The UCSD Student-Run Free Clinic Project: Transdisciplinary Health Professional Education

Ellen Beck, MD

Abstract: In the face of the serious problem of lack of access to health care in the United States, with over 45 million uninsured,[1] there exist many models of collaborative local programs serving the uninsured. One such approach is the student-run free clinic, small projects managed by health professional students, supervised by licensed health professionals, offering free health services to those without health access. The purpose of this article is to describe the UCSD Student-Run Free Clinic Project, its history, mission, partners, clinical services, curriculum, funding, replicability, outcomes, elements of success, transdisciplinary nature, and hopes for the future.

Key words: Underserved, free clinic, transdisciplinary, health professional, medical education, access, uninsured, student, dentistry, acupuncture, pharmacy, medicine, training, humanistic, empowerment, person-centered, student-run, community, promotora, trust, respect, service-learning, residency training, fellowship, community, community medicine, pre-dental, integrative medicine, healer, teacher, advocacy, health access, COPC.

The UCSD Student-Run Free Clinic Project resulted from the dreams of a group of medical students at UCSD School of Medicine. In 1996, a small group of medical students and faculty approached a community partner doing excellent work with street homeless in a part of the city with few resources for homeless people and offered to strengthen the community program's effort by offering some clinical services on a weekly basis. The street homeless program, based at a local Methodist church, welcomed the project and offered space one evening a week after a community meal. An affiliation agreement was signed between the university and the church, some supplies and medications were donated, appropriate arrangements were made for such things as records, charting, confidentiality, and safety, and in January 1997 the program began.

The first Wednesday night there were 10 patients and the project grew from then on. Eventually, more students were involved than one site could handle. Less than a year later, a pastor in a downtown Lutheran church, known for its work in social justice, approached the clinic director and invited the students and faculty to start a second site in the downtown area. The second site opened on Monday nights in October 1997 and it flourished as well.

***DR. BECK** is the Director of Community Education in the Division of Family Medicine, Department of Family and Preventive Medicine, at the UCSD School of Medicine in San Diego and can be reached at ebeck@ucsd.edu (or lightstream@att.net).*

The first two sites were primarily serving adults, working poor and street homeless. The students wanted to work with women, children, and families as well, especially from underserved minority communities. A free clinic project outreach team approached a revered local African American community pastor and suggested a third site at his church. He indicated that although his church was located in the inner city, his congregation was primarily middle class. However, he went on to point out, his wife was the Montessori consultant at Baker Elementary School in the inner city. By October 1998, the third site had opened on Tuesday afternoons at Baker Elementary. The school site, where 100% of the children receive subsidized lunches, offers services to the families and community of Mountain View, an inner-city neighborhood in Southeast San Diego, which is 67% Hispanic and 30% African American. Now, over 8 years later, clinical services are offered every Monday night at the downtown site, every Wednesday night at the beach location, and every Tuesday afternoon and Thursday morning at the school site. Each of the three community partner sites now provides at least two rooms of dedicated space for the clinic project and more during clinic sessions. In addition, a street homeless outreach team (consisting of a formerly homeless street-wise guide, a physician, a social worker, and students or residents) goes out on the streets several times a month and encounters street homeless, provides basic advice, and encourages follow-up at one of the three clinic sites.

Mission

The students and faculty developed a mission statement that focuses on the core values of respect and empowerment. *Empowerment* in this setting is defined as creating an environment in which the other (individual, family, and community) can take charge of his or her life and achieve well-being. Student leaders are expected to model these values and reinforce them among their fellow students. The mission statement that was finally adopted is the following:

> We are committed to providing free high quality health care to underserved communities of San Diego. The UCSD Student-Run Free Clinic Project, in partnership with the community, provides accessible, quality healthcare for the underserved in a respectful environment in which students, health professionals, patients and community members learn from one another. We seek to sustain health through . . .
>
> - free medical and preventive care
> - health education
> - access to social services

Figure 1 represents the clinic's mission in another form.

The faculty-student group also identified the list that follows as core values of the clinic project.

