



# Building a Patient Navigation Program to Improve the Student and Patient Experience at a Student-Run Free Clinic

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## Abstract

**Introduction:** Patient navigation programs improve patients' access to care. The existing literature on patient navigation programs affiliated with Student-run Free Clinics (SRFCs) is limited. The Patient Navigation Program (PNP) was developed to give health professions students early experience in patient-centered care while helping patients overcome barriers to care. First-year student volunteers at our SRFC, the Delivering Equal Access to Care (DEAC) clinic, have limited opportunities to participate in direct patient care. A subset of our patient population faces additional challenges accessing health-related services, resulting in a need for coordinated care. This descriptive report describes a sustainable patient navigation program designed to improve the student and patient experience at an SRFC.

**Methods:** One medical director and three third-year medical students supervised all participants. First-year students from the Doctor of Medicine (MD) and Physician Associate (PA) programs applied for Patient Navigator (PN) positions, and upper-level students from the MD and PA programs applied for Navigation Manager (NM) positions. Two mandatory student trainings were provided, one led by the program's medical director and the other by an associate professor in Psychiatry and Behavioral Medicine. Patients were referred from the primary care service. A voluntary, program satisfaction survey was emailed to PNs at the end of the year.

**Results:** Seven of the eight PNs completed their 12-month commitment and one PN transitioned into another DEAC clinic leadership role before the end of the year. Seven PNs completed the survey, and all indicated wanting to stay involved with the program in some capacity. Four of seven (57%) respondents were interested in continuing with their current patient due to perceived ongoing needs. Perceived impact of PNP on patients' health includes obtaining additional health services, reliable transportation, and someone to discuss health concerns.

**Discussion:** Over half of PNs joined DEAC clinic leadership at the end of their 12-month commitment, pointing to the potential of patient navigator programs to develop committed leaders at SRFCs. Building a sustainable program like PNP at another SRFC is feasible and has potential for meaningful student and patient impact.

## Introduction

Student-run free clinics (SRFCs) provide medical services to uninsured or underinsured patients, while also providing a service-learning opportunity for health professions students. The most recently published survey by the

Association of American Medical Colleges reported 75% of accredited medical schools support at least one SRFC.<sup>1</sup> This survey did not report data on patient navigation programs with health professions students as navigators. Only a limited number of patient navigation programs using medical students as navigators to address the

needs of specific patient populations at SRFCs (e.g., refugee families, patients experiencing homelessness) have been described in the literature.<sup>2,3</sup> Patient navigation programs have demonstrated efficacy in improving treatment adherence, patient knowledge, and communication between patients and their healthcare teams.<sup>4</sup>

The Delivering Equal Access to Care (DEAC) clinic is an SRFC in Winston-Salem, NC. It is affiliated with the Wake Forest University School of Medicine and Atrium Health Wake Forest Baptist academic medical center. Established in 2008, the DEAC clinic provides primary care for uninsured adults across five counties, including Forsyth County. In 2022, the clinic relocated to a historically underserved area where most community members identify as Black or African American (58.5%), 18.5% identify as Hispanic or Latino of any race, 12% of households identify as limited English-speaking, 37.4% of adults are unemployed, and the median household income for a 4-person family is \$30,329.<sup>5</sup> Potential clinic patients are pre-screened for eligibility including being 18 years of age or older, having no form of medical insurance, and residing in one of five surrounding counties. One evening a week, patients are seen by appointment only for primary care concerns. Specialty care clinics in cardiology, neurology, pulmonology, orthopedics, and dermatology are also offered on a rotating basis. The clinic is staffed by health professions students and physician volunteers. Patients can obtain point-of-care testing and labs onsite free of charge. Patients requiring additional labs, imaging, or financial assistance are referred to community resources that include Health Care Access (HCA), a regional form of medical insurance that allows patients to receive additional health related services at a reduced cost, and MedHelp, a medication assistance program sponsored by the affiliated university hospital.

