Patient experience in an interprofessional collaborative practice for underserved patients with heart failure

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Abstract

Heart failure is a complex chronic condition that results in multiple patient visits throughout the care continuum. Patient experience has associations with clinical outcomes. The purpose of this study was to examine patient experience among the underserved in a specialized interprofessional collaborative practice heart failure clinic. This prospective study utilized both qualitative and quantitative data to describe the patient experience within an interprofessional collaborative practice. Data were collected from patient experience surveys in 1128 patients seen in the Heart Failure Transitional Care Services for Adults (HRTSA) clinic between January 1, 2018, and December 31, 2021. Interprofessional collaborative practice surveys were completed by clinic staff members. When examining relationships associated with patient experience, we found three significant associations. Being single was negatively associated with patient experience. When examining IPCP and patient experience, overall interprofessional collaborative practice alignment [t(237)=2.00, p=.046] and the team's alignment of mission, vision and purpose [t(254)=1.99, p=.047] were positively related to patients' care satisfaction. Interprofessional collaborative practice team alignment can positively impact patient experience in underserved patients with heart failure.

Keywords

Patient experience, interprofessional collaborative practice, heart failure, underserved

Introduction

Heart failure is a complex chronic condition that requires timely and efficient care throughout the care continuum. Heart failure accounts for over a million hospitalizations and 11 million outpatient provider visits a year.[1-3] These visits are responsible for healthcare costs estimated to be 69.2 billion dollars by 2030.[1] The quest for achieving the Quintuple Aim (improving population health, enhancing the patient experience, reducing health care costs, improving staff well-being, and advancing health equity)[4] is dependent on the effectiveness of the delivery of care during these visits (Figure 1). A care delivery model used to achieve this aim is the interprofessional collaborative practice (IPCP) model which is the intentional collaboration of a team from multiple disciplines working in the same space with a shared vision to care for a population.[5] This model focuses on care coordination, effective communication, and well-organized teamwork.[5,6] IPCP models have reported improvements in population health outcomes,[7,8] reducing costs,[9] and improving staff functioning and well-being.[10,11]

Patient experience has associations with clinical outcomes, quality, safety, cost, and team performance initiatives.[12-15,8] While there is not a standardized definition of patient experience, the Agency for Healthcare Research and Quality defines patient experience as a compilation of interactions which patients have with the health care system including timely appointments, the quality of care, access to information, and communication with providers.[16] The Beryl Institute defines patient experience as the sum of all interactions, influenced by an organization's culture, that shapes patient perceptions across the continuum of care.[17] Even though these definitions differ slightly, the key element highlighted is that patient experience is not just about patient satisfaction, it is more about the perception of the relationship between the healthcare delivery model and the patient.[18,13]

There are few reports on the relationship between IPCP and patient experience. Sanchez and Hermis showed that an interprofessional team approach can lead to improved

Figure 1. Interprofessional Collaborative Practice Care Delivery Model with Quintuple Aim
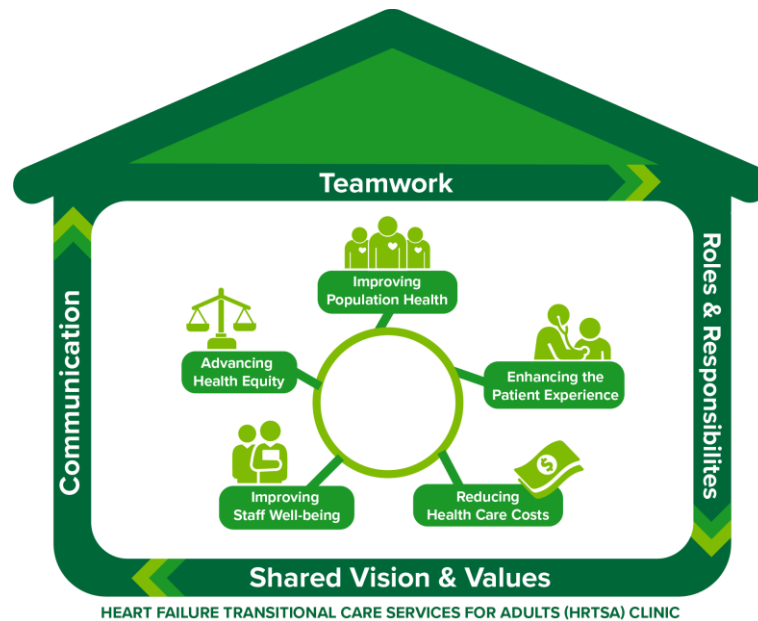
patient experience metrics.[8] With heart failure, providing an ideal patient experience could significantly impact health outcomes. Using the IPCP competencies of communication, role definition, shared values, and teamwork as the underpinning for care coordination, our IPCP team has been able to demonstrate high team performance[11] and improved outcomes measured by decreased hospitalization and cost[9] as well as excellent quality metrics among underserved patients with heart failure.[19] For example, the IPCP team has been able to sustain these results with an 80% decrease in hospital admissions and cost from 6 months prior to the initial HRTSA Clinic visit compared to 6 months post HRTSA Clinic care, and consistently meeting or exceeding quality metrics for fiscal year 2022.[9] A discussion of other outcome metrics is beyond the scope of this paper.

