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A Model Of Primary Care To Meet The Needs Of The Underserved: Haven Free Clinic

Mary Ella Bartlett
Yale University, mary.bartlett@aya.yale.edu

A MODEL OF PRIMARY CARE TO MEET THE NEED OF THE UNDERSERVED: HAVEN FREE CLINIC

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Mary E. Bartlett

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Ruth McCorkle PhD, FAAN

May 18, 2015

Jessica Coviello, DNP, APRN, ANP-BC

May 18, 2015

Katrina Clark, MPH

May 18, 2015

Signed: Mary E. Bartlett

May 18, 2015

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Introduction

Many organizations throughout the United States have recognized the need for a broader safety net of health care systems to care for the underserved. According to a survey conducted late in 2005 by Darnell[1] and published in 2010, there were 1007 free clinics in the United States that served over 1.8 million individuals. Most of the work of these free clinics focused on chronic disease management, physical exams and urgent care. The Society for Student-run Free Clinics has 149 registered clinics throughout the United States and Canada[2]. These student run clinics generally are supported by medical schools and utilize medical students as volunteers working in university hospital based clinics. Each year more of these clinics, here and in Canada, incorporate interprofessional education and care into their operations. Most commonly, these professions include medical, dental and social work to provide care to patients. Barnsteiner, et al[3] provides a brief history of interprofessional education, including a list of the many terms used to describe this process including interprofessional learning, multiprofessional learning and shared learning. It has become common understanding that the terms "multidisciplinary" or "multiprofessional" describe a process of parallel learning while interdisciplinary is used by physicians to denote working with colleagues across specialities. This article will utilize the term "interprofessional" to describe the collaboration and team effort between physicians, nurse practitioners, physician associates and other health care professionals, both students and preceptors.

HAVEN Free Clinic, a collaboration of the Schools of Nursing, Medicine, Physician's Assistants and Public Health at Yale University and the Fair Haven

Community Health Center (FHCHC), is the only student clinic that partners with a free-standing Federally Qualified Health Center (FQHC). The core values of HAVEN are contained within its acronym: Health, Advocacy, Volunteerism, Education and Neighborhood and frame the mission of the clinic. In addition, HAVEN is one of the few student run clinics that has interprofessional student clinical teams and preceptors as well as undergraduate and graduate school volunteers.

This article utilizes Donabedian's model[4] of patient antecedents, structure, process and a brief description of outcomes to describe an innovative model of care for the medically underserved population of Fair Haven. As students and faculty begin to examine and publish outcomes for HAVEN, a description of the clinic, its structure, and how the collaborative practice model serves the needs of its patients needs to be disseminated. Using the structure and process of the HAVEN clinic, this article describes a model of primary care for an underserved, urban population delivered by an interprofessional group of students and faculty. Ultimately, what makes HAVEN unique is its role as a portal to primary care for the medically underserved that maximizes the benefits of a student clinic before transferring these patients to a permanent patient centered medical home at the Fair Haven Community Health Center.

Background and Setting

As the health care professions became professionalized over the past hundred years, opportunities for collaborative processes developed. From Florence Nightingale's collaboration with the Sanitation Commission during and after the Crimean War[5] to midwives and obstetricians managing high risk births, nursing has worked together with other professions for the common good of their patients for many years. The World

Health Organization (WHO) defines interprofessional education as "students from two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes"[6]. Interprofessional education seeks to break down the silos created by culture, tradition and training for the next generation of health care providers to fully actualize the core goals of improved population health, improved patient experience and reduced cost as defined by the Institute of Healthcare Improvement's (IHI) Triple Aim of Healthcare[7]. Organizing teams of students and preceptors across professions encourages innovative thinking and problem solving within the context of the patient's needs. Recently, the Institute of Medicine's (IOM)[8] report on the future of nursing identified the need (1) to develop a nursing workforce that practices to the fullest extent of its education and (2) to establish collaboration in practice across professions. Efforts toward collaborative education and practice have been difficult to achieve. Thibault[9] described several challenges including cultural barriers; each profession valuing its own unique and separate identity and logistical barriers, such as professional schools operating on different calendars and schedules. If the focus of inter-professional education and care is patient-centered and not provider-centered, the creation of a student clinic as a collaboration between the professional schools offers a unique opportunity to enhance a shared learning process that ultimately will result in improved patient outcomes.