Health profession students in the Doctor of Medicine (MD), Physician Associate (PA), and pharmacy programs are eligible to volunteer at the DEAC clinic. Roles for first-year MD and PA students are limited to rooming patients, taking patient vitals, and briefly discussing reasons for the visit with patients. Comments to DEAC clinic leadership on first-year student dissatisfaction were often in reference to limited opportunities

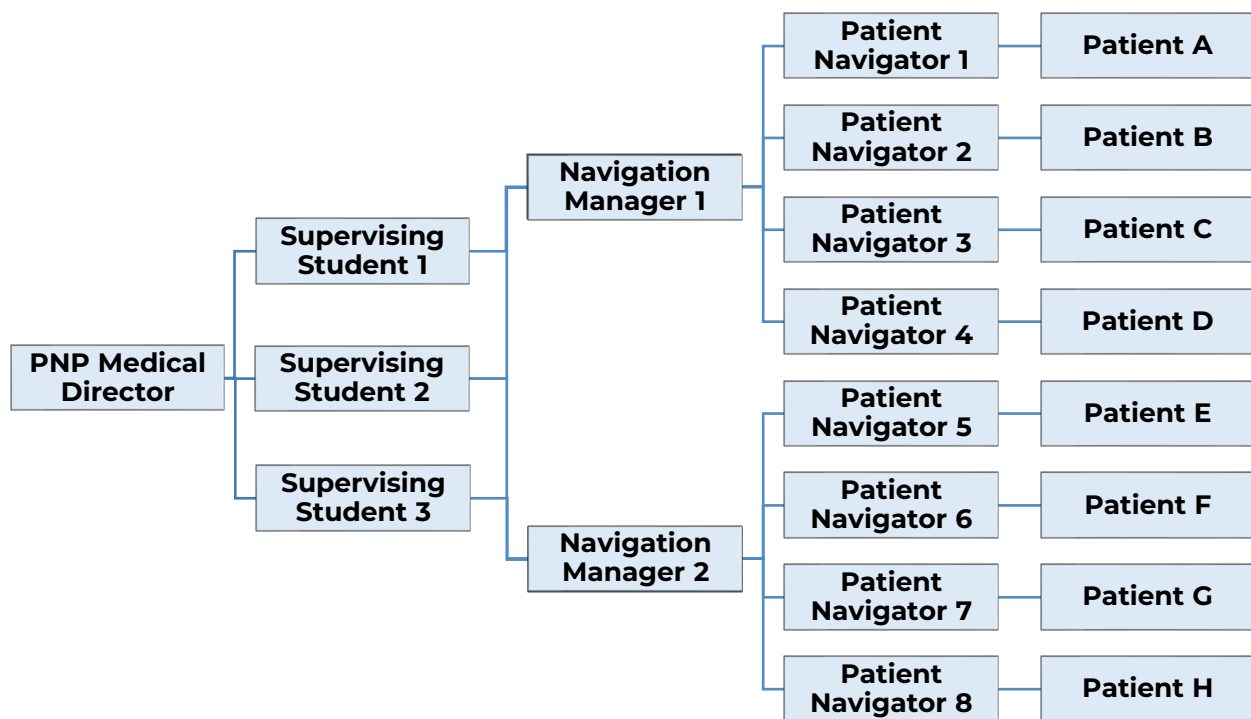
to participate in direct patient care. Due to the volunteer nature of the clinic, patients are often seen by different student and physician volunteers at each visit. The student-patient or physician-patient relationship must be re-established at each visit, and sensitive patient information is often disclosed multiple times. A subset of patients faces additional challenges to receiving continuity of care that include transportation difficulties, food insecurity, language barriers, and limited social support systems. Student leadership observed worrying trends in this subset of patients that include medication non-fulfillment, low treatment adherence, higher no-show rates, limited follow-up when referred to community services, and preventable emergency department visits.