To address the gap in the literature linking patient experience and IPCP,[20,21] we sought to examine the patient experience over time in an interprofessional heart failure clinic for the underserved. We also examined if IPCP competencies can have an impact on patient experience.

Methods

This prospective study utilized both qualitative and quantitative data to describe the patient experience within an interprofessional collaborative practice over time. We used the implementation science framework,[22] which transitions research findings and evidence-based practices into routine care in a timely manner as well as the Institute of Medicine's patient experience framework to guide our work.[23]

Care Processes
Even though our clinic is described elsewhere,[9-11,19] it is important to understand our patient population and the clinic care delivery model. Patients seen in the HRTSA clinic must have a diagnosis of heart failure and be deemed underserved which is broadly defined as having no insurance, being underinsured, or not having an established medical home or health care provider. Over 60% of our patients live in Jefferson County in Birmingham, Alabama, which is within 30 miles of the clinic. Patients are mostly African American, male, and have a mean age of 52.6 years.

The clinic has a transitional care model in which patients are seen during hospital admissions, offered a home visit, and followed in the clinic setting. The Clinical Nurse Leader (CNL) rounds on inpatients and begins the assessment for the initial clinic appointment. The CNL and social worker perform the home visits to assess self-care management and social determinant of health needs. During clinic appointments, the patient is seen by the IPCP team (nurse practitioner, nurse, certified medical assistant, social worker, pharmacy student, social determinant of heath coordinator) according to the plan of care needs discussed in daily huddle. In addition to establishing guidelines directed medical therapy, social determinants of health and behavioral health needs are assessed. We have strong collaborations with multiple departments within the hospital system which help us to provide additional services for our patients. For example, we collaborate with the Department of Care Transitions which provides meal and transportation vouchers. We partner with the Pharmacy Department to house the

Dispensary of Hope Pharmacy which provides free medications to those who qualify. We communicate with our Hospitalists, Emergency Department, and Cardiology colleagues to assure that patients are referred to our services. In addition, we have recently partnered with the School of Optometry and the School of Dentistry at our academic medical center to provide eye and dental care for our patients. We also provide training in IPCP for students from numerous health professions within our campus.

Clinic Team Processes

Interprofessional collaborative practice competencies (values, communication, roles and responsibilities, and teamwork) are taught during initial onboarding and at each monthly division meeting. Topics of the meetings are based on the previous month's Survey of Organizational Attitudes in Primary Care (SOAP-C) and biannual Collaborative Practice Assessment Tool (CPAT) scores. For example, the team recently worked on teamwork by discussing team emotional intelligence. The team has also focused on the other competencies by discussing unconscious bias, workflow efficiency, communication skills, and how to decrease stress and chaos in the clinic. Patient experience scores are discussed at each monthly meeting, and the staff has access to review the scores on a daily basis. We celebrate patient promoter comments and do just-in-time process improvement for any detractor comments. Clinic leadership receives a daily notice if the net promoter score (NPS) goes below 90%.

Setting and Sample

The Heart Failure Transitional Care Services for Adults (HRTSA) clinic is a 5- day-a-week, nurse-led IPCP clinic located within a large academic medical center. The HRTSA clinic is the medical home for an underserved population of heart failure patients and has a mission of providing guideline directed medical therapy also addressing social determinants of health across the health care continuum.

A total of 1128 patients seen in the clinic between January 1, 2018 and December 31, 2021 who completed at least 1 patient experience survey were included in this study. The follow-up time for patient experience scores was May 30, 2022. The clinic staff is composed of members from multiple disciplines who all work in a shared space. The core staff consists of 2 fulltime and 1 part time Nurse Practitioners as well as a Psychiatric-Mental Health Nurse Practitioner once a month, 2 fulltime Social Workers, 1 Clinical Nurse Leader, 1 fulltime and 1 part time Registered Nurse, 1 Certified Medical Assistant, a Social Determinant of Health Program Coordinator with a public health background, a Collaborating Physician, Business Officer, Office Support, and a Nurse Administrator. All staff have been educated on IPCP competencies and patient experience metrics.[24,25]

Instruments

Four instruments were used to address the study aims.

Patient Satisfaction Survey

The Patient Satisfaction Survey is a 12-item paper and pencil tool developed by the study investigators to ask about the clinic experience. Seven items used Likert rating scales to ask about information given, communication, respect, and satisfaction, 2 items asked about clinic access and waiting time, one question asked to rate their experience (0=worst experience, 10=best experience), and there were 2 open ended questions. (Table 1) The surveys were anonymous and therefore, could not be associated with a specific patient. This tool was used from 2018 to 2021.