- Respect
- Trust

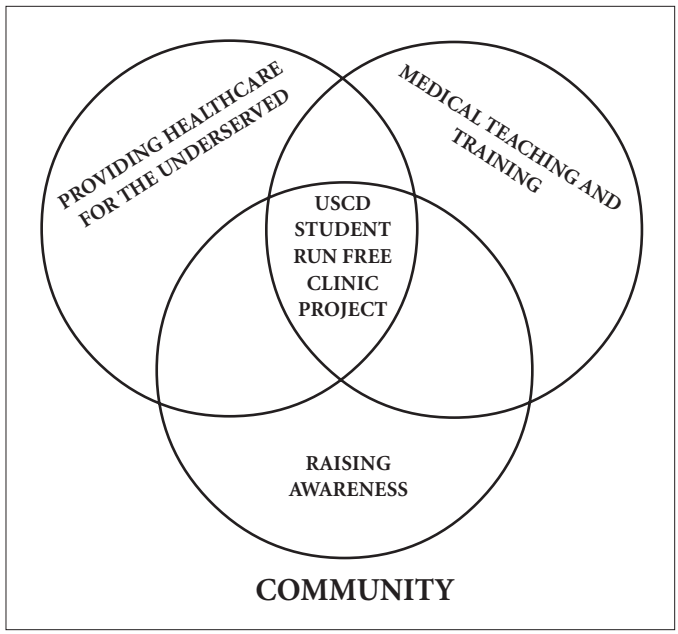

Figure 1. The Mission of the UCSD Student-Run Clinic Project.

- Learning
- Excellence
- Respect for diversity
- Communication
- Empowerment
- Integration
- Community

Professional Partners

From the beginning, the Pacific College of Oriental Medicine has provided acupuncture faculty and students at two of the sites on a weekly basis. Patients sign up for medical or acupuncture clinic or both. Patients are also referred from one team to the other. Students and faculty consult and collaborate in the care of the patient.

The UCSD School of Pharmacy and the UCSD–UCSF Combined Pharmacy program provide faculty and students to all three sites on a weekly basis. Students and faculty from pharmacy and medicine collaborate in seeing patients and providing care and education.

Nurse practitioners function as attendings alongside physicians and supervise nurse practitioner students from the University of San Diego Nurse Practitioner Program as well as medical students. For 5 years, the core associate director for the clinic project was a nurse practitioner. Thus, medical students have the experience of a core mentor early in their clinical training being a nurse practitioner.

Social work and mental health staff and faculty supervise medical students and social work interns from the San Diego State University School of Social Work in the provision of care.

In many American communities, the School of Dentistry is an important setting for the provision of care to the underserved. Although there is a school of dental hygiene, San Diego does not have a School of Dentistry. Predental students and voluntary faculty who are dentists and orthodontists in the community collaborate in the care of the patients.

Legal Components and Organizational Structure

The clinic's legal status is that of an outreach program of UCSD School of Medicine. An affiliation agreement is established between each site and UCSD School of Medicine and the other health professional schools. All supervisory faculty are either salaried faculty or appointed as voluntary faculty in the School of Medicine, or one of the other professional schools in the partnership, which addresses the liability of supervisor and student. The clinic is organized nonhierarchically as much as possible with students managing different administrative aspects of the clinic project. All student managers are expected to work onsite at the clinic project so that there is not one tier of managers and another of workers, but all clinic leaders function as both.

Clinical Components

Epidemiology and demographics. San Diego County does not have a county hospital. Outpatient county medical services for single adults are limited to those earning less than $802 per month, which is the federal poverty level for a single adult. This amount is not a "livable wage" given the high cost of living in San Diego. Thus the "working poor", those who earn too much to qualify for county health services, are not eligible for Medicaid, and who are self-employed or whose employers do not provide health benefits, make up a large percentage of the free clinic projects' patients. Insufficient shelter space and warm weather result in a large street homeless population. In addition, San Diego's location, 15 miles from the border with Mexico, ensures that there is a large undocumented population. Thus, the need for access to care for the uninsured is great.