The Patient Navigation Program (PNP) was developed as a 9-month pilot program in 2021 by DEAC clinic student leadership to improve continuity of care and to give health professions students early experience in patient advocacy and holistic care. PNP connects first-year students with patients who need help navigating complexities related to coordination of care including transportation, scheduling, and other health-related services. Patients can discuss their health goals and barriers to care, and student navigators can help patients access care by connecting them with community resources. Participating students are also introduced to a variety of leadership roles at the DEAC clinic and patient advocacy initiatives.

In 2022, the program was expanded to a 12-month period, doubled in participant size, and became an integral part of clinic operations, with an annual budget of \$1000.00 allotted from clinic funds. DEAC clinic funds are obtained mostly through grants and donations to cover training costs and health-related materials and equipment (e.g., blood pressure cuffs, glucometers, yoga mats, etc.). Program updates were announced at monthly executive board meetings, which provided student leadership with opportunities for sustainability planning to build a robust program.

This descriptive report details the structure, implementation, challenges, and future directions of PNP, a program designed and implemented by medical students at an SRFC with a

**Figure 1.** PNP leadership structure



PNP: Patient Navigation Program.

diverse patient population. It serves as a valuable template for other SRFCs looking to improve the student and patient experience. The PNP design can be easily replicated and adapted to fit the needs of any SRFC, and it can be implemented with a limited budget and leadership structure.

### Methods

Supervision for the 2022-2023 PNP cohort was provided by an internal medicine physician who serves as the program’s medical director, and three third-year medical students (MD3) interested in patient advocacy and community medicine (Figure 1). These students were involved in other DEAC clinic leadership roles and volunteered for the position of PNP Supervisors. Two of the three Supervisors were native Spanish-speakers.

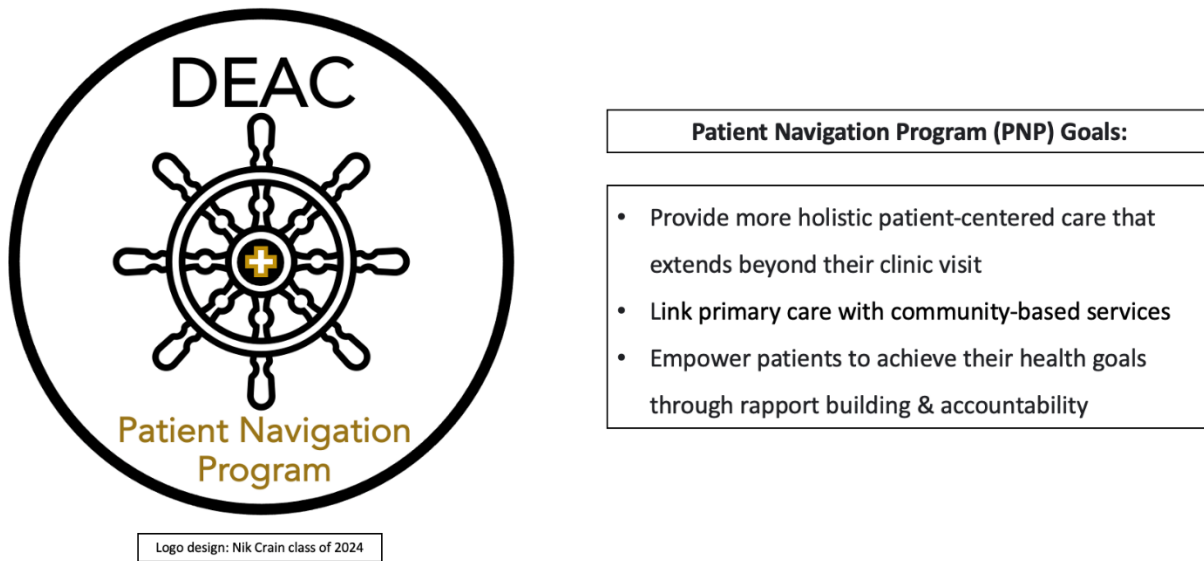
At the beginning of the academic year, Supervisors presented on PNP to first-year MD (MD1) and PA (PA1) students at a student organization fair and a first-year, MD student orientation. Students from both programs were invited to apply for Patient Navigator (PN) positions, and students

from second-year PA (PA2), and third- and fourth-year MD (MD3 and MD4) classes were invited to apply for Navigation Manager (NM) positions. Presentation slides with program goals, expectations, and examples were sent with the application emails (Figures 2, 3).