Ambulatory Patient Experience Online System

In March 2021, the HRTSA clinic began to utilize the Ambulatory Patient Experience Online System.[26,27] The online system uses email or text messaging to ask questions on waiting time, ease of scheduling appointment, staff satisfaction, and care satisfaction and can be associated with the provider who sees the patient.[26] Percentage scores (0 to 100%) are produced from the 10-point rating scale (0=not satisfied at all, 10=extremely satisfied) for each category. In addition, a Net Promoter Score (NPS) is calculated which is the percent promotor comments (scores 9 and 10) minus the percent detractor patient comments (scores 0 to 6) divided by the total responses. The NPS question "On a scale of 0-10, how likely are you to recommend the HRTSA Clinic to a friend or colleague?" is sent within 24 hours of the clinic visit. The qualitative statements, which add rich descriptions of the patient experiences, were reviewed and organized into themes.

Collaborative Practice Assessment Tool

The Collaborative Practice Assessment Tool (CPAT) was used to monitor progress of the IPCP team.[28] The CPAT is a validated 57-item survey that measures eight dimensions (Mission and Goals, General Relationships, Team Leadership, Role Responsibilities, Communication, Community and Coordination of Care, Decision-making and Conflict Management, Patient Involvement) using a 7-point Likert scale (Strongly Disagree=1 to Strongly Agree=7).[29]

Survey of Organizational Attitudes in Primary Care

The Survey of Organizational Attitudes in Primary Care (SOAP-C) has 4 subscales (Communication, Decision Making, Stress/Chaos, and History of Change).[30] This validated 21-item tool has a 5-point Likert scale (1= Not Aligned with IPCP, 5=Strongly aligned with IPCP) and measures how closely aligned the clinic team is with IPCP functioning.[29]

Table 1. Patient Satisfaction Survey 2018-2021

Heart Failure Transitional Care Services for Adults (HRTSA) Clinic
Patient Satisfaction Survey

Date:_____   Please select the answers that best describe your experience.

1. During this visit, how would you rate the friendliness/responsiveness of staff?
    ▫Poor   ▫Fair   ▫Good   ▫Very Good   ▫Excellent

2. Have you ever missed an appointment with this clinic?
    ▫ Yes   ▫No   If yes, why? _____

3. During this clinic visit, how long did you have to wait for your appointment?

▫ My appointment started on time	▫ Less than 30 minutes	▫ 30 min – 1 hour
▫ 1 – 2 hours	▫ More than 2 hours	

4. During this visit, did the care providers listen carefully to you?
    ▫ Never ▫ Sometimes   ▫Usually   ▫Always

5. During this visit, did the care providers treat you with respect?
    ▫ Never ▫ Sometimes   ▫Usually   ▫Always

6. During this visit, was your privacy respected and maintained?
    ▫ Never ▫ Sometimes   ▫Usually   ▫Always

7. During this visit, when you asked questions, did you get answers you could understand?
    ▫ Never ▫ Sometimes   ▫Usually   ▫Always

8. How much information did you get about your condition from your care provider?
    ▫ Way Too Little ▫ Too Little   ▫ About Right   ▫ Too Much   ▫ Way Too Much

9. How satisfied were you with your visit?
    ▫ Very Dissatisfied   ▫ Dissatisfied   ▫ Neutral   ▫ Satisfied   ▫ Very Satisfied

10.   What did you like best about the clinic? _____

11.   Please use this section to ask Questions, or tell us Complements or Concerns:
      _____

12.   Using a number from 0 to 10, where 0 is the worst experience and 10 is the best
      experience, what number would you use to rate this clinic experience?
            0   1   2   3   4   5   6   7   8   9   10

Data Collection, Procedure and Analysis

This study was granted approval from the Institutional Review Board for Human Use. A letter of invitation was given to patients informing them of the data collection and informed consent was waived. All data collected were part of the clinic's routine care.

The Patient Satisfaction Survey was given to each patient to complete at the end of every clinic visit from 2018 to 2021 and was used to monitor trends over time. The Ambulatory Patient Experience online system sends an email and text message to the patient within 24 hours of the clinic visit. The raw data from the online system was used to examine relationships between patient experience and IPCP using both the SOAP-C and CPAT scores during 2021 and 2022. Since the surveys are voluntary, not all patients completed, and may have skipped questions resulting in fewer survey responses.

The clinic staff complete a CPAT survey twice yearly and a SOAP-C survey monthly. IPCP data and patient experience data were merged based on response date.

Therefore, SOAP-C data were linked to patient experience month by month. For example, January SOAP-C data were linked to January patient feedback, February SOAP-C data were linked to February patient feedback and so on. The first CPAT survey was collected in July 2021 and was linked to the first 6 months of the patient experience data. The second CPAT survey was collected in January 2022 and was linked to the last 6 months of the patient experience data.