Most researchers describe the beginning of focused attention on interprofessional learning to date back to 1991 and the Pew Health Professions Commission report that defined interdisciplinary team's core competencies. Then in 1994, the Institute for Healthcare Improvement (IHI) initiated the Interdisciplinary Professional Education

Collaborative (IPEC), an organization focused on improving the curricula of the health professions. In 2008[10] and updated in 2014, Reeves, et al[11] published a Cochrane review of literature on IPE. In 2008, there were 9 articles that met the criteria of the review, since then, only 6 more studies have been added to their review. Currently, the field of IPE continues to define and develop instruments to measure the experiences of students and faculty; there is no consensus yet as to the best measure of outcomes. As this article will not focus on outcomes, no further discussion is necessary.

Xyrichis and Lowton[12] in a review of the literature identified several factors that either inhibit or promote efficient multidisciplinary teambuilding in primary and community care settings. Several factors impact the teambuilding process and its successful implementation in these settings including team structure and team processes. They concluded by stating that the success of a multidisciplinary team in primary care is affected by structure, composition and support provided by its organization.

Giddens, et al[13] described a national think tank of leaders re-designing clinical education for nurses. These leaders identified IPE as one of the themes for change. They focused on the need for longitudinal or immersive clinical placements to fully develop thinking and management skills needed for practice. In an article by Sommerfeldt[14], she described the lack of clarity and engagement of nursing in interprofessional education. The author noted there is relatively little published by nurses about IPE and even fewer nurses as presenters at international conferences about these topics. This absence from the discourse about IPE contributes to the inability of nursing students to articulate their role in collaborative practice and increased tensions between the professions in interprofessional care teams.

Further justification for the strength of IPE is found in an article by Henderson[15] that emphasized that the goals of IPE must be clearly stated and not be unrealistic about the possibilities of this type of training. In addition, the authors cautioned that IPE must be grounded within a clinical setting where providers are best able to help students translate the teaching of IPE into the practice skills necessary for improved patient outcomes.

In the recently published *Recruiting and Maintaining U.S. Clinical Training Sites: Joint Report of the 2013 Multi-Discipline Clerkship/Clinical Training Site Survey*, one-third of the Schools of Nursing, Osteopathy and Physician Associates stated that one of the methods used to combat the loss of clinical sites was the use of interprofessional education[16]. HAVEN serves as a primary care clerkship site for the Yale School of Medicine and several nursing students have received credit for clinical hours spent as Senior Clinical Team members.

Primary Care of Medically Underserved Populations.

The structural organization needed to improve outcomes of the medically underserved population includes increased access to health care. Penchansky and Thomas[17] define access as the "degree of fit between the client and the health system" (p 128). They further refine this definition to address five key aspects of this fit including availability, accessibility, accommodation, affordability and acceptability (p 127). Primary care services within a student-run free clinic provides the organizational framework for these five aspects of fit. In 2009, Simmons et al[18] published a study that discussed the lack of student preparedness for understanding the issues specific to their patients regarding access to care issues. These students were volunteers at a student run

clinic in Philadelphia. Only 10% of the students at the JeffHope clinics felt they understood or knew how to refer patients to services within the Philadelphia health system. As demonstrated by the article, there exists a need for student education that can be met by a free clinic that is specific to the patient population it serves.

Organizations such as the IOM and the Robert Wood Johnson Foundation recognize the need for more primary care providers (PCPs), especially advanced practice registered nurses (APRNs) and physician associates (PAs) to fill the gaps left behind by the dwindling interest of physicians in primary care. Changes to the methods of reimbursement by the Centers for Medicare and Medicaid Services[19] may influence medical students choices in primary care for their residency, but this may be years away.

Additionally, many of the goals of the Patient-Centered Medical Home (PCMH) certification process instituted by the National Center for Quality Assurance[20] require the skills and leadership of an interprofessional team. Arend et al[21] in a 2012 review article about the transformation of health care through patient centered medical homes noted that the qualities important to primary care: access, continuity, comprehensiveness and coordination of care need to be combined with changes to reimbursement and how offices are run to further improve patient outcomes and allow for cost savings. Weiner[22] discussed the potential errors that occur when the patient's social context has not been incorporated into the plan of care. This context may include unemployment, lack of housing or food which then affects the patient's ability to pay for, properly store, or take as directed medications prescribed by the provider. Many patients in this impoverished neighborhood choose between buying food or buying their medications. Understanding the specific psychosocial and cultural barriers affecting the patient's ability to engage in

their medical care is an active process at FHCHC as well as at HAVEN through these interprofessional teams.