In 2004, 767 patients were seen in the medical clinic for 2,699 visits. (This does not include dental or acupuncture visits.) Table 1 summarizes demographic data from January 1, 1997 to December 31, 2004 for 2,074 individual free clinic patients at all three clinic sites. (More specifically, it includes patients at the following sites for the time periods shown here. Site 1: January 1997 through December 2004; Site 2: October 1997 through December 2004; Site 3: October 1999 through December 2004.)

The age data appear to reflect which groups have the least access at the State and National level. Access exists for children, through programs such as Medi-Cal Healthy Families, and for the elderly, through Medicare, but not for single adults between 18 and 65.

Personnel. Students at the free clinic project include medical students, pharmacy students, nurse practitioner students, predental students, acupuncture students, public health students, social work interns, and other pre–health profession students.

Table 1.

DEMOGRAPHIC AND BACKGROUND CHARACTERISTICS OF FREE CLINIC PATIENTS, 1997–2004

Gender	Employed	Age	Ethnicity	Top 5 chronic diagnoses	Educational level	History of domestic violence	Homelessness
51.4% Female 48.6% Male	24.8%	<20: 4.4% 20–40: 34.3% 41–60: 47.8% >60: 13.5%	African American 8.8%, Asian 2.3%, Caucasian 28.2%, Hispanic 52.7%, Other 4.4%, Not specified 3.6%	Hypertension Diabetes Hyperlipidemia Depression Asthma	Completed high school 33% Some to completion of college 24%	9.2% reported a past experience of domestic violence	Not homeless 56.9% Homeless (from 1 week to >6 months) 36.2% Did not answer 6.9%

We hope to involve other students as well, including nursing students, dental hygiene students, family therapy and psychology interns, and residents from various training programs. Medical student involvement varies according to year in medical school. This year, the breakdown is as follows: 105 of 122 first-year students; 35–45 second-year students; and 72 fourth-year students, who rotate through as part of the family medicine clerkship. An additional 12 fourth-year students devote their time as year-long clinic managers or clinical coaches. Family medicine, psychiatry, and neurology residents participate as well.

Twenty-five first-year pharmacy students rotate through, several third-year pharmacy students participate in the free clinic elective class, and 12 fourth-year pharmacy students participate during 6-week blocks in the course of the year. Eight senior acupuncture students participate for 10 weeks each quarter, supervised by acupuncture faculty funded by Pacific College of Oriental Medicine.

Community health professionals appointed as voluntary faculty and faculty health professionals who volunteer their time are known in the program as volunteer health professionals. These include 60 primary care physicians, 15 specialty physicians, 12 pharmacists, 35 dentists, and 3 nurse practitioners.

The funded members of the team provide infrastructure and supervision, as well as contributing to day-to-day management, continuity, and fundraising. These positions, most of which are part time, include the Clinic Project Director, the Fellow in Underserved Medicine, some clinic attending support, community health promoters from the community, psychosocial program coordinators at two of the sites, a dental program coordinator, and administrative assistance.

Primary care/continuity. Pre–health professional volunteers check patients in, prepare charts, and administer consents. All patients are initially seen by a team of a first- or second-year student and a senior student or intern. The first- or second-year student establishes the relationship, and takes the history, while the senior student acts as coach and assists with the initial examination. The students present to an attending and then the attending must see all patients with the students. Together, they write a note, consult with pharmacy staff, and consider management options, including social resources. Most patients at the clinic sites are followed for ongoing care of chronic problems. Approximately 20 patients are seen per site per week per half-day clinic, with established patients getting top priority, and new patients being seen on a space-available basis.

At the end of the evening or half day, when time permits, a learning circle is held in which all members of the health care team stand in a circle and share something they have learned that day, no matter what part of their experience it involved. This process of reflection helps to build community and reinforces the humanistic model practiced at the clinic sites.