Descriptive statistics were used to show trends, opportunities, and improvements over time. Qualitative comments from the patient reported surveys were used to confirm the patient perceptions. Correlations and linear regression were used to examine associations and predictors of IPCP characteristics on the patient experience. Three dependent variables, net promoter score (overall HRTSA Clinic rating), care satisfaction, and clinic staff satisfaction, were examined separately using both the overall and subscales of both the SOAP-C and CPAT instruments. Effects of IPCP predictors were examined using a two-level regression model, controlling for several

Table 2. Average Patient Experience Scores over Time

	2018	2019	2020	2021
Communication				
During this visit, did the care providers listen carefully to you? (Patients who answered Always)	N= 1199, 90.3%	N= 1195, 92.6%	N= 707, 94.8%	N= 851, 93.7%
During this visit, did the care providers treat you with respect? (Patients who answered Always)	N= 1259, 94.2%	N= 1224, 95.0%	N= 719, 96.6%	N= 876, 96.5%
Information				
During this visit, when you asked questions, did you get answers you could understand? (Patients who answered Always)	N= 1134, 88.0%	N= 1150, 89.4%	N= 686, 92.2%	N= 818, 88.0%
Satisfaction				
How satisfied were you with your visit? (Patients who answered satisfied and very satisfied)	N= 1064 96.5%	N= 1229 96.2%	N= 722, 98.23%	N= 874, 96.9%

*Scores converted to Percentage with 0% = worst experience and 100% = best experience

demographic characteristics including patient's age, gender, race, marital status, insurance status, and type of appointment. All patient-related predictors, i.e., the control variables, were entered into the model first as level 1 predictors. Then, the IPCP predictors were entered one by one as level 2 variables. IPCP predictors were all examined separately to avoid high correlations among subscales. All analyses were performed in SPSS version 28.0.

Results

Patients were predominately male (61.8%), Black race (59.9%), single (50.8%), and had a mean age of 52.6 years. Most of the survey responses were from returning patients (87.5%) and patients could have completed multiple surveys (Table 2). Patient experience scores collected from the patients remained steady and high during the study period (Table 2 and 3).

Communication
The metric, "Listening to our patients," scores reported from the Patient Satisfaction Survey (2018 to 2021) were either satisfied or very satisfied (90.3% to 94.8%) (Table 1). Three months of Ambulatory Patient Experience online survey data accessed in January 2022 reported 100% care satisfaction (Figure 2). Patients did not answer all questons. Exemplars from patient surveys depict the communication between the IPCP team and patient.

- *"Everyone is great. I love it, they make me feel great about myself, they really listen to their patients."*
- *"The entire experience made me feel very secure and I know more about my condition thanks to the amazing staff."*
- *"Everyone was very friendly and professional very informational and I was able to sit and talk with my provider she's a great listener and very very helpful, my experience there was amazing and thank you guys so much."*

Access to Information
Provision of information scores ranged from 88% to 92.2% (Table 2).

The IPCP team provides individualized care based on the needs of the patient during their clinic visits. The interprofessional team uses their combined expertise to address the most immediate needs and then develop a long-term plan of care. Examples from patients regarding information provision include:

Figure 2. Three Month Patient Experience Scores: Accessed January 2022

Net Promoter Score* N=49 **100%**	Responses Answered via Email N=10	Responses Answered via Text N=39
Ease of Scheduling N=9 **90%**	Ease of Check-in N=8 **88.9%**	Waiting Room Wait Time N=8 **80%**
Clinic Staff Satisfaction N=35 **100%**	Care Satisfaction N=43 **100%**	Ease of Parking N=10 **70%**

*Net Promoter Score is the sum of responses answered via email or phone text. Scheduling, check-in, waiting room time and parking questions are asked in email only.

- *"Everyone Was Extremely Professional And Kind. My Condition Was Explained To Me Where I Could Understand. And Put On Good Meds So I Can Get Better."*
- *"The efforts of the people at the clinic have greatly helped me understand my heart failure and their treatments have improved my quality of life."*
- *"We were amazed at the quality of care we received, the Nurse Practitioner was amazing and she took time to explain everything and answered our questions in detail.... The Social Workers were very helpful and helped get the ball rolling for the services we need and the two nurses helped to calm and soothe an otherwise difficult experience...even the lady at the front desk was very helpful....so we would recommend HRTSA Heart Failure Clinic to everyone."*
- *"The staff are friendly and helpful to explain how to take care of your heart condition and taking your medicine properly."*

Satisfaction: Relationship with the IPCP Team

Building a relationship with the patient and family and IPCP team can be seen in the clinic satisfaction scores which ranged from 96.2% to 98.2% (Table 2). On a 3-month report from the Ambulatory Patient Experience online survey in January 2022, the clinic achieved 100% in clinic staff satisfaction as well as care satisfaction. In addition, the clinic achieved a net promoter score of 100% meaning there were no negative comments reported during the 3 months (Figure 2). The clinic team received the Patient Experience Hero Award for 2021 and 2022 from the Academic Medical Center's Office of Patient Experience and Engagement. This award is given annually to recognize those who help provide an exceptional experience for patients and their families. It is awarded to staff who consistently go above and beyond by embodying the organization's core values, showing compassion, and keeping patients their top priority. The HRTSA Clinic also achieved a Level 5 (highest level) on the patient experience metric. Below are patient comments related to relationships taken from the online system.

