

IMPROVING HEART FAILURE

Reducing Hospital Readmissions Through Veteran-Centered Education

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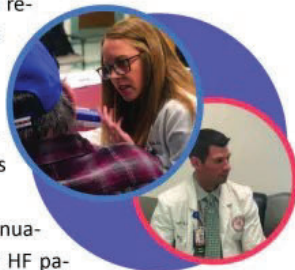
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BACKGROUND IPE and Project

The University of Texas at Austin College of Pharmacy Interprofessional Education (IPE) curriculum is grounded in the Institute for Healthcare Improvement's Triple Aim, of which population health is a key component.

- Heart failure (HF) is the inability of the heart to pump sufficient blood throughout the body to perfuse organs.
- An estimated 5.7 million Americans have HF
- Each HF diagnosis costs the VA \$21,300 to \$52,800 per year
- The Audie L. Murphy VA Hospital reported an 18.4% readmission rate for HF patients in 2019.
- Previous studies have shown that education alone, independent of other treatments, reduces HF readmissions by 39%.
- This project is focused on continuation of an educational course for HF patients at the VA to decrease hospital readmissions and improve quality of life.



OBJECTIVES

- REDUCE the number of HF readmissions for HF patients 30-days post-class compared to 30-days pre-class.
- INCREASE patient knowledge of HF by at least 1 point on average as determined by formal surveys administered during and 1 month after the HF class.

Reduce 1 month Readmission

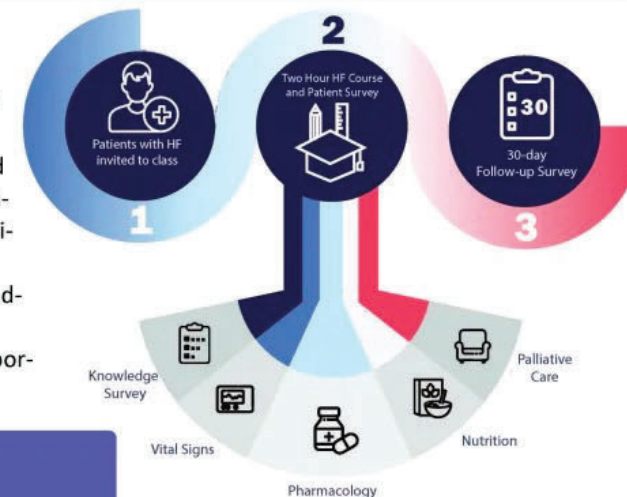


+1 point knowledge score



METHODS

- Veteran patients at the Audie L. Murphy Memorial Veterans' Hospital with HF exacerbation between June 2018 to April 2019, and October 2019 to February 2020 were identified and invited to attend a 2 hour heart failure educational class.
- The class included obtaining vital signs, a pre-class formalized survey establishing the veterans' knowledge of HF, palliative care education, a powerpoint presentation on the pathophysiology and medications commonly prescribed in HF, and a nutrition class.
- The education was provided by a multidisciplinary team which included pharmacy, palliative care and nutrition.
- Pharmacy students were involved in teaching the pharmacology portion, as well as individualized counseling for patients.



RESULTS

VETERAN POPULATION IMPACT

30-DAY HF READMISSIONS

Admissions Before Class



66% Readmitted
(n = 23 of 35)

Admissions After Class



3% Readmitted
(n = 1 of 35)

■ Readmitted ■ Not readmitted

KNOWLEDGE SURVEY



↑ 9 POINTS
median increase in patient knowledge score via post-class survey (n=5)

STUDENT KNOWLEDGE SECONDARY OUTCOME

- Student knowledge improved by 5.3 points on a knowledge survey taken before and after community project.
- Tested knowledge of HF pathophysiology and pharmacology.

- Hospital readmissions due to HF exacerbation show that for the veterans attending the class (n=35), 1 was readmitted and 34 were not. Of these patients, 23 had experienced a HF exacerbation in the month before the class. (Reduction of 48.6%)

- Those veterans reachable (n=5) for post survey showed a median increase in 9 points on knowledge of their disease state.



CONCLUSION

- Heart failure education appears to have decreased the number of hospital readmissions.
- This preliminary finding demonstrates that increased knowledge and education among veteran patients with heart failure has a long-term impact.

REFERENCES

- Department of Veterans Affairs (2020). Strategic Analytics for Improvement and Learning (SAIL) Data for FY 2019. Heidenreich PA, Trogdon JG, https://www.va.gov/QUALITYOF CARE/measure-up/Strategic_Analytics_for_Improvement_and_Learning_SAIL.asp
- Khavjou OA, Butler J, Dracup K, Ezekowitz MD, Finkelstein EA, Hong Y, Johnston SC, Khera A, Lloyd-Jones DM. Forecasting the future of cardiovascular disease in the United States: a policy statement from the American Heart Association. *Circulation*. 2011 Mar 1;123(8):933-44.
- Groeneveld PW, Medvedeva EL, Walker L, Segal AG, Menno DM, Epstein AJ. Association Between Spending and Survival of Chronic Heart Failure Across Veterans Affairs Medical Centers. *JAMA Network Open*. 2019 Jul 3; 2(7):e197238.
- Howie-Eskulvel J, Carroll M, Brinker E, Kao H, Pantilat S, Rago K, De Marco T. A strategy to reduce heart failure readmissions and inpatient costs. *Cardiology research*. 2015 Feb;6(1):201.