Preparation of Future Primary Care Providers to Medically Underserved Populations.

As health care moves toward standards of care based upon the Institute for Healthcare Improvement's initiative of the Triple Aim, collaborative primary care programs that educate the next generation of providers while focused on patients' needs will be essential. A partnership between a student run clinic and a local community health center has the potential to improve access to care for the medically underserved in Fair Haven as well as provide an opportunity for teaching and learning to an interprofessional group of students.

The model developed at HAVEN was based upon two important and concurrent goals; provide outstanding primary care services to a medically underserved population while teaching students from Yale University how to work collaboratively in a resource poor environment. The first medical directors, a family nurse practitioner (MB) and two physicians wanted to mentor students in the same collaborative practice model that was the standard at FHCHC. Thus HAVEN became the first student-run free clinic to develop an inter-professional model of care in the United States. Now, there are more than 15 Yale affiliated attendings, 10 attendings from the Fair Haven Community Health Center (FHCHC), a faculty adviser from the Yale Medical School and the two medical directors from FHCHC, a FNP and a family medicine physician.

In November of 2005, a student-run free clinic, HAVEN, was formed through a collaboration between FHCHC and the Yale Schools of Medicine, Nursing, Physician

Associates and Public Health. The purpose was to enhance access for primary care to the medically underserved and develop a collaborative model of education and practice to deliver patient-centered care. At the time HAVEN was founded, there was no free clinic in the City of New Haven. The only access to free services was on an intermittent basis through the Community Health Care Van managed by Yale University. While uninsured patients in the city could become patients at the two community health centers, even a small fee for services served as a barrier to care.

The HAVEN Free Clinic was established several years before the Institute of Medicine's (IOM) report on the future of nursing identified the importance of inter-professional education[23] and was one of the first to begin to address the critical issues in delivery of primary care including limited access and the shortage of students becoming primary care providers[24]. This inter-professional collaborative practice model provides the opportunity for HAVEN student volunteers to learn how each person's role and disciplinary perspective contributes to meeting patient needs. Teaching responsibilities at HAVEN are shared among a team of family nurse practitioners, certified nurse midwives, family and internal medicine physicians from the FHCHC as well as the Yale community. This teaching model replicates the same type of working collaboration at FHCHC among its primary care providers. The interprofessional teams at FHCHC center around particular diagnoses such as HIV/AIDS, chronic pain, or diabetes. These teams consist of physicians, APRNs, registered nurses (RNs), dietitians, social workers, outreach workers and behavioral health specialists with the goal of comprehensive and contextually appropriate care. The experiences of the FHCHC medical directors and providers influence and inform the methods used to teach the student volunteers at

HAVEN. With direct experience from work on interprofessional teams as volunteers at HAVEN, the students engage in critical thinking about the strengths and challenges of the different disciplines to further develop their skills as future clinicians.

Description:

Setting for HAVEN

New Haven and Fair Haven.

Served by a wide variety of health care providers, the Greater New Haven area health system exists as separate communities serving their own diverse neighborhoods. Yale-New Haven Hospital, Fair Haven Community Health Center (FHCHC) and the Cornell Scott-Hill Health Center (CS-HHC) are the major stakeholders within this health care system. Both FHCHC and CS-HHC are federally qualified health centers (FQHC) as providers of primary care to underserved populations.

Consequences of the lack of quality health care.

Through a mandate in the Affordable Care Act, Yale New Haven Hospital (YNHH) and the city of New Haven Health Department undertook a Community Health Needs Assessment. This assessment included input from a variety of community members with a wide range of expertise. As presented in the *Greater New Haven Community Index 2013*[24], several areas for improvement have been targeted in the health care sector. This document was a collaboration of several public health, health care, government and civic leaders working as the Partnership for a Healthier New Haven. With its emphasis on public health and the constraints of social determinants on population health as identified by the assessment, the New Haven Health Department has developed a Community Health Improvement Plan. This plan seeks to address several

policies that affect the delivery of health care in New Haven and to engage all the major stakeholders in that delivery including lost opportunities due to working in silos and lack of communication between different organizations.

According to the GNHCI, residents of poor New Haven neighborhoods have rates twice as high as wealthier neighborhoods of diabetes and COPD and three times the rate of homicides. People living in the poor neighborhoods of New Haven are more likely to die of complications of diabetes. The prevalence of obesity is three times as high in the medically underserved areas of New Haven where 69% of adults and one-half of New Haven's middle school students do not meet healthy weight standards. The infant mortality rate is double in the poor resource neighborhoods of New Haven than the wealthier neighborhoods[24].

Within this report, New Haven and health department officials have targeted the reduction of disparities in social and environmental areas as the means to improve the overall health of its residents. Some areas of disparity that were targeted for reduction included healthy food availability, access to health care, and increased recreational activities. As demonstrated in the CHNA for New Haven, the health care needs of the community are divided along socioeconomic lines[25]. These areas are noted on the following map as Fair Haven, Hill, Dixwell and Newhallville, the neighborhoods served by these two community health centers. Within what is termed the "inner core" of New Haven, these medically underserved areas contain residents who are more likely to report their health as fair to poor.

In 2001, more than a decade before the Affordable Care Act, the IOM[23] published *Crossing the Quality Chasm: A New Health System for the 21st Century* with the intent of

transforming the delivery of health care in the United States. Within this document they proposed the following rules to develop a system that was more patient-centered, safe and cost effective. The IOM's Ten Rules to Transform Health Care Delivery are shown in Table 1.

Table 1 Institute of Medicine's Ten Rules to Transform Health Care Delivery

1. Care based on continuous healing relationships
2. Customization based on patient needs and values
3. The patient as the source of control
4. Shared knowledge and the free flow of information
5. Evidence-based decision making
6. Safety as a system property
7. The need for transparency
8. Anticipation of needs
9. Continuous decrease in waste
10. Cooperation among clinicians

Each of these rules, if integrated into the systems and processes of a student-run clinic, has the potential to shape a delivery system that produces excellent outcomes for its patient population. Adapting the processes and organization of an established health center such as FHCHC into the process and structure of a student run clinic strengthens the foundation of HAVEN to achieve its goals.

Structure

HAVEN, as a student run clinic organized and supported by the Yale School of Medicine Office of Education, is led by a student board comprised of two to three

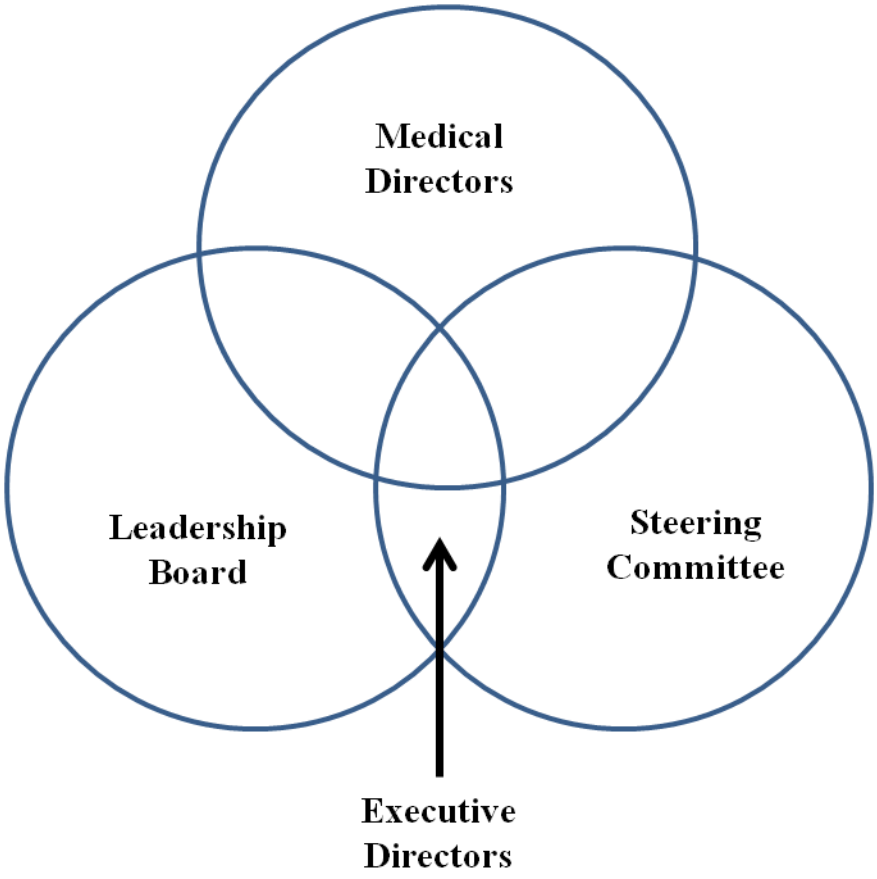
directors in each of the following departments: Clinical Advisors, Reproductive Health, Laboratory, Pharmacy, Referrals, Social Services, Education, Finance and Development, Information Technology and Communications, Research, Interpretation and Diversity, Faculty Recruitment, Student Recruitment, and Patient Services. In addition to the Board of Directors, there are three standing committees: Volunteer Affairs, Community Partnership and Outreach, and Clinical Quality Assurance. Students meet every other Monday night throughout the year to discuss on-going initiatives at the clinic, develop long-range plans and develop and monitor quality assurance programs. Over the past nine years, members from these groups have collaborated to produce the HAVEN by laws, a long-range strategic plan, clinical guidelines, and training manuals for all volunteers. All of this information is kept up-to-date on the HAVEN wiki which allows longitudinal planning and consistency in an organization with constant student turnover of volunteers. The student Executive Directors are the vital link between the different groups to ensure open communication, continuity and adherence to all clinic policies and procedures.