- *"The Heart Failure team have been instrumental in my recovery and maintaining my health!!"*
- *"Most positive experience with medical issues in my life."*
- *"The HRTSA Heart Clinic is one of the best facilities that I attend at UAB Hospital. They always make me feel welcome and appreciated."*
- *"I owe my life to the work done in this clinic. I wouldn't be alive today without it."*
- *"I am consistently treated with respect and I truly believe the people here care for my well-being and are dedicated to their mission. Thank you."*
- *"My NP is awesome and I trust her. The staff is very nice and it is clean. I like the way they treat people and make you feel like you matter to them."*
- *"That's the best team that I've ever had the pleasure of letting take part in my health care."*

Sociodemographics, Interprofessional Collaborative Practice, and Patient Experience

When examining relationships associated with patient experience, we found three significant associations. Marital status was found to be a predictor to the overall satisfaction with clinic score (Net Promoter Score) [$F_{(2, 309)}$=4.53, p=.011] (Table 3). Specifically, patients who were single reported significantly less satisfaction with the clinic experience than patients who were divorced, separated, or widowed [$t_{(309)}$=-2.78, p=.006]; while patients who were married reported no statistically significant differences from those who were divorced, separated, or widowed [$t_{(309)}$=-0.60, p=.549]. No other demographics were associated with patient experience. When examining IPCP and patient experience, we found that the SOAP-C overall scale positively predicted the patients' care satisfaction [$t_{(237)}$=2.00, p=.046] meaning that overall alignment with interprofessional collaborative practice was positively related to the patients' satisfaction with the care received. In addition, the mission, vision, and purpose subscale on the CPAT positively predicted patients' care satisfaction [$t_{(254)}$=1.99, p=.047] (Table 4). In other words, the interprofessional clinics' foundational mission, shared vision, and purpose statement positively impacted the patients' satisfaction with their care. The clinic's mission is to provide guideline directed care and education to underserved patients with heart failure and their caregivers in an interprofessional collaborative practice across care transitions. No other subscales on either tool achieved significance.

Discussion

In this paper, we have presented experiences of patients in an IPCP model caring for underserved patients with heart failure. Key findings from our study include the patients' self-reported outcomes of feeling safe, respected, and cared for by the HRTSA team. These outcomes contribute to the development of trust between the team and patient. In addition, this paper provides confirmation that marital status, which is a form of social support, is important to the patient experience. Our findings also provide new evidence which supports that an IPCP model can positively impact patient experience.

Marital status is well documented as playing an important role in improving health outcomes in heart failure.[30-39] Having an identified social support such as a spouse or significant other has been associated with improved physical and mental quality of life.[34,37,39] Poor social support has been associated with increased depression,[32,36] poorer self-care management,[31,35,37] greater likelihood of hospital readmissions, and increased mortality.[33,37] In our study, not being married was a predictor of the overall patient experience score. This information is important because over 50% of the underserved patients in this study self-reported themselves as single. Involving a support

Table 3. Patient Experience Differences by Demographic and Appointment Differences

	Number	%	HRTSA Clinic Net Promoter Score	Care Satisfaction	Clinic Staff Satisfaction
			Mean Score		
Total	327*	100%	9.8	9.8	9.8
Appointment Type					
New Visit	35	10.7%	9.8	9.9	9.9
Return Visit	286	87.5%	9.7	9.8	9.7
Other	6	1.8%	10.0	10.0	10.0
Gender					
Male	202	61.8%	9.7	9.7	9.6
Female	125	38.2%	9.9	9.9	9.9
Race					
White	114	34.9%	9.7	9.8	9.8
Black	196	59.9%	9.8	9.8	9.7
Other	17	5.2%	9.8	10.0	10.0
Marital Status					
Married	78	23.9%	9.9	9.8	9.8
Single	166	50.8%	9.6	9.7	9.7
Other	83	25.4%	9.9	9.9	9.9
Insurance					
Commercial	98	30.0%	9.7	9.9	9.9
Charity Care	21	6.4%	10.0	10.0	10.0
Medicaid	48	14.7%	9.8	9.6	9.8
Medicare	18	5.5%	9.8	9.9	9.9
No Insurance	122	37.3%	9.8	9.8	9.6
Other	20	6.1%	9.5	9.5	9.7
Age	Mean=52.6 years, SD= 9.3				

*Patients who returned patient experience surveys

person to participate in care across the continuum especially during the ambulatory visit where extensive heart failure patient education is performed, provides an additional resource to help patients manage their self-care. While the clinic does not influence marital status, it can provide opportunities to enhance social support such as patient support groups[9], peer support programs[9], and home visits.[40] Our team has offered monthly support groups for networking with other patients in similar circumstances and home visits which provide social support from the team. Another support service the clinic offers is through a partnership with the Center for Psychiatric Medicine (CPM). The CPM provides Peer Support Services which extends support by connecting trained peers with patients who are ready to begin the journey to recovery. This finding has important implications for health care providers who should monitor patients who are single or who have no social support for signs of poor self-care.

Both the SOAP-C and CPAT results showed that teams who are more aligned with interprofessional collaboration are able to positively impact patient experience. Our study validates Davidson and colleagues' integrative review describing the positive patient experience within an IPCP model.[39] To our knowledge, our study was the first to find that the overall better team alignment with IPCP was a predictor of care satisfaction, and the first to associate IPCP with patient experience in a heart failure population who is underserved. Interprofessional collaboration includes the dimensions of communication, decision making, and stress/chaos suggesting that teams who can effectively communicate, make collaborative decisions on the patient's plan of care, and manage busy workflows can impact how patients perceive their care experience.[41]

Multiple comments from the online surveys reflect that the patients positively experience the caring culture of the clinic. We also found an interesting finding that having a shared mission, vision, and purpose was a predictor of care satisfaction. It is important for IPCP teams to be committed to the mission of their patient population served.[11] The team has engrained its mission and vision (to be the premier interprofessional collaborative practice providing evidence-based care to an underserved population with heart failure) and incorporate the IPCP

Table 4. Predictors of Patient Experience (Net Promoter Score) from CPAT or SOAP-C scores (2021-2022)

INDEPENDENT VARIABLES	DEPENDENT VARIABLES**		
	HRTSA Clinic Net Promoter Score (N=309)	Care Satisfaction (N=254)	Clinic Staff Satisfaction N=232)
Control Variables			
Appointment Type	.789	.827	.709
Gender	.145	.224	.113
Race	.295	.763	.764
Marital Status	.011*	.339	.748
Insurance	.485	.949	.171
Age	.584	.654	.459
SOAP-C (N=40)			
Overall Scale	.142	.046*	.513
Subscale: Communication	.971	.167	.509
Subscale: Decision Making	.159	.176	.096
Subscale: Stress	.113	.070	.852
Subscale: Change	.962	.311	.157
CPAT (N=40)			
Overall Scale	.530	.526	.175
Subscale: Mission, Meaningful Purpose, Goals	.213	.047*	.252
Subscale: General Relationships	.747	.338	.490
Subscale: Role Responsibilities and Autonomy	.548	.925	.142
Subscale: Communication and Information Exchange	.503	.392	.262
Subscale: Community Linkages and Coordination of Care	.341	.274	.638
Subscale: Decision-making and Conflict Management	.483	.972	.106
Subscale: Patient Involvement	.977	.429	.563

* Insurance was recoded into a binary variable (Insurance vs. No Insurance) for the regression analyses
**Returned surveys

competencies in daily practice. Again, multiple patients report that the team is professional, and cares about them. One patient summed our team by stating, "*I am consistently treated with respect and I truly believe the people here care for my well-being and are dedicated to their mission.*" These findings provide new evidence regarding mission and purpose not found by others.[42] A firm foundation with clear purpose is key to the clinic's success. To achieve exceptional outcomes, the team reviews patient experience metrics (care satisfaction, clinic staff satisfaction, overall net promoter score, ease of scheduling, waiting room time, parking) and patient feedback each month. The IPCP team looks for opportunities for improvement and discusses ways to enhance the patient experience.

Our study has several strengths including the prospective data collection over an extended period. Limitations of our study were that this was a non-randomized, single center study in an academic medical center. We did not have a control group and could not compare the patient experience results prior to the implementation of this clinic. We also could not map earlier data back to the individual patients.

Conclusion

Concentrating on achieving the best experience for our patients is one of the quintuple aim components in the overall mission of the HRTSA Clinic. This study provides new information on linkages between patient experience and a well-aligned interprofessional collaborative clinic model. Having an IPCP team with a clear mission and purpose is an important component in care satisfaction and needs to be reproduced with larger sample sizes and

diverse populations. Further understanding how interprofessional collaborative practice may lead to improved patient experience may help organizations implement care delivery models that provide an excellent experience for their patients.

References

1. Tsao C, Aday AW, Almarzooq ZI, et al. Heart Disease and Stroke Statistics-2022 Update: A Report From the American Heart Association. *Circulation.* 2022;*145*(8): e153–e639. https://doi.org/10.1161/CIR.0000000000001052

2. Agarwal M, Fonarow G, Ziaeian B. National trends in heart failure hospitalizations and readmissions from 2010 to 2017. *JAMA Cardiology.* 2021; 6(8):952-956. http://dx.doi.org/10.1001/jamacardio.2020.7472.

3. Maddox T, Januzzi J, Allen L. et al. 2021 update of the 2017 ACC expert consensus decision pathway for optimization of heart failure treatment: Answers to 10 pivotal issues about heart failure with reduced ejection fraction. *Journal of the American College of Cardiology.* 2021;77(6):772-810. https://doi.org/10.1016/j.jacc.