Case management. One of the principles of the clinic is to present no barriers at entry. Thus, initially, there is no financial screening. However, if a person meets eligibility requirements for government-sponsored insurance or other programs giving them access to care at other facilities, every effort is made to help them to enroll in these other programs, so that, at the free clinic project, ongoing services are only provided to those without any eligibility for access. The only exception to

this is for street homeless patients who might officially be eligible for a program such as County Medical Services but whose lives are too chaotic for them to take advantage of the opportunity.[2] At each site, students supervised by a social worker, a family therapist, or physicians provide case management services to help patients with shelter, access, legal advocacy, and other needs. In addition, each site has a limited case management budget so that if there is a specific need that prevents access, or a specific barrier to achieving health or well-being (e.g., transportation, a low-cost procedure, a special medication, a specific form of therapy, tuition at a community college for a person reentering the work force, a suit for a job interview, or shelter for 2 nights so that a wound can be cared for), these may be purchased based on a joint decision between the case manager and the clinic director.

Lab testing. The free clinic project is part of a San Diego purchasing cooperative, Council Connections, sponsored by the Council of Community Clinics, which makes it possible for the clinic project to purchase lab services so inexpensively that it can offer free lab tests to clients. Licensed volunteer phlebotomists and health professional students draw blood for blood tests. Through a waiver, certain tests may be performed on site. Results are delivered daily to the university administrative offices of the free clinic project where they are reviewed for abnormalities. Routine labs are only drawn from a patient at his or her second visit to the clinic to ensure that the patient has established his or her commitment to continuity. Students are taught that they must be able to identify a way to follow up with a patient during the week, if needed, and thus make efforts to learn and record a phone number, the street corner where a person sells newspapers, the cell phone of a close friend, or the location where a homeless person tends to sleep.

Specialty services. Over time, a variety of specialty services have been developed based on the needs of the clinic and the interests of the students. These services include a monthly hepatitis clinic (supervised by a hepatitis specialist and a nurse practitioner and managed by the students), which provides patient education and helps to access treatment to patients with hepatitis C, as well as monthly clinics in dermatology (pathology services for biopsies being provided as a donation by the UCSD Department of Pathology), diabetes care, neurology, and cardiology. These specialty clinics are each offered at one of the sites once a month; students refer patients and establish follow-up mechanisms. Volunteer attending practitioners supervise students at these specialty clinics. A local ophthalmologist donates retina exams and, if needed, laser retinopathy treatment for diabetics at his office once every 6 weeks. Students organize the clinic and a van picks up patients at each of the three sites to go to the ophthalmologist's office.

Dental clinic. The greatest unmet health care in the country is for dental care. The Surgeon General's *Report on Oral Health* from 2000 reported that although 44 million Americans lacked medical insurance, about 108 million lacked dental insurance.[3] Five years ago, student leaders at the clinic project estimated that 4 out of 10 free clinic patients had expressed unmet dental needs. A student, Eric Goldlust, offered to start a dental clinic project. At this point, dental services are offered once or twice a week at all three sites. At the school site, orthodontic services, using retainers and other temporary devices, are offered free of charge as well. The steering

committee of the dental clinic project includes the executive director of the local dental society. The dental directors of the clinic are dedicated volunteer health professionals, including Irv Silverstein, DDS and Melanie Parker, DDS. As part of a Community Advocacy elective, Dr. Parker teaches a session to the medical students on oral health and disease, a topic often overlooked in medical school curricula, bringing to bear such home truths as "toothlessness can lead to joblessness," among other things. Dr. Silverstein has become the advisor to the predental students, aiding them with the application process, and encouraging their future involvement in underserved communities.

