Characteristics of an allied health–led telemedicine clinic for atrial fibrillation

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Introduction

Obtaining access to cardiac electrophysiology care can be complex, resulting in long delays for appointments, inadequate atrial fibrillation (AF) education, and lack of self-management skills training. The result is fragmentation of care, leading to repeated emergency department evaluations and escalated healthcare costs.[1] Allied health professionals (AHPs) in cardiac electrophysiology have the expertise to deliver integrated AF care through telemedicine. Such a program has the potential to expand access to specialized AF care and improve outcomes.

The aim of this project was to determine whether telemedicine would be a feasible delivery system for an AHP-led AF clinic to provide comprehensive education, teach symptom management, address stroke and heart failure risk, identify individual AF risk factors, and expedite referrals for ablation or left atrial appendage occluder devices.

Methods

Referral criteria were as follows: any adult patient with a primary diagnosis of AF confirmed on electrocardiograph and referred by the emergency department, cardiology clinic, cardiac electrophysiology service, cardiac device clinic, or hospital service and who had telephone or internet access. The clinic was staffed by 1 advanced practice provider (APP) with 12 years of experience in cardiac electrophysiology and 1 certified medical assistant. The APP performed patient visits independently, with an electrophysiologist available by phone if needed. The APP and medical

assistant's salaries were paid by the physician services group. Patients received 1 AHP 30-minute visit on a secure video conferencing platform.

An intake sheet completed by the medical assistant prior to the patient's visit was confirmed by the APP during the visit. The sheet documented arrhythmia type, vitals, body mass index, CHA_2DS_2-VASc score, left ventricular ejection fraction, left atrial volume, ischemic evaluation, ablation and cardioversion history, oral anticoagulant type, antiarrhythmic drug use, pertinent laboratory data, alcohol use, tobacco use, obstructive sleep apnea screening, physical activity level, and hypertension history.

The APP used the following script to guide the visit:

(1) Introduction of the APP role, educational background, licensure, and experience;
(2) Asking the patient's expectation and goal for the appointment, desired topics of discussion, and understanding of AF;
(3) Statement that AF is not usually a true medical emergency although it often makes patients feel that way, and inquiry as to the patient's subjective experience of AF;
(4) Description of AF, treatment options, risks, rhythm vs rate control, and indications for ablation;
(5) Discussion of risk of stroke and CHA_2DS_2-VASc score, evaluation of oral anticoagulant use and bleeding risk, and referral to the left atrial occluder closure device coordinator if needed;
(6) Discussion of self-monitoring devices such as hand-held electrocardiogram monitor or smart watch;
(7) Action plan for acute exacerbations;
(8) Discussion of antiarrhythmic drugs, review of any current medication appropriateness, and surveillance testing based on medication requirements;
(9) Identification of personal risk factors and intervention for obstructive sleep apnea screening, dietician services, alcohol reduction interventions, weight loss programs, hypertension clinic, and tobacco cessation information.

Table 1   Demographics and comorbidities of patients (N = 115)

	Range	Mean
Age (years)	27–99	69.4
CHA_2DS_2-VASc	0–7	2.92
Patient miles from clinic	1–97	51
Sex	n	%
Male	82	71.3
Female	33	28.7
Race/ethnicity		
White (non-Hispanic)	95	82.6
Hispanic	12	10.4
African American	6	5.2
Asian	1	0.9
Other	1	0.9
Comorbidities		
Hypertension	82	71.3
Congestive heart failure	30	26.1
Diabetes mellitus	17	14.8
Vascular disease	35	30.4
Cerebrovascular accident	16	13.9
Atrial fibrillation type		
Paroxysmal	56	48.7
Persistent	47	40.9
Permanent	12	10.4

Following institutional review board approval and exempt status, a retrospective chart review was conducted using the AF clinical registry for patients seen in the AHP telemedicine clinic from January 8 to May 11, 2021.

Results
The chart review included 115 cases. Results are summarized in Table 1.

Conclusion
The AHP-led AF telemedicine clinic accessed patients throughout a large geographical area, with a broad age range, comorbidity status, and arrhythmia type. Future steps will include evaluation of the effectiveness of the clinic using pre-post test surveys for AF-related knowledge, quality of life, and symptom severity. Future recruitment should focus on minorities and women to bridge the gaps in AF care identified.

Reference
1. Hart D, Hopman WM, Hammond S, Redfearn DP. Augmenting atrial fibrillation care after an emergency department visit: implementing telephone practice. J Nurs Care Qual 2019;34:337–339.