There are two medical directors from FHCHC (a family physician and a family nurse practitioner) and a faculty adviser from the Yale School of Medicine that are the frontline for decision-making for the student clinic. Historically, one of the HAVEN medical directors has been the medical director at FHCHC. As described in the HAVEN by laws, the medical directors are ultimately responsible for patient care at the student clinic. During quarterly Quality Assurance meetings, the members of the student board present new initiatives with goals and expected outcomes to the medical directors for discussion of relevance, viability and patient impact. As standing members of the HAVEN Steering Committee, the medical directors participate in long range planning

and guide the students through decisions on policy and procedures. The Steering Committee is comprised of Deputy Deans from the Yale Schools of Nursing, Medicine, Public Health, and Physician's Assistants, the medical directors, the current student directors and former student directors.

Figure 1 illustrates the relationships between the Medical Directors, the Steering Committee and the Leadership Board with the student Executive Directors as the interface between all groups.

Figure 1: HAVEN Free Clinic Operating Structure



Process

The structure for HAVEN Free Clinic has been carefully crafted to facilitate an efficient, effective and comprehensive structure to ensure patient safety while supporting an immersive educational experience for the students. The process of what is done for the patients unfolds during clinic hours on Saturdays and continues throughout the week through work of the student and medical directors.

Saturday clinic flow: On a typical Saturday, more than 50 student volunteers and three faculty attendings (either physicians, certified nurse midwives [CNMs], family nurse practitioners [FNPs] or physician associates [PA]) coordinate care for 40-50 patient encounters. HAVEN, housed within Fair Haven Community Health Center's main building in New Haven CT, provides services to uninsured adults over the age of 18 for a comprehensive offering of services. Last year, the HAVEN patient population was 90% Hispanic, 55% male, median age of 37 years old and 64% were employed full or part time. Since 2005, almost 7,000 patient visits have been delivered at HAVEN with countless referrals for laboratory studies, imaging and specialty appointments completed.

Students from the different professional disciplines come together at HAVEN to provide services and care to the patients on Saturdays, outside of their regularly scheduled classes and clinical rotations. This non week day schedule eliminates some of the logistical barriers to an interprofessional model of care and education and reinforces the sense of purpose through volunteerism. In the past nine years, HAVEN volunteers have been students at the Yale Schools of Nursing, Medicine, Physician Associates, Public Health, Law, Graduate School, Organization and Management, Forestry, Divinity, and undergraduates from Yale College.

As the patient enters HAVEN, they are greeted at the front desk by a Patient Services volunteer enrolls the patient and completes a new patient survey. These past two years, Social Service volunteers have screened and helped patients to access information through the CT health insurance exchange during their wait time. The next group of students is the clinical team made up of a Senior and Junior Clinical Team Member (SCTM and JCTM) and a medical interpreter where the patient begins their medical visit to HAVEN. Later, the patient may receive assistance from student volunteers in the Pharmacy, Laboratory, Education, Social Services or Referral Departments. There is a separate clinical department to assist with visits about Reproductive Health including IUD insertions, education about sexually transmitted infections and pregnancy options discussions. During every Saturday session, senior clinical students are serving as Clinical Advisers, volunteers responsible for the continuity of care between visits. Most Saturdays, free exercise classes are offered in the community room as well as different teams screening for behavioral health needs or offering help with legal matters. Figure 2 shows a map of the facilities with the locations of each department noted.

Coordinating all of these departments is the student Executive Director who manages the flow for the day. There are many students that begin to volunteer at HAVEN in their first year in one of the supporting departments and as they acquire clinical experience, come back to volunteer in the more clinically focused departments. More than 350 students from all the professional schools, as well as undergraduates, law and business students from Yale University volunteer each year. The two medical directors from FHCHC, a FNP and a physician, routinely provide coverage for HAVEN throughout the week.

Outcome:

With the completion of its strategic plan, HAVEN has begun a new phase of growth and refinement. The first ten years of the clinic established its place in the safety net of providers within the community. The next phase of growth will examine the impact of HAVEN on its patient population and how best to accomplish the Triple Aim in an area of limited resources. Recent articles published by students and faculty from HAVEN demonstrated completion rates for latent tuberculosis treatment as good as specialty clinics[26]; preventive care provision equal to other primary care clinics[27, 28] and reinforced students' desire to work with the underserved population[29]. The HAVEN Research department, working with members of the Steering Committee, continues to explore areas where outcomes from HAVEN's work can be studied and disseminated. New initiatives at the clinic must include measurable outcomes as well as an impact statement that focuses on patient access to care, student learning opportunities and sustainability. Among the outcomes needing further exploration is the impact of HAVEN on student and faculty volunteers as well as its patients.

"Attendings at HAVEN were always teaching in a constructive and patient centered way…I learned quickly to look up clinical guidelines and practical evidence and apply it in the context of the … resources available." HAVEN Student Volunteer Comments

"Having [many] preceptors enables [us] to focus on teaching, allowing more time to educate, model and observe. This individualized attention creates a learning atmosphere, which encourages questions, debate and evidence-based patient care, ultimately benefiting both the student and the patient." HAVEN Faculty Comments

"They don't see race, they don't see size or color… they're offering services to all. And thanks to this clinic, many people are going to be saved from many things." HAVEN Patient

These anecdotes from the key stakeholders at HAVEN Free Clinic begin to describe some of the anticipated outcomes from the continued operations of this

enterprise. Understanding the benefits and costs of a student-run clinic needs further research to address issues of replication and sustainability.

Challenges

Jacobson et al[30] described the challenges that are faced by safety net organizations that provide care to the medically underserved by their emphasis on mission driven efforts. As with HAVEN, organizations develop with the ideal of free care to a medically needy population but often lack financial planning. Through the generosity of several donors as well as on-going support from the professional schools and other student organizations, HAVEN benefits from a sound financial foundation. Further financial support through generous donations from Yale New Haven Hospital for all laboratory and imaging services as well as volunteer specialty services from the Yale Medical Group may be a challenge to other student clinics to replicate. Fair Haven Community Health Center, as the home for HAVEN, has been reimbursed for facilities and supplies but continues to have unreimbursed expenses each year. One of the benefits FHCHC has reaped from its relationship with HAVEN, all of the recent newly hired clinicians are former HAVEN volunteers. Given the razor thin operating margins at most community health centers, it is likely the HAVEN/FHCHC partnership will be difficult to duplicate. Additionally, the support of the administration of FHCHC, from the CEO to its medical director and clinical staff is essential to the successful collaboration with HAVEN and may be difficult to replicate elsewhere.

This past year, student leaders initiated the Strategic Planning Task Force to develop a long range plan to address these particular challenges. The goals addressed by the Task Force include: improve patient care, enhance student development and

strengthen foundational support. HAVEN continues to be one of the few longitudinal, interprofessional primary care experiences for health care students at Yale University. The opportunities to volunteer at HAVEN are often noted by applicants to the Yale professional schools. Graduates from the programs have used the experiences gained at HAVEN to successfully transition into employment at community health centers. While many previously uninsured patients now have coverage under the ACA, the safety net providers such as HAVEN continue to serve the uninsurable such as the undocumented. This model for the delivery of health care by a student run clinic in partnership with a community health center to a medically underserved population is a viable alternative in the safety net of providers.

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