Growth and Experiences of a Student-Led Patient Navigation Program Serving Individuals Experiencing Homelessness

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***Background*:** *Those experiencing homelessness face disproportionately large barriers in access to healthcare. Patient Navigation is a service that provides disadvantaged populations with guidance through healthcare systems. Acting as a patient navigator is found to help enhance learning in the pre-clinical years of medical school. Developed by medical students, the Patient Navigator Program (PNP) pairs medical students trained as patient navigators with individuals experiencing homelessness. The uniqueness of this program lies in its fully student-run format, simultaneously providing individuals experiencing homelessness with longitudinal navigation services toward self-defined goals and medical students with exposure to a disadvantaged and underserved population in their early years of medical school. The purpose of this study is to evaluate the growth and student experiences of PNP from its inception and inform those who aim to develop similar student-run patient navigation programs.*

***Methods*:** *Participation metrics in the program were extracted from volunteer records, and five 30-min student leader semi-structured interviews were conducted using open-ended questions to investigate the experiences of those who developed the program. Interviews were transcribed, and responses were categorized by themes.*

***Results*:** *Enduring involvement in PNP over years was demonstrated quantitatively through participation metrics and qualitatively through interviews. Positive aspects of participation in PNP were meeting and working with other students, utilizing their creative vision in developing the program, learning about those experiencing homelessness and the local resources available to them, shaping career goals and academic interests, and learning the soft skills necessary for medical clerkships. Negative experiences primarily revolved around time constraints of the program in addition to their academic responsibilities. Commonly stated advice included identifying an appropriate faculty mentor and building strong relationships with community partners.*

***Conclusions*:** *Participation in PNP was felt to be beneficial both personally and professionally. Reporting these perspectives and experiences will provide insight to future student-led programs at other institutions.*

Keywords: *patient navigation; homelessness; program evaluation; medical education*

INTRODUCTION

Medical and health systems are frequently fragmented and disorganized, making them difficult to maneuver and utilize.[1] This may be especially true for the medically underserved.[1] Patient navigation (PN) is a service that guides individuals through these systems to maximize positive health outcomes and minimize disparities among populations.[1,2] PN originally began as a community-centered health initiative with the intention of accelerating the diagnosis and treatment of cancer.[3] However, it is now also used to assist in a myriad of other domains, such as HIV and stroke, among others.[1,4,5] Due to the variety of problems that PN now addresses, programs vary considerably in many aspects, including how much of the care continuum is supported, qualifications and responsibilities of navigators, organizational structure, funding sources, and size.[3]

PN is found to increase adherence to screenings, result in more timely diagnoses, and increase rates of attendance at medical appointments, all while providing financial benefits as determined through cost-effectiveness analysis.[6–9] Moreover, learners' participation in a PN program in the early years of medical school provides a positive learning opportunity.[10–13] As opposed to solely learning in a classroom, immersion in real-life patient interactions gives students hands-on opportunities where they can better understand the complexities of healthcare systems and the barriers patients face.[10–13]

Individuals experiencing homelessness are more susceptible than the general population to a range of health complications and illnesses and often do not receive necessary treatment until advanced stages of disease/illness.[14–20] These individuals make up a significant portion of emergency department admissions, and healthcare workers are likely to care for them on a regular basis.[21–23] The additional barriers these individuals may face in receiving adequate care, such as their limited access to follow-up appointments and other financial and logistical obstacles, require physicians to build attainable treatment plans specific to their patients' circumstances.[24] Proper education and exposure during medical school to the barriers homelessness causes are crucial to providing high-quality care after graduation.

To address the issues that these populations face, a group of medical students at the University of Texas Southwestern Medical Center (UT Southwestern) Medical School developed the Patient Navigator Program (PNP). The objectives of the PNP are to provide medical students with a rich learning opportunity working as patient navigators during their first and second years of medical school and improve health outcomes in a local medically underserved homeless population. PNP seeks to prepare student navigators in serving homeless populations competently as future physicians.

The PNP curriculum includes didactic and experiential training in collaboration with the community partner, Union of Gospel Mission (UGM) homeless shelters. Didactic training involves a weekly, semester-long elective course that educates students on the barriers individuals experiencing homelessness face and how to best serve this population as healthcare providers. The elective course is structured as seven 2-h sessions led by program leaders and community members. The first hour of each session is comprised of didactic information presented by a community expert on the relevant topic, followed by an hour of interactive training led by a PNP leader to prepare students on their upcoming patient navigator role. Topics discussed during meetings include direct conversations with individuals experiencing homelessness, social determinants of health and healthcare literacy, barriers to care, resources available in DFW, cultural sensitivity, and motivational interviewing. A more detailed account of didactic structure, including tabular breakdown of the elective schedule, has been previously described.[25] After taking the elective, students become student navigators, or 'PNP fellows', for one calendar year of experiential training beginning the following semester. There are two UGM shelters that PNP works in conjunction with: Center of Hope, an urban non-profit women and children's shelter that houses up to 235 residents, and Calvert Place, an urban non-profit men's shelter that houses up to 335 residents. Clients at the UGM shelters are paired with student navigators, who assist the clients in identifying health goals and connect them with local resources. Cycles of the fellowship run the length of a semester, and within each cycle, two programs are available. The Continuous Care Systems (CCS) program pairs navigators with clients from Center of Hope for 12–15 weeks, while the Standardized Care Systems (SCS) program pairs navigators with clients from Calvert Place for a shorter 4–6-week period. Each cycle, student navigators participate in the CCS program with voluntary addition into the SCS program as well.

The development of PNP as a student-led organization began Spring 2020, and the training elective was first implemented in Fall 2020, followed by the first fellowship cycle in Spring 2021. Understanding PNP's growth and significant obstacles faced over the years would yield beneficial information to students who are interested in replicating similar programs. The purpose of this study is as follows: 1) To evaluate the growth and student experiences of the UT Southwestern PNP from its inception and 2) To inform those who aim to develop similar student-run patient navigation programs at other institutions.

METHODS

To understand the pattern of growth, we gathered two distinct forms of data: 1) program participation and impact indicators (quantitative data) and 2) past leadership interviews (qualitative data). The study was approved by the UT Southwestern institutional review board.

Program Participation and Impact Indicators

PNP participation and impact were measured by collecting the number of student volunteers and clients served per year. This information was gathered by referencing the volunteer records of previous fellowship cycles. Percentage of clients completing their cycle for each period was also determined.

Past Leadership Interviews

We conducted five 30-min semi-structured interviews of student PNP leaders involved in the founding and

Table 1. Continuous care systems participation.

Time period	Number of PNP fellows	Number of clients	Number of clients completing cycle (%)
2021	42	33	18 (54)
Spring 2022	34	15	6 (40)
Summer 2022	9	4	1 (25)
Fall 2022	32	13	6 (46)
2022	35	32	13 (41)

development of the PNP. Participants consented to participate, interviews were recorded, and notes were taken concurrently to summarize responses. Interviews included open-ended questions on topics such as participants' perceptions on PNP's growth over the years, positive and negative experiences in their roles, obstacles they or PNP faced, and advice they would give to those who are founding similar programs elsewhere. All five interviews were conducted by one researcher following a pre-determined script to maintain consistency in question format. Qualitative data from the interviews were transcribed and categorized in themes according to the questions addressed. Number and percent of those interviewed mentioning each response theme were measured to determine the most common responses.

RESULTS

Program Participation and Impact Indicators

To date, five cycles of the fellowship (Spring 2021, Summer 2021, Fall 2021, Spring 2022, and Summer 2022) have concluded. First and second year medical students were typically organized in groups of 3–4 to serve a single client for the duration of the cycle. For those clients who did not complete the cycle, the primary causes were evolving housing situation (i.e., they no longer resided at the shelter) or no further need for navigation services. Within the CCS program, 42 PNP fellows served 33 clients during 2021, with 18 of those clients (54%) completing their cycle. In 2022, 35 fellows served 32 clients, 13 (41%) of whom completed their cycle. Within the SCS program, 10 fellows served 20 clients during 2021, with 16 (80%) completing their cycle. Finally, in 2022, 13 fellows served 10 clients, and 8 (80%) of whom completed their cycles. The breakdown of participation in CCS and SCS of fellows and clients in 2021 and 2022 is provided in Tables 1 and 2, respectively. While data were available for the individual cycles in 2022, specific data were not available for the 2021 cycles.

Past Leadership Interviews

In total, five interviews of PNP student leaders were conducted. All those interviewed were third- and fourth-year medical students at the time who were involved in PNP during its establishment.

Growth of Program

Four of the five interview participants (80%) were surprised at how much the program had grown in the year(s) they were involved. One participant was not able to comment on program growth due to lack of participation. It was reported that the number of individuals involved to date is 'approximately a few hundred members' and includes clients, student fellows, community partners, and academic institution administration. In general, consensus remained that growth had already exceeded expectations by the end of the first year and expanded even more through the second year. Moreover, a

Table 2. Standardized care systems participation.

Time period	Number of PNP fellows	Number of clients	Number of clients completing cycle (%)
2021	10	20	16 (80)
Spring 2022	5	2	1 (50)
Summer 2022	4	2	2 (100)
Fall 2022	8	6	5 (83)
2022	13	10	8 (80)

Table 3. Positives and Negatives to Participating in PNP.

Positives
[Founding PNP was similar to] '*running a startup* without the money'.
[I] 'became more aware about what's actually here in the Dallas area' [and learned] 'how extensive and not extensive some services are'.
[PNP] 'taught soft skills including professionalism' [and was an] 'excellent supplement to medical education that is necessary'.
Negatives
[Founding PNP was similar to] 'running a startup *without the money*'.

participant mentioned that 'the next group of leadership expanded to the associated men's shelter in the second year after the initial board of founders and leadership left'.

Positives and Negatives Aspects

Three of the five participants (60%) mentioned that meeting and working with other students was a positive aspect of being part of PNP. Two participants (40%) mentioned that they enjoyed being able to utilize their creative vision to shape the program's launch and growth. Two participants (40%) mentioned that learning about those experiencing homelessness, as well as becoming aware of the depth and scope of local resources, was a positive outcome. Other positives mentioned included seeing gratitude from the clients and how the experience shaped participants' career goals and academic interests.

Four of the five interviewed (80%) responded that time constraints, partially due to frequent PNP-related meetings and emails, was a negative aspect. Specifically, difficulties arose because of the responsibilities that participants held as medical students prior to participating in PNP, stating they felt that they did not have adequate time for studying, research, or other obligations. Direct accounts of positive and negative aspects from being part of PNP are available in Table 3.

Significant Obstacles

All but one participant (80%) reported that the COVID-19 pandemic and having to transition to virtual activities were significant obstacles for PNP. Other obstacles included maintaining communication with their community partners and limited technology access for clients. Finally, determining how to utilize grant money to benefit clients posed a challenge.

Advice to Other Programs:

Two of the five participants (40%) mentioned the importance of finding good mentors to guide development. Two others (40%) mentioned building strong relationships and establishing regular contact with community partners. Other program advice included obtaining expertise in curriculum design prior to implementation, strengthening the organization of the program documents, recognizing the multiple responsibilities of medical students and adjusting roles accordingly, devoting time for program pilot testing, and focusing on sustainability. Regarding students' attitudes and perceptions, the most important pieces of advice were reminding oneself of end goals when becoming discouraged, being flexible and adaptable to inevitable obstacles, and monitoring improvement.

DISCUSSION

Evaluation of the program participation indicators and interview responses yielded interesting information regarding the growth and experiences of PNP, how to sustain our program in the future, and implications for future patient navigation programs at other institutions.

Growth of Program

Seeing a program built from nothing grow to hundreds of members was a consistent source of student satisfaction. All participants commenting felt that the growth of the program was unexpectedly large, especially in its first year, and gratifying to see. The expansion of PNP to a second site of the UGM shelters, a men's shelter, by the second cohort of program leadership also allowed us to reach a larger range of individuals.

CCS participation, our 15-week cycle program at the women and children's shelter, reflected the sustainability of PNP, with approximately equal number of clients served in 2021 vs 2022. While CCS clients served remained consistent from year to year, participation metrics from the SCS program, our 4–6-week cycle program at the men's shelter, however, portray a different story. The drop in clients served in 2022 highlights the staffing difficulties

that the shelters faced at the beginning of the year. It is important to note that, per shelter policies, recruitment of clients occurs exclusively through shelter chaplains who advertise PNP as well as identify and approach potential clients. They subsequently send PNP a list of interested clients and their respective contact information for us to assign navigation teams and reach out to begin the patient navigation cycle. Because the limited staff were focused on their primary responsibilities at the shelter, they were unable to dedicate as much time toward PNP recruitment during that period. Regardless, this information is encouraging in showing that a student-run patient navigation program is attainable and can sustainably run even after initial launch and transition of power over to new executives.

Student Experience

Given that a large focus of the study was on the student-run aspect of PNP, a significant amount of new information was provided, describing the interaction of the medical student experience with PNP. There was a general enthusiasm for the benefits that PNP provided to participants' medical education, allowing them to collaborate with other students and faculty and learn about the healthcare system and barriers that individuals experiencing homelessness face. These findings are consistent with the existing literature, stating that patient navigation programs provide medical students exposure to barriers to healthcare.[10–13]

Getting to incorporate their creative vision into a project was commonly cited as well and enriched learning beyond the classroom and clinic. Additionally, previously conducted work demonstrated that skills, knowledge, self-efficacy, and social advocacy as measured by pre-elective, post-elective, and post-fellowship surveys were improved in students following involvement in the PNP.[26] These perspectives and data point toward the well-rounded benefits that PNP provides for medical students, which may encourage others to start similar programs elsewhere. However, almost all participants stated that they felt a lack of time for academics as a result of working on PNP. Regarding the future of our program and the development of others, it is important to state that the time constraints of leadership need to be realistically considered when assigning responsibilities and determining timelines. Leadership members in student-run programs are indeed medical students first, and future potential navigation programs should carefully evaluate the time required of a role when shaping it. This may include dividing responsibilities into more roles or assigning multiple members to work on a branch of the program together. High satisfaction of members necessitates them feeling able to fulfill their higher priority responsibilities first.

Helpful Advice

The pieces of advice gathered from the interviews provided valuable perspective for the future of our program as well as new PNPs. The first being the importance of working with a dedicated faculty mentor who is equally invested in the mission of the program, has the time for it, and is familiar with the target population. Identifying a faculty mentor that fulfills these requirements is crucial for the sustainability and growth of the program as they are likely to stay at an institution more permanently than students. Discussing expectations with the faculty mentor and relationship-building with community partners appears to be very important in program progress and helping clients meet their health goals. Our two primary faculty mentors were initially identified and approached as both were well known for their community work and had strong pre-existing relationships with the shelters. Their previously established desire to participate in this type of work and familiarity with our community partner and target population made them ideal candidates for faculty mentors. As needs of the program expanded, other faculty and staff members recommended by our initial faculty advisors were approached to be a part of PNP.

Regular communication with community partners was often difficult due to their busy schedules and unexpected staffing obstacles. However, the commitment and support from a respected member of the shelter and their advocacy on our behalf to the rest of the shelter allowed us to push forward development. Without investment from a community partner, no meaningful change can be made, so building these relationships, hearing their needs, and demonstrating the program's value are all fundamental.

Finally, proper planning/organization and willingness to improve are both critical to success of the program. Conducting thorough preparatory research, maintaining all documents in one place, and simplifying whatever possible all exemplify proper organization and planning. With multiple individuals working on various tasks, these two attributes are crucial in ensuring that everything runs smoothly. Flexibility and willingness to continually improve are also hallmarks to developing any successful

program. Piloting our program with one client prior to program implementation allowed us to work out the kinks and determine how we wanted to lay out the fellowship. Furthermore, the COVID-19 pandemic caused considerable disruption and forced us to shift the entire program to a virtual format. Rather than in person meetings with the clients, fellows met virtually with clients at predetermined times which were set up via email. Regarding access to technology for meetings, clients either used their own personal devices if they had one or a computer in the shelter's computer lab that was available for use by all shelter residents. However, even with access to the computer lab, lack of consistent utilization of technology remained an issue in maintaining a line of communication with clients. If a team was unable to reach their client to establish contact or set up the next meeting, an email to the shelter chaplain usually rectified the situation as they would be able to contact the client in person. Other barriers included unfamiliarity with technology by clients, which required further education on device use by the shelter chaplains.

CONCLUSIONS

Our program's experiences will help plan the next steps of our program as well as inform future programs of common roadblocks during their initial phases. Our study was primarily limited by the sample size of interviews conducted, which limited the conclusions we were able to draw. A larger sample size would have allowed for a quantitative analysis of opinions and attitudes regarding our program. Unfortunately, only a limited number of student leaders worked closely enough with our program to comment on its development. Future studies could examine our program's experiences and its impact at a later point in time, compare the development of our and other similar programs, or evaluate client outcomes and opinions on the PNP. While the findings from this study are broadly relevant to all future patient navigation programs, we believe that specifically those student-run would benefit most from our accounts and advice. The challenges that medical students face in starting initiatives concurrently to education are unique. By taking into consideration the lessons we learned, we hope that future programs will have a successful launch and development.

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Conflicts of interest and funding

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