4. Nundy S, Cooper LA, Mate KS. The Quintuple Aim for Health Care Improvement: A New Imperative to Advance Health Equity. *JAMA : the Journal of the American Medical Association.* 2022;327(6): 521–522. https://doi.org/10.1001/jama.2021.25181

5. World Health Organization. Framework on interprofessional education and collaborative practice. [https://www.who.int/westernpacific/publications-detail/framework-for-action-on-interprofessional-education-collaborative-practice.] 2010; Geneva: Author. Accessed 6/22/22.

6. Interprofessional Education Collaborative (IPEC). Core competencies for interprofessional collaborative practice: Report of an expert panel, 2011. Washington, DC: Author. [https://ipecollaborative.org/uploads/IPEC-Core-Competencie.pdf. Accessed 6/22/22.

7. Zierler B, Abu-Rish Blakeney E, O'Brien K and the IPCP Heart Failure Teams. An interprofessional collaborative practice approach to transform heart failure care: an overview. *Journal of Interprofessional Care.* 2018; 32(3);378-381. doi: 10.1080/13561820.2018.1426560.

8. Sanchez N, Kimberly H. Interprofessional Collaboration to Improve and Sustain Patient Experience Outcomes in an Ambulatory Setting. *Patient Experience Journal.* The Beryl Institute. 2019; 6(1):149–53. https://doi.org/10.35680/2372-0247.1313.

9. White-Williams C, Shirey M, Eagleson R, Clarkson S, Bittner V. An Iiterprofessional collaborative practice can reduce heart failure hospital readmissions and costs in an underserved population. *Journal of Cardiac Failure.* 2021; May 13:S1071-9164(21)00154-8. doi: 10.1016/j.cardfail.2021.04.011.

10. Shirey MR, White-Williams C, Hites L. Integration of authentic leadership lens for building high performing interprofessional collaborative practice teams. *Nursing Administration Quarterly.* 2019;43(2):101-112. https://doi.org/10.1097/NAQ.0000000000000339

11. White-Williams C, Shirey M. Taking an Interprofessional Collaborative Practice to the Next Level: Strategies to Promote High Performing Teams. *Journal of Interprofessional Education and Practice.* 2022; 26: 100485–, https://doi.org/10.1016/j.xjep.2021.100485.

12. Wolf JA. Patient Experience: The New Heart of Healthcare Leadership. *Frontiers of Health Services Management. 2017;33(3):3-16.* https://doi.org/10.1097/HAP.0000000000000002.

13. Guler PH. Patient Experience: A Critical Indicator of Healthcare Performance. *Frontiers of Health Services Management. 2017;33(3):17-29.* https://doi.org/10.1097/HAP.0000000000000003.

14. Figueroa F, Zhou X, & Joynt Maddox K. Hospital-Level Care Coordination Strategies Associated with Better Patient Experience. *BMJ Quality & Safety. 2018;27(10);844-51.* https://doi.org/10.1136/bmjqs-2017-007597.

15. Doyle C, Lennox L, Bell D. A systematic review of evidence on the links between patient experience and clinical safety and effectiveness. *BMJ Open* 2013;3(1):e001570.

16. What Is Patient Experience? | Agency for Healthcare Research and Quality [https://www.ahrq.gov/cahps/about-cahps/patient-experience/index.html (ahrq.gov)]. Accessed 1/23/22

17. Three Dimensions of Patient Experience - The Beryl Institute - Improving the Patient Experience. [https://www.theberylinstitute.org/blogpost/593434/373189/Three-Dimensions-of-Patient-Experience]. Accessed 1/23/22

18. Oben P. Understanding the Patient Experience: A Conceptual Framework. *Journal of Patient Experience.* 2022;7(6):906-10. https://doi.org/10.1177/2374373520951672.

19. White-Williams C, Bittner V, Eagleson R, Feltman M, Shirey M. An Interprofessional collaborative practice improves access to care and healthcare quality to advance health equity. Journal of Healthcare Quality. 2022; 44 (5), 294-304. https://doi.org/10.1097/JHQ.0000000000000353.2022

20. McCutcheon L, Haines ST, Valaitis R. Impact of Interprofessional Primary Care Practice on Patient Outcomes: A Scoping Review. *SAGE Open.* 2020;10(2):1-17. https://doi.org/10.1177/2158244020935899

21. Morgan K, Barroso CS, Bateman S. Dixson M, Brown KC. Patients' Experiences of Interprofessional

Collaborative Practice in Primary Care: A Scoping Review of the Literature. *Journal of Patient Experience.* 2020;7(6):1466-75. https://doi.org/10.1177/2374373520925725.

22. Becan JE, Bartkowski JP, Knight DK, Wiley T, DiClemente R, Ducharme L. A model for rigorously applying the exploration, preparation, implementation, sustainment (EPIS) framework in the design and measurement of a large scale collaborative multi-site study. *Health & Justice.* 2018; 6 (1);1-14. https://doi.org/10.1186/s40352-018-0068-3.

23. https://app.ihi.org/Events/Attachments/Event-2432/Document-2842/Framework_for_Patient_Experience.pdf. Accessed 1/27/22.

24. https://www.whpa.org/activities/interprofessional-collaborative-practice. Accessed 1/27/2022.

25. Browne K, Roseman D, Shaller D, et al. Measuring patient experience as a strategy for improving primary care. *Health Affairs.* 2010;29(5):921-5

26. https://www.medallia.com/blog/net-promoter-score-formula/. Accessed 5/16/2022

27. Anhang Price R, Elliott MN, Zaslavsky AM, et al. Examining the role of patient experience surveys in measuring health care quality. *Med Care Res Rev.* 2014;71(5):522-54.

28. Schroder C, Medves,J, Paterson B, Chapman C, O'Riordan A, Pichora D, Kelly C. Development and pilot testing of the collaborative practice assessment tool. *J Interprof Care.* 2011; 25: 189-195.

29. Ohman-Strickland PA, Orzano J, Nutting PA, et al. Measuring organizational attributes of primary care practices: development of a new instrument. *Health Services Research.* 2007; 42(3p1): 1257-1273.

30. Cene CW, Haymore LB, Lin FC, et al. Family member accompaniment to routine medical visits is associated with better self-care in heart failure patients. *Chronic Illness.* 2015;11:21-32.

31. Chung ML, Moser DK, Lennie TA, Frazier SK. Perceived social support predicted quality of life in patients with heart failure, but the effect is mediated by depressive symptoms. *Qual Life Res.* 2013;22:1555-63.

32. Kaiser P, Allen N, Delaney JA, et al. The association of prediagnosis social support with survival after heart failure in the Cardiovascular Health Study. *Annals of Epidemiology.* 2020;42:73–77. https://doi.org/10.1016/j.annepidem.2019.12.013

33. Jeong Y, Yu H, Hwang B. Self-Care Behaviors Mediate the Impacts of Social Support and Disease Knowledge on Health-Related Quality of Life in Patients With Heart Failure. *Clinical Nursing Research.* 2022;1-8. https://doi.org/10.1177/10547738221092864

34. Trivedi R B, Slightam C, Nevedal A, et al. Comparing the barriers and facilitators of heart failure management as perceived by patients, caregivers, and clinical providers. *Journal of Cardiovascular Nursing.* 2019; 34(5):399–409. https://doi.org/10.1097/JCN.0000000000000591.

35. Graven L, Grant J. The Impact of Social Support on Depressive Symptoms in Individuals With Heart Failure: Update and Review. *The Journal of Cardiovascular Nursing.* 2013;28(5):429–443. https://doi.org/10.1097/JCN.0b013e3182578b9d

36. Årestedt Saveman, BI, Johansson P, Blomqvist K. Social support and its association with health-related quality of life among older patients with chronic heart failure. *European Journal of Cardiovascular Nursing : Journal of the Working Group on Cardiovascular Nursing of the European Society of Cardiology.* 2013;12(1):69–77. https://doi.org/10.1177/1474515111432997

37. Wu J, Frazier SK, Rayens MK, Lennie TA, Chung ML, Moser DK. Medication Adherence, Social Support, and Event-Free Survival in Patients With Heart Failure. *Health Psychology.* 2013;32(6),:637–646. https://doi.org/10.1037/a0028527

38. Liu Chiou, AF, Wang CH, Yu WP, Lin MH. Relationship of symptom stress, care needs, social support, and meaning in life to quality of life in patients with heart failure from the acute to chronic stages: a longitudinal study. *Health and Quality of Life Outcomes.* 2021;19(252):1–11. https://doi.org/10.1186/s12955-021-01885-8

39. Davidson AR, Jaimon K, Ball L, Morgan M, Reidlinger DP. What do patients experience? Interprofessional collaborative practice for chronic conditions in primary care: an integrative review. *BMC Family Practice.* 2022;23(8): 1–12. https://doi.org/10.1186/s12875-021-01595-6

40. Arnold E, White-Williams C, Miltner R, Hites L, Su, W, Shirey, MR. Transitional care home visits among underserved patients with heart failure. *Nursing Administration Quarterly*, 2020:44(3), 268-279. doi:10.1097/NAQ.0000000000000426

41. Morgan K, ,Barroso CS, Bateman S, Dixson M, Brown KC. Patients' Experiences of Interprofessional collaborative practice in primary care: A scoping review of the literature. *Journal of Patient Experience.* 2020;7(6), 1466–1475. https://doi.org/10.1177/2374373520925725

42. Fisher M, Weyant D, Sterrett S, Ambrose H, Apfel A. Perceptions of interprofessional collaborative practice and patient/family satisfaction. *Journal of Interprofessional Education & Practice.* 2017; 8: 95–102. https://doi.org/10.1016/j.xjep.2017.07.004