

## A Paramedic Staffed Prehospital Program May Reduce Hospital Readmissions for Heart Failure

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# A Paramedic Staffed Prehospital Program May Reduce Hospital Readmissions for Heart Failure

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## STUDY OBJECTIVES

Hospital readmissions for heart failure (HF) are a major issue for providers, hospitals and patients. Centers for Medicare and Medicaid Services reported a 22% national 30-day readmission rate for HF patients. In a review of 47 randomized trials, the Agency for Healthcare Research and Quality found that only one trial, using a home visiting program with advanced nurse practitioners, reported a reduction in all-cause 30-day readmissions. The purpose of this pilot project was to assess the feasibility of a paramedic staffed home-visit program to reduce readmissions for HF patients.

## METHODS

Nine community paramedics currently employed by one of 5 participating EMS agencies were chosen as study paramedics and completed an educational HF curriculum consisting of 8 hours of classroom and 8 hours of clinical and scenario based training. In addition, they observed experienced HF practitioners perform patient exams. Upon successful completion of this training, they were referred to as Mobile Integrated Health Paramedics (MIHP). They functioned within their usual scope of care as defined by the state. Providers could request an urgent

MIHP home evaluation for study patients any time during the first 30 days after hospital discharge by calling the study call center. Emergency physicians (EPs) were available on call for circumstances when the cardiologist consulting with the MIHP requested a medication requiring the orders of an EMS medical command physician as outlined in state protocols (e.g. IV furosemide). In this circumstance, a 3-way conversation would be set up through the study call center. Twenty eligible patients with Stage C HF were consented into the study and had a scheduled home evaluation by a MIHP at days 2 and 15 after discharge. A standard template was utilized to document each MIHP house call and was scanned into the patient's electronic medical record. Patient and medical provider perception of the MIHP and the house call process of care were surveyed.

## RESULTS

A total of 49 MIHP house calls were performed on 20 patients. Urgent unscheduled house calls were requested and performed for 6 (30%) patients. Half of these patients received a second follow up house call and one patient received a third. MIHPs administered additional

medication at-home at the request of a cardiologist twice. EPs were consulted for medical command 3 times during the 10-month study period (twice for the same patient). Interventions utilizing the EP included orders for IV furosemide and in one case the recommendation that a patient be transported to the hospital via ambulance. There was only one 30-day HF readmission (5%). The incidence of 30-day all-cause readmissions was 15%. Emergency department (ED) evaluations were performed in 4 patients (20%), one of whom was admitted. There were no adverse events attributable to the MIHP house calls. Patient and provider perception of the MIHP house calls program was favorable.

## CONCLUSION

With ED command physicians and cardiologists working together, it is feasible to use trained paramedics to perform scheduled home assessments and acute medical interventions for HF. Our findings support the institution of a prospective, preferably randomized, controlled trial.

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