

Mobile Integrated Healthcare – Community Paramedicine: An Integrated and Novel Approach to Caring for Heart Failure Patients

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INTRODUCTION

Reduction in heart failure (HF) hospital readmissions has been the focus of the healthcare system in the past years. It is estimated that readmissions cost Medicare around \$17 billions a year^{1,2}.

Piedmont Healthcare (PHC) has utilized a multi-disciplinary approach in its efforts to reduce HF readmissions. It included follow-up appointment within 1 week, patient education in recognizing signs and symptoms of HF, medicine delivery to bedside, and sending patients home with scale among others. Patients’ daily activities and their home conditions have historically been out of the purview of healthcare providers.

Emergency medical services (EMS) invested in community services by providing a collaborative care model that addresses gaps identified in a community-specific needs assessment. Mobile Integrated Healthcare Community Paramedicine (MIH-CP) programs have focused on post-hospital health services which included follow-up visits for discharged patients who were identified as high risk for readmission and partnering with community health workers and physicians to expand coverage to underserved areas³.

OBJECTIVES

To assess the efficacy of the Mobile Integrated Healthcare - Community Paramedicine (MIH-CP) program in the reduction of HF readmissions and improvement in quality of life (QoL) based on EuroQol score.

METHODS

Piedmont Healthcare partnered with MetroAtlanta Ambulance Service to provide home visits to Medicare patients discharged home with a heart failure index admission, judged to be at high risk for readmission by Lace + score of > 60, and/or internal decision by case management team. Patients were enrolled from May 1, 2016 to December 31, 2016 at Piedmont Newnan and Piedmont Fayette hospitals.

MetroAtlanta is uniquely qualified as the only EMS provider with an accredited program to train paramedics for community based service in Georgia. In conjunction with Kennesaw University, they developed a 160 hour program to train extended practice paramedics to care for patients in the community setting.

The program was funded through philanthropic sources at no cost to the patients. The home visits included HF specific patient assessment, home safety checks, medication compliance confirmation, patient needs assessment, and education on medications, diet, and medical conditions.

The readmission rates of patients that completed at least one visit with the paramedic were compared to the readmission rates of patients that were not part of the program. Patient QoL was measured at onset and finish of program utilizing the EuroQol Eq-5D self-assessment tool⁴.

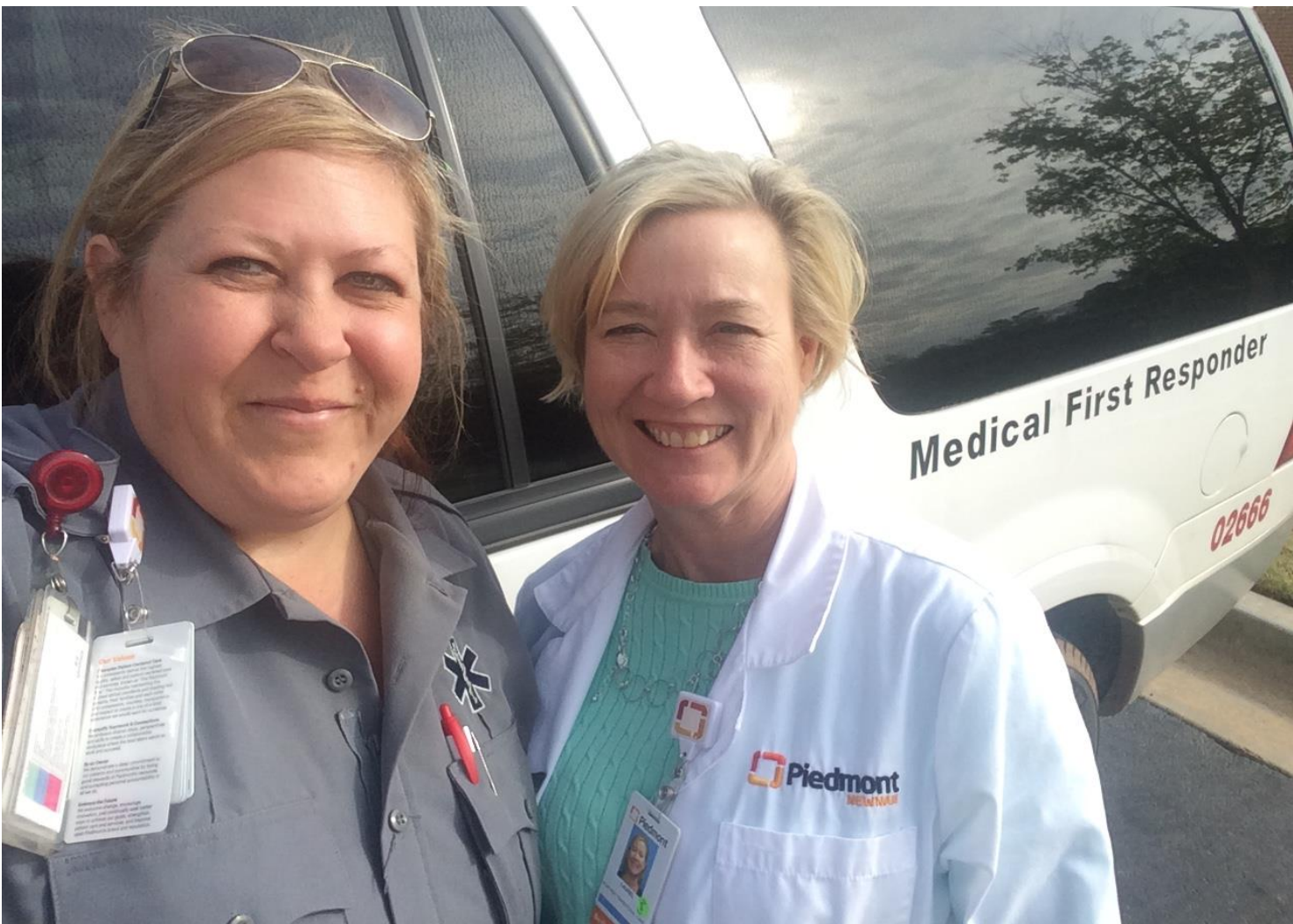
Patient Demographics	
	Patients Completing One In-home Visit:
Patients Referred: 148	115
Median Age: 74 years	Age Range: 38-96 years
Gender:	Female: 72 Male: 76
Race: Caucasian 64.3%; African American 31.8%; other 3.9%	

Table 1- Patients demographic information



Pictures-
Left. MIH Team for Piedmont Healthcare with MetroAtlanta community paramedic Michael

Right. Community paramedic Carrie and Transitions RN Laurel from Piedmont Newnan Hospital



RESULTS

148 patients were referred to the MIH-CP trial with 77.7% receiving at least one home visit (Table 1). The paramedics made a total of 1,316 home visits during this time (Table 2). The readmission rate for patients in the community paramedicine program was 13% versus 20.4% for Medicare discharged HF patients at the two participating hospitals. Patients reported a 21% increase in perceived quality of life per EuroQol scoring (Figure 1).

Date	MIH Readmits	MIH Patients	MIH Rate	Non-MIH Readmits	Non-MIH Patients	Non-MIH Rate
May-16	1	7	14.3%	4	8	50.0%
Jun-16	0	4	0.0%	2	9	22.2%
Jul-16	0	7	0.0%	2	12	16.7%
Aug-16	4	20	20%	4	19	21.1%
Sep-16	3	21	14%	4	16	25.0%
Oct-16	1	11	9.1%	2	22	9.1%
Nov-16	1	20	5.00%	2	5	40.0%
Dec-16	5	25	20.00%	3	22	13.6%
Total	15	115	13.0%	23	113	20.4%

Table 2- Readmission rate comparison, by month, for patients enrolled in community paramedicine program versus patients discharged to other care methods or self-care.

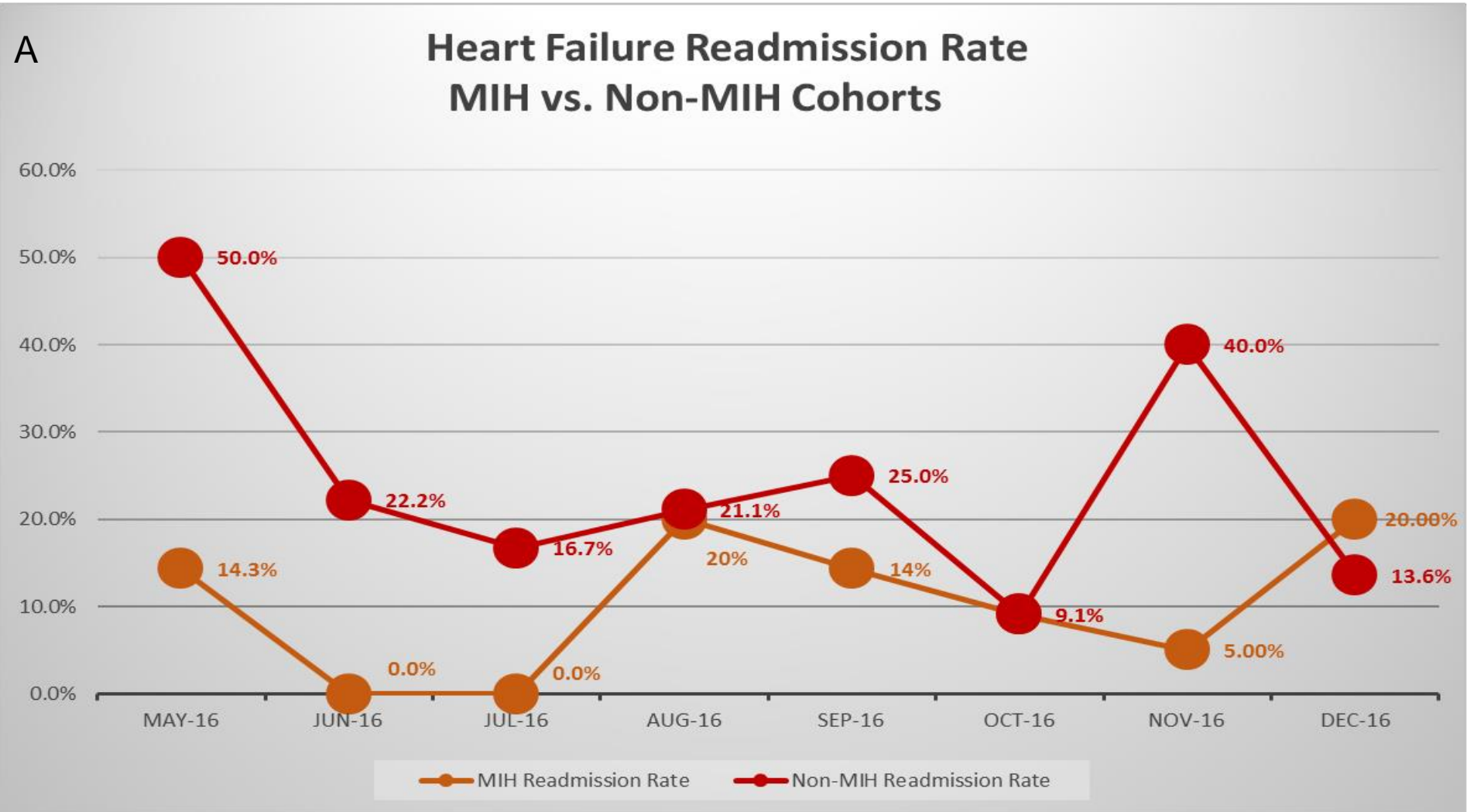
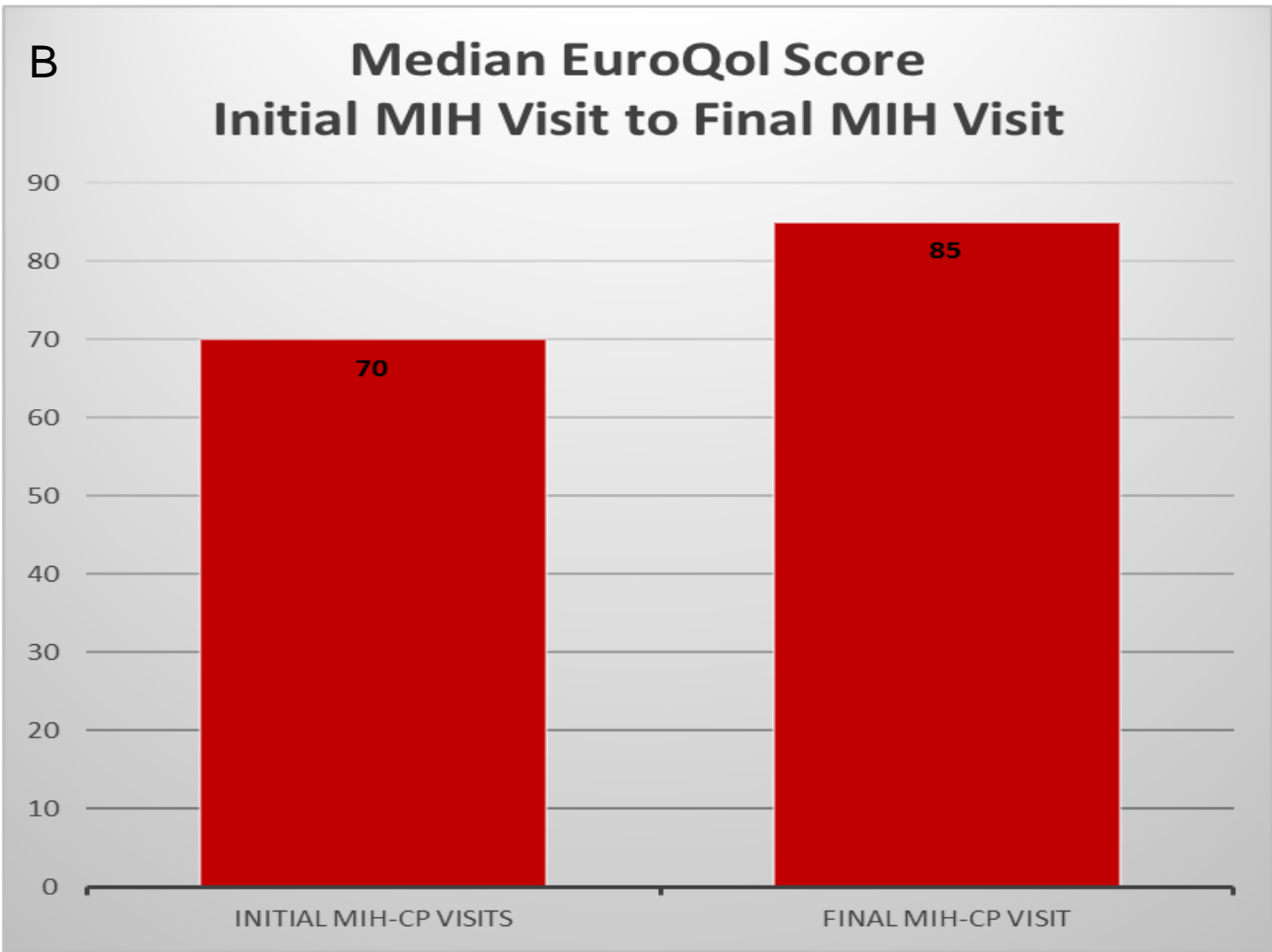


Figure 1 –
A. Monthly readmission rate of patients enrolled and visited by MIH-CP program and patients that were not part of the program.
B. Median EuroQol score on admission to MIH-CP program and Median EuroQol score on final visit from community paramedic.



CONCLUSIONS

The MIH-CP program can be a successful adjunct to in-hospital efforts to decrease HF readmissions. Patients that completed the program had significantly lower readmission rates and better QoL than patients discharged without this resource.

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