Patients were referred to PNP by DEAC clinic primary care physician volunteers or student medical teams at the end of each clinic. Potential patients for the program were identified as patients with a combination of any of the following characteristics: having two or more medical comorbidities, English as a second language, lacking reliable transportation, polypharmacy, difficulties affording prescribed medications, housing instability, requiring regular lab monitoring, and referrals to specialists, therapy services, imaging, or procedures. Patient Medical Record Numbers (MRNs) were included in post-clinic debrief emails shared with student supervisors. Potential patients were consented for the program by Supervisors on an ongoing basis.

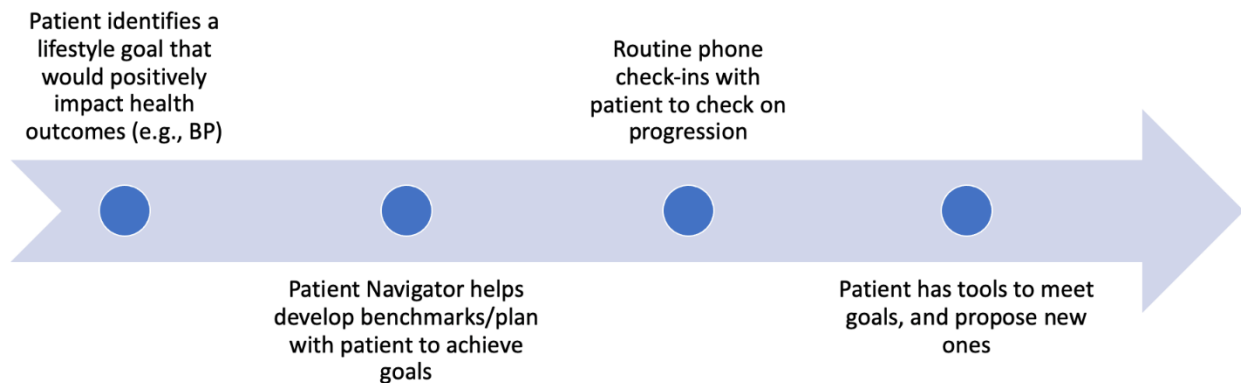
Two mandatory trainings were provided for all PNP participants. The first training was held within a month of being accepted to the

Figure 2. PNP presentation slide 1, PNP goals



DEAC: Delivering Equal Access to Care.

Figure 3. PNP presentation slide 2, patient goals



Common Goals	Common pitfalls	Suggestions
<ul style="list-style-type: none"> <li>Weight loss</li> </ul>	<ul style="list-style-type: none"> <li>Patient doesn't know where to begin, how to change diet</li> </ul>	<ul style="list-style-type: none"> <li>Navigator provides examples of nutritiously dense foods (that are also culturally appropriate and within financial means)</li> </ul>
<ul style="list-style-type: none"> <li>"Exercise more"</li> </ul>	<ul style="list-style-type: none"> <li>Patient doesn't have gym membership, busy work schedule</li> </ul>	<ul style="list-style-type: none"> <li>Navigator and patient discuss 5- to 10- minute daily walks that fit into patient routines</li> </ul>

PNP: Patient Navigation Program; BP: blood pressure.

program and targeted program expectations, navigating the electronic medical record (EMR), and access to tools (e.g., shared files, phone applications, etc.). Training also included role-play scenarios for the initial call with a patient and a physical tour of the clinic. A follow-up training three months later focused on motivational interviewing and active listening with an associate professor in Psychiatry and Behavioral Medicine. All participants were added to a shared teams-based website where they could access community resources, applications, and a patient call-log.