Mental health care. Another important area of unmet health needs is mental health; many of the free clinic patients have both mental and physical health needs, and problems with addiction. At the school site, a mental health team has formed that includes a family therapist/case manager who grew up in the Mountain View area, a community health promoter, and a family physician/psychiatrist. The mental health program supports a broad definition of mental health, in harmony with the definition of health provided by the World Health Organization: "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (p. 100).[4]

The mental health program includes a weekly women's support group, a monthly stress management lunch program, and ongoing individual and family counseling for children and families without access to care. Care is ongoing and may include medication and psychiatric consultation. An art health program is being developed that will include creating a community mural at Baker Elementary. People from the free clinic project and children having problems at Baker Elementary and lacking access to care are referred to the Baker mental health program. The approach is to address the child's difficulties in a broad context, by attempting to work with both the family and the child to address often complex situations. At the other two sites, psychiatry residents, family medicine/psychiatrists, a social worker, and family physicians provide mental health services. At the church sites, many of the clients are homeless. The free clinic project provides a safe, trusted setting that allows for the possibility of addressing the mental health as well as the physical health needs of this population. Students are taught to address the presenting concern of the patient (e.g., a skin rash or respiratory infection) letting trust develop over time. As trust develops, they can begin to address some of the more fundamental problems (such as mental illness or alcoholism) that may contribute to the patient's homelessness.

Medications. Medications are provided free of charge to patients through three sources. One is a purchased formulary of primarily generic medications (one medication in each major category). The second source is a wish list formulary constructed to ensure that samples provided by physicians and pharmaceutical companies are those that are needed by the clinic project and to ensure consistency of medications for individual patients. The final source is patient assistance programs, through which medications are provided free of charge by the pharmaceutical companies to patients unable to purchase them, one patient at a time. It is made clear to the community that no habituating medications such as

narcotics and benzodiazepines are dispensed by the free clinic project. This precludes patients recurrently attempting to seek commonly abused drugs from the free clinic project. An ongoing dilemma is the cost of diabetes test strips, which are not usually covered by patient assistance programs and which patients need to truly take charge of their diabetes.

Curricular Components

All students who work at the free clinic project are required to take an elective entitled Community Advocacy. This class comprises a weekly reflective component, a series of didactic and experiential sessions, and the students' first five sessions at clinic. These five sessions include a session at each of the three sites as a clinical trainee and two sessions as an administrative trainee. Classroom sessions include a presentation by community members and health promoters, entitled The Community as Teacher, an experiential session providing teaching skills called Becoming a Teacher, a session by an orthodontist on oral health and disease, a participatory introduction to acupuncture, the practical use of social and legal resources, mental health and addiction care, women's health, issues of domestic violence, border health, pharmacy principles including access to pharmaceuticals and safe practice, a community and clinical approach to diabetes, and an experiential approach to health professional wellbeing. Themes such as empowerment, respect, trust-building, confidentiality, safety, quality, "cultural humility"[5],working with interpreters, the concept of vulnerable populations, and always learning from and involving the community[6] are emphasized. Students are also expected to present a health education session at one of the sites, and to complete a reflective paper synthesizing what they have learned. Students who choose to take a second elective, entitled Free Clinic II, then choose one of the clinic sites, and an administrative trainee role, and are expected to divide their time between administration and clinical work at the site. During this elective there are three group meetings, during which the students continue to reflect, share their experiences, and learn practical clinical skills (e.g., electrocardiograms or joint exams). Students may repeat this elective, and continue to receive credit, throughout their first and second years. Between the first and second year of medical school, students have the opportunity to work at the free clinic project during the summer to help build its infrastructure, trouble shoot and solve problems, and ensure quality in all aspects of care. Six to 10 students work through the summer. These students often indicate that creating this type of program is a career goal for them.

In their third year, students drop in as clinical coaches. Two third year students may also choose the Baker Elementary clinic site as their half-day weekly clinical setting for their required longitudinal primary care core clerkship. In their fourth year, students may be clinical coaches (paired with first- or second-year students), modeling a humanistic approach in the care of patients,[7] or they become clinic managers, as a team with second-year students, supervising the clinical services at one of the three sites. A humanistic approach embodies person-centered and relationship-centered care and is based on core principles developed by Carl Rogers in the mid-20th century of empathy, congruence, and unconditional positive

regard.[7,8] Consistent with the free clinic project mission statement, it employs an empowerment approach and attempts to address the needs of the person's mind, body, and spirit and to create an environment in which they can take charge of their life and achieve well-being. Students at UCSD School of Medicine are expected to complete an independent study project during their 4 years of medical school. Students may choose to do a research project and/or a community service project. Many of the students choose to do theirs at the Free Clinic Project. This has led to the improvement of the clinic through addition of specialty clinics, development of outcome measures, creation of a clinical database, implementation of a folic acid preconception education project, as well as other programs.

Acupuncture students work at the clinic as part of a one-semester third-year option, attending once a week for 10 weeks. Pharmacy students participate in the first year as part of a required pharmacy practice class and as part of a fourth-year 6-week elective. Social work interns may participate in a 1-year internship. Two students from City College, a local community college, are placed at the Baker Elementary site for a year as their community service commitment as part of the Price Scholarship Program sponsored by Price Charities.

Funding: An Adventure in "Altrepeneurship" (Altruistic Entrepreneurship)

When the clinic project began, the effort was largely volunteer in nature and supported by in-kind donations. The university provided liability insurance, a key element of support; the partners provided space, telephone, utilities, and security; small donations supported supplies and basic equipment; and the students ran bake sales when the clinic was running out of medications. To this day, the project seeks no reimbursement for patient services. Some federal funding was obtained through the Health Resources and Services Administration (HRSA) primary care training funds to provide for some supervisory faculty and staff support. For the first few years, the students and faculty wrote small grants to help support the program, from foundations such as the County Employees Charitable Organization and the Harold S. Mindlin Foundation. A seminal event occurred 4 years after the start of the project when the interim Dean of the Medical School decided to provide core infrastructure funding. This funding, which has continued for the last 4 years, has allowed the project to seek and receive funding from larger foundations (including the Alliance Healthcare Foundation, The California Endowment, the March of Dimes, and the Guenther Foundation). Sometimes one of the community partners is the lead agency on a proposal grant, sometimes the university. The quality of collaboration toward shared goals between the free clinic project and community partners has engendered the trust necessary for such a mutually beneficial partnership.

Replicability

In 1999, with the grant support of HRSA Title VII Primary Care Training funds, Dr. Beck, the author of this paper, created a 3-week national faculty development program entitled Addressing the Health Needs of the Underserved; over 70 faculty

from 25 states have attended this program over the last 7 years. As a result, seven new student-run free clinic projects have been created, in settings as diverse as the Baylor School of Medicine in Houston, the University of Kentucky at Lexington, the University of Missouri at Kansas City, and the University of Mississippi at Jackson.[9]

In 2001, the author, with the assistance of HRSA funding, created a 1-year Fellowship in Underserved Medicine at UCSD for physicians, postprimary care residency, who have an interest in working with underserved communities. The fellow assists in the direction of the free clinic project, functions as an attending physician at the free clinic, and completes studies and a project in a relevant area. Fellows also have the option to earn a master's degree in public health. Of the four full-time fellows since 2001, two have previously been free clinic student leaders who did their residency elsewhere and returned to work with the clinic.

Outcomes

Clinical outcomes are measured by the Quality of Wellbeing Scale (QWB-SA),[10] a well-validated and reliable measure that is administered regularly over time to free clinic patients.[11] A clinical database is maintained that allows the students to measure changes in clinical endpoints such as blood pressure and hemoglobin A1C.

A preliminary study comparing students in the free clinic electives with those who had not taken the elective indicated that the free clinic students were more likely in a pre–post assessment to have acquired more positive attitudes to working with the underserved and homeless than students who had not taken the elective (David Hoffman, unpublished data, Independent Study Project, 1999). A study currently being developed will look at long-term attitudes, career choices, future decisions to work with underserved individuals, and collaboration with other health professionals on the part of students involved with the free clinic project. Although the fact that the free clinic students are self-selected limits the implications of such comparisons, we still hope that they will prove useful.

Elements of Success

Medical students arrive at medical school with passion, compassion, and a desire to serve and make a difference. They are often leaders and have demonstrated this leadership prior to entering medical school. Once entering medical school, especially during the first 2 years, they often feel inadequate. