IMPACT OF HOME HEALTH PHYSICAL THERAPY ON READMISSION RATES IN FRAIL OLDER ADULTS: A LITERATURE REVIEW

Ileana Armendi SPT

Tracey L. Collins PT, PhD, MBA, Board-Certified
Clinical Specialist in Geriatric Physical Therapy

OVERVIEW

Introduction

Purpose

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Results

Conclusion

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Clinical Relevance

Acknowledgements



OBJECTIVES

- **By the End of the Presentation:**
 - Gain insight on the need to determine optimal transitional care in the population of frail older adults.
 - Understand the literature regarding the effect of readmission rates on frail older adults receiving home health physical therapy.
 - Recognize the limitations and clinical relevance of this literature review.



INTRODUCTION

- Frailty is a state of increased vulnerability to poor resolution of homeostasis following a stress which increases the risk of adverse outcomes including falls, delirium, and disability.¹
- The population of frail older adults are known for their complex health status.^{2,3}
- Their healthcare needs are demanding and require individualized care to meet their necessities.
- Older age, multiple chronic conditions, and functional limitations are all factors associated with risk of readmission to acute hospital stays.⁴



INTRODUCTION

- Care for older adults with multiple comorbidities are often poorly coordinated as reflected in a steady increase in rates of preventable hospitalizations.⁵
- Optimal transitional care for older adults with frailty from acute care stays have yet to be determined to prevent readmission.^{3,6}
- Physical therapy services at home may be an effective solution in the prevention of acute care readmissions in frail older adults.⁶



PURPOSE

The purpose of this literature review is to describe the impact of home health physical therapy (HHPT) on readmission rates in frail older adults.



METHODS

METHODS

- Search Engines:
 - CINAHL
 - PubMed
 - ProQuest
 - ScienceDirect



METHODS

- **Search Limits:**
 - Peer-reviewed
 - English
 - Human subjects
 - Publication within last 10 years



METHODS

- **Search Terms:**

(“Home health” **OR** “home care” **OR** “home-based rehab” **OR** “home health rehab”) **AND** (Physical Therapy **OR** PT **OR** rehab **OR** rehabilitation) **AND** (Hospital readmission **OR** rehospitalization) **AND** (“elderly individuals” **OR** “elderly persons” **OR** “elderly patients” **OR** “older adults”) **AND** (Frailty **OR** Frailties **OR** Frailness)



RESULTS

RESULTS

- 677 studies were screened for eligibility
- Included articles with information regarding the impact of **Home Health Physical Therapy (HHPT)** on readmission rates in **frail older adults**.
- Total search yield = **3** studies



RESULTS

- **Study Characteristics:**
 - 2 randomized controlled trials (OCEBM Level II) and 1 quasi-experimental (OCEBM Level III)
- **Sample Population:**
 - Ranged from 108-770 participants (n=1,100)
 - Males and females 65+
 - Multiple comorbidities



RESULTS

Authors	Level of Evidence	Inclusion Criteria	Methods	Key Findings
Tinetti et al.	Level III	<ul style="list-style-type: none">- Age 65+- Dependence of >1 ADLs- Referred to home care after recent acute care hospitalization	Compared readmission to acute care in patients receiving HHPT with nursing care based on a restorative model (restorative group) to nursing and aides (usual care group)	Restorative/HHPT group had fewer readmissions compared to usual care group



RESULTS

Authors	Level of Evidence	Inclusion Criteria	Methods	Key Findings
Sandberg et al.	Level II	<ul style="list-style-type: none"> - Age 65+ - Dependent in at least 2 activities of daily living - Admitted to hospital at least twice or had at least 4 visits to outpatient or primary care in last 12 months 	<p>Compared ED readmissions in patients receiving at home nursing and HHPT (intervention group) to patients receiving just nursing care of medication monitoring (control group)</p>	<p>HHPT intervention group had significantly fewer ED visits compared to control group 6-12 months after baseline</p>



RESULTS

Authors	Level of Evidence	Inclusion Criteria	Methods	Key Findings
Finlayson et al.	Level II	<ul style="list-style-type: none"> - Age 65+ - Admitted with medical diagnosis - At least 1 risk factor for readmission 	<p>Compared unplanned hospital readmission in standard care, HHPT exercise only, nurse home visit and telephone follow-up (N-HaT), or HHPT exercise program and nurse home visit and telephone follow-up (ExN-HaT)</p>	<p>ExN-HaT (including HHPT) were less likely to have an unplanned readmission 28 days following discharge compared to rest of groups</p>



RESULTS

- **Tinetti et al.**
 - **13.2%** of the restorative model **participants receiving HHPT** were readmitted to the hospital during homecare compared to **17.6% not receiving HHPT**.⁴
- **Sandberg et al.**
 - **HHPT intervention group** had **significantly lower mean number and proportion** of ED visits not leading to hospitalization 6-12 months after baseline compared to control group ($p=0.08$ vs 0.37; **17.4%** vs 46.9%).²
- **Finlayson et al.**
 - At 28 days and 12 weeks following discharge, **8% and 20%** of the **ExN-HaT group (including HHPT)** respectively, experienced unplanned hospital readmission compared to **control group (not including HHPT)**, **20% and 38%**.⁵



LIMITATIONS

- No studies utilized the frailty index
- No studies independently isolated PT as primary homecare intervention
- No specific HHPT interventions were outlined
- Some participants in all studies passed away due to underlying comorbidities



CONCLUSIONS

- There is limited research available relevant to the impact of HHPT on readmission rates in frail older adults.
- Overall, those receiving HHPT had lower unplanned readmission rates than those receiving other types of post-acute care.
- The lack of evidence found in this literature review indicates the need for further research in regards to the impact of HHPT on readmission rates in older adults with frailty.



CLINICAL RELEVANCE

- Physical therapy services at home may decrease the rate of readmissions in frail older adults.
- Clinicians may consider referring home health physical therapy services to frail older adults in order to decrease readmissions to the hospital.



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ANY
QUESTIONS?