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Summary:

Impact of Home Health Physical Therapy on Readmission Rates for Individuals with COPD

Purpose/Hypothesis: The purpose of this systematic review is to determine the impact of home health (HH) PT on hospital readmission rates for individuals with COPD. (145)

Number of Subjects: N/A

Material/Methods: A literature search of EBSCO, PubMed, ScienceDirect, & Proquest was conducted using the search terms: (“Chronic Obstructive Pulmonary Disease” OR COPD) AND (Readmission OR “Hospital Readmission”) AND (“Physical Therapy” OR Rehab OR Rehabilitation OR Physiotherapy) AND (“Home Health” OR “Home Care” OR “Home Healthcare”). Search limits English, peer-reviewed, and human subjects. Study designs: RCT, quasi experimental, and cohort studies. Selection criteria: Adults 18 years or older with COPD receiving HH PT at least once a week and included a primary outcome of readmission rates defined as any acute exacerbation leading to a hospital readmission following discharge. Primary outcome: readmission rates, any acute exacerbation leading to a hospital readmission following discharge. Two reviewers assessed each study independently, for methodological quality, and came to consensus based on Oxford Levels of Evidence (2009).

Results: 267 articles were screened for eligibility. After detailed appraisal, five studies met selection criteria, which included three RCTs, one retrospective cohort study, and one case-control study. Levels of evidence ranged from 2-4. Samples ranged from 50-15,030 (15,476 total) with the mean age of 73.4 (18-92 years) with all participants having a confirmed diagnosis of COPD and a previous hospital admission that year. HH treatment parameters varied widely with durations ranging from 1-5 times per week lasting anywhere from 8 weeks to 2 years. No adverse events were reported. Four of the five studies reported statistically significant reduction in readmission rates (27% of the collected sample population were readmitted). One study reported less days in the hospital for the HH group compared to the control group (0 vs 7 respectively). Interventions with the most success (50%-reduced hospitalizations) incorporated respiratory therapy and specific exercise training to target dyspnea symptoms.

Conclusions: There is moderate to strong evidence that HH PT, with individualized discharge

plans, decreases hospital readmission rates in patients with COPD. Limitations included small sample size and vague description of interventions. Future research should utilize a larger sample size, in depth intervention descriptions, and high-level study designs, such as a prospective study. These adaptations will allow for a more proactive approach in analyzing ongoing influences on readmission rates.

Clinical Relevance: Hospital readmission rates for patients with COPD experience a significant increase in the absence of appropriate HH PT that emphasizes the fundamental strategies tailored to this specific diagnosis. Clinicians should consider Home Health PT as part of the discharge plan for patients with COPD to prevent hospital readmission.

KEYWORDS: COPD, home health physical therapy, readmission rates