PNs were encouraged to log all patient communications into a shared, encrypted file and accompany their patients to DEAC clinic visits to help advocate for their needs in real time as much as their schedules allowed. A monthly, virtual meeting was regularly scheduled for all program participants and PNP's medical director to update patient progress and delegate next steps. Supervisors were responsible for communicating with DEAC leadership and physician volunteers caring for PNP patients. NMs were encouraged to get updates from their PNs on a regular basis. NMs and Supervisors triaged patients' acute health needs outside of DEAC clinic hours under the guidance of PNP's medical director.

At the end of their academic year, PNs were provided with an opportunity to complete a voluntary, anonymous survey to indicate their satisfaction with the program (IRB exempt). The survey, consisting of four questions requiring write-in responses, was emailed to participants (online appendix).

## Results

Eight students were accepted into the program as PNs, including one PA and seven MD students. Two MD3 students were selected as NMs, overseeing a cohort of four PNs each (Figure 1). Selection criteria included an understanding of the PN or NM role, a genuine interest to address barriers to care, an understanding of strengths and limitations in personal communication skills, and a commitment to serving a diverse group of patients. Fluency in another language, specifically Spanish, was considered a positive asset for candidates. PNs were mostly female (75%, n=6), with 50% (n=4) of the cohort representing Black,

Indigenous, and people of color (BIPOC). None of the PNs reported Spanish fluency.

Seven of the eight (88%) PNs completed their 12-month commitment with the program. One PN left before program completion to join the DEAC Board of Directors as a PA Co-Director, which allowed the student to continue participating in discussions regarding program design, areas of need, and future directions. All NMs and Supervisors completed their terms.

PNs were paired with one patient during their 12-month commitment and used the communication logs regularly to track patient concerns, goals, and progress. Over the year, 10 patients interacted with PNs including female (70%, n=7) and male (30%, n=3) patients ranging from 48 to 71 years of age, with a mean age of 55.9 years. All referred patients had more than one chronic health condition, required assistance to obtain HCA for additional imaging or health related services, and two were Spanish-speaking patients. The most common comorbidities shared among patients referred for the program were type 2 diabetes, hypertension, cardiovascular disease, and obesity.

Seven PNs participated in the survey (88% response rate). All respondents indicated an interest in continuing their involvement with the program in some capacity, and four of seven (57%) indicated an interest in continuing their role with their patients beyond the 12-month requirement. When asked how the program positively impacted their educational experience, responses included early usage of the EMR, learning how the DEAC clinic works, increased awareness for barriers to healthcare access, and learning about community resources. Perceived impact of PNP on their patients' health included obtaining HCA for additional health-related services, having reliable transportation to and from clinic appointments, and having someone to discuss health concerns (Table 1).

Of the eight PNs recruited, five (63%) joined clinic leadership in some capacity in addition to their PNP role, including two executive board positions and three floor manager roles. Of the two NMs, one joined the team of student Supervisors for the following academic year. All three student Supervisors and PNP's medical director remained on the team.

**Table 1.** Perceived PNP impact on student and patient experiences

Patient Navigator perceived impact on educational experience	Patient Navigator perceived impact on patient health experience
Learned how DEAC clinic works	Obtaining Health Care Access (coverage for additional health services)
Learned about community resources and programs relevant to patients' health needs	Reliable transportation to and from clinic appointments
Increased awareness of challenges faced by some patient groups (e.g., language proficiency)	Having someone to discuss health concerns
Longitudinal relationships with patients	Coordination of care
Learned motivational interviewing skills	Referrals for additional services (counseling, legal help, surgical care, etc.)
Early usage and practice with EMR	Point of contact at DEAC clinic

PNP: Patient Navigation Program; DEAC: Delivering Equal Access to Care; EMR: electronic medical record.

With a budget of \$1000.00 from clinic funds, PNP leadership was able to cater two boxed dinners for 14 adults and purchase 10 glucometers, 10 glucometer strip refills, five scales, 10 pedometers, 10 measuring cup sets, 10 lunch boxes, 10 water bottles, 10 resistance band sets, and five yoga mats. Remaining funds were shared with the pharmacy team to purchase \$10.00 gift cards to help assist with medication costs. The pharmacy team provided blood-pressure cuffs, which they obtained from clinic funds using their allotted budget, for PNP patients. The most requested items from PNs on behalf of their patients were blood pressure cuffs, glucometers and refills, and yoga mats.

### Discussion

PNP is a student-led initiative with high qualitative ratings for student satisfaction. Nine of the 13 (69%) students who participated in PNP will continue their involvement with the DEAC clinic and/or PNP for the upcoming year, pointing to the potential of patient navigator programs to develop committed leaders at SRFCs.

With support, PNP patients arranged cab rides or bus routes to and from clinic appointments, obtained additional labs, imaging, and procedures like colonoscopies and Mohs surgery, and received rehabilitative therapies at no cost. PNP facilitated prescription fulfillment and medication refills. PNP regularly updated community resources based on patient experiences and shared these resources with DEAC clinic floor managers for the benefit of all patients. PNs were given the

opportunity to accompany their patients to clinic and other related appointments, allowing them to participate in full clinic visits. Although the physician and student volunteers continued to be different for patients at every visit, patients could count on the consistency of their PNP team.

Strengths of the program include regular trainings and communication with all participants, in-person interactions between students and their patients, a reliable patient referral process, and strong support from DEAC student and faculty leadership. Additionally, it is possible to operate a program like PNP for approximately \$1000.00 for 9-12 months. PNP leadership utilized its budget to provide meals for participants during trainings and to help patients achieve their health goals. No costs were incurred for the trainings facilitated by faculty. SRFCs on tighter budgets can choose not to cater trainings, and they can be more selective about the materials and equipment they purchase for participating patients.

Limitations include coordinating monthly meetings and trainings, varying communication intervals between PNs and their patients, a lack of Spanish-speaking PNs, a lack of quantitative data tracking, and limited opportunities for second-year MD students to participate in PNP. PNs were able to communicate with Spanish-speaking patients through phone, tablet, and in-person interpreters. The main challenge for PNs was obtaining patient education materials in Spanish and requiring additional help from the two Spanish-speaking Supervisors to help translate

written instructions on after visit summaries. PNP leadership has not used quantitative data to help measure the program's success or impact. Our SRFC has an outcomes team that collects data points for all patients. The outcomes team could help PNP leadership track missed visits, emergency room visits, medication fulfillment, and referral follow-through. These data points can be used to justify resource allocation and help make observations about some of the worrying trends that inspired the development of PNP. Currently, the only participating second-year students in PNP are those who maintained contact with their patients due to ongoing health needs. PNP leadership is developing a Care Coordinator role for the upcoming year to help with onsite PNP patient recruitment, follow up on patient referrals for health-related services for all patients, and serve as an onsite reference for community resources. This role could be recruited from the MD2 class in addition to upper-level PA and MD classes. The goal will be to have one Care Coordinator present at each clinic.

Improvements in program design are ongoing. Currently, student feedback to PNP leadership is qualitative via online surveys with a free response format. Survey questions completed by PNs on perceived impact on the patient health experience can be reworded and restructured to minimize positive bias (online appendix). Future surveys could ask a series of standardized yes/no questions that lead into more specific questions requiring numerical values. Patients can be given the same set of questions, and percent agreement can be analyzed. Additionally, Likert scales can be incorporated into anonymous feedback sessions to give quantitative value to student and patient responses. Another consideration is the implementation of regular feedback surveys throughout the year and structured interviews at program conclusion for PNs and their patients. PNP leadership aims to include quantitative data in future assessments of program efficacy. This data can also help ensure continued faculty and financial support for PNP.

The PNP team will continue to share lessons learned on barriers to care and community resources with clinic leaders to the benefit of all DEAC clinic patients. PNP is a reproducible strategy to engage health professions students in

patient advocacy early in their medical education and help address patient care gaps at SRFCs. For SRFCs that rely on different physician and student volunteers at each clinic, this program offers consistency, coordinated care, and a rewarding experience for patients and students alike.

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### Disclosures

The authors have no conflicts of interest to disclose.

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