DEVELOPMENT AND EVALUATION OF A NURSE PRACTIONER DIRECTED HOME-BASED PRIMARY CARE PRACTICE AND ITS IMPACT ON EMERGENCY ROOM VISITS, OBSERVATION UNIT STAYS, AND HOSPITAL ADMISSIONS

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Problem

- By 2030, 1 in every 5 will be over 65 years old (Vespa, 2020)
- By 2034, older adults will outnumber children for the first time in United States history (Vespa 2020)
- Aging frail patients with multiple comorbidities need an accessible model of care
- Fragmentation in traditional healthcare is evidenced by silos, phone access, electronic access, and poor communication across disciplines, and settings
- Poor access to care is a contributor to avoidable hospital use
- Functional limitations and often social determinants of health barriers lead to greater hospital use when access is poor
- Home-confined older adults represent almost 21% of people over the age of 65 and require the costliest care
- Current access to HBPC in our healthcare system is limited and fragmented. Home-based medical visits were utilized for episodic transitional care visits only.

Purpose

- The purpose of this project is to implement an evidence-based HBPC practice for the Center for Healthy Aging.

PICOT

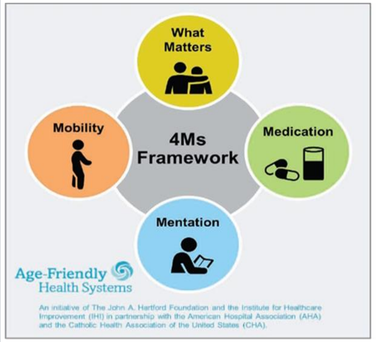
In complex homebound geriatric patients, do Home-Based Primary Care visits with access to an interprofessional team, vs traditional office visits, reduce emergency room, observation visits, and hospital admissions, over 6 weeks?

Available Knowledge

- HBPC patients saw a decrease in hospitalizations from 61% to 38% and skilled nursing home placements from 30% to 18%. (Zimbroff et al.(2021
- The GRACE model of HBPC showed positive outcomes in a public health system that served low-income seniors. (Counsel et al, 2016).
- Medical house calls have been shown to reduce hospital readmissions by 25% to 50% and reduce or eliminate readmission penalties in a private multi-state HBPC program. The program generated over $59 million in shared savings in its first two years of participation in the MSSP ACO. (Schuchman et al, 2018).

Methods

- The patients were identified as complex and home-bound through data pulled from the EMR. Those with documentation of durable medical equipment and hospital use in the last year. were offered HBPC visits. Direct in-practice referrals were accepted as well.
- Access to biweekly interprofessional team consultation was available. Visits were set up for every 4-6 weeks. Four patients are seen a day. Demographics such as age, sex, ethnicity, and insurance were collected.
- HBPC visits followed the traditional format of obtaining a history of presenting illness, a review of medical, surgical, and social histories, and a review of vital signs, and medications.
- Additionally, the patient visits and chart review will include an age-friendly assessment using the 4Ms framework to ensure reliable, evidence-based care is delivered.
- Patient and caregiver education will be an integral component of all patient contact. Access to healthcare services, meaning where to call at what times, and when to go to the emergency room is a challenge in the current large, fragmented healthcare system.
- At the end of the 6-week project, the emergency room utilization and hospitalization rates were quantified and compared to the 6 weeks preceding the project and after the 6-week project.

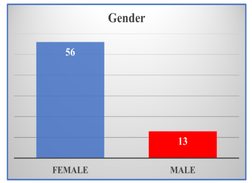


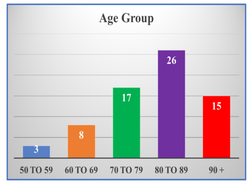
Theoretical Framework

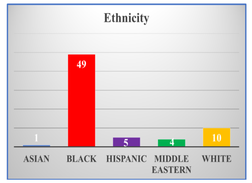
- PDSA-Plan, Do, Study, Act
- This allowed for swift adaptation during implementation

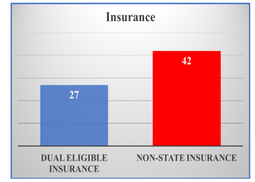
Results

- This was a longitudinal study of analysis of hospital use for HBPC patients over 18 weeks
- Hospital use rates were compared between the 6 weeks leading up to the project, during the 6-week project, and the 6 weeks after the project.
- There were 69 unique patients seen in the 6 weeks of implementation 9/25/2023-11/5/2023.
- 15 patients had more than 1 visit during the 6-week project time









All Patients - No Duplicate Visits - 69 Patients

Groups	Sum	F	P-value
# ER visits- pre	12	1.30	0.274
#ER visits during	5		
Post ER visits-6wks	13		
Groups	Sum	F	P-value
# OBS visits-Pre	1	1.18	0.310
#Obs during	3		
Post Obs visits-6 wks	0		
Groups	Sum	F	P-value
#Admissions-Pre	11	0.43	0.650
#Admissions during	7		
Post Admissions-6 weeks	9		

Patient with Multiple Visits - 15 Patients

Groups	Sum	F	P-value
# ER visits- pre	7	0.44	0.647
#ER visits during	3		
Post ER visits-6wks	5		
Groups	Sum	F	P-value
# OBS visits-Pre	1	0.60	0.553
#Obs during	2		
Post Obs visits-6 wks	0		
Groups	Sum	F	P-value
#Admissions-Pre	7	0.43	0.650
#Admissions during	3		
Post Admissions-6 weeks	2		

Patients with One Visit - 54 Patients

Groups	Sum	F	P-value
# ER visits- pre	5	1.73	0.180
#ER visits during	2		
Post ER visits-6wks	8		
Groups	Sum	F	P-value
# OBS visits-Pre	0	1.00	0.370
#Obs during	1		
Post Obs visits-6 wks	0		
Groups	Sum	F	P-value
#Admissions-Pre	4	0.57	0.567
#Admissions during	4		
Post Admissions-6 weeks	7		

Discussion

- The greatest reduction in hospital use was noted in those with had more than 1 visit during the week project period
- The access to address acute issues reduces hospital use
- The average hospital admission costs $24,680 (McDermott, 2020)

Limitations

- Hospital use is multifactorial
- No dedicated support staff in place
- IPT access halted during the project
- Short measurement time frame
- Many were behind on preventative care due to access barriers.
- Travel/traffic/technology limits volume for HBPC

Clinical Significance

- HBPC reduces a significant gap in healthcare for those home-confined.
- Maintain access for acute visits to prevent hospital use when possible and quick transitional visits to prevent readmissions
- IPT support necessary for AFHS 4Ms approach to blossom and truly integrate services
- Many emergency room visits, observation stays, and hospital admissions are avoidable when appropriate access to primary care is available.
- Significant cost-saving potential
- This HBPC DNP project integrated the AACN DNP Essentials.

Conclusion

Home-Based Primary Care can close a significant gap in care for home-confined geriatric patients while reducing hospital use leading to decreased cost of care.

Contact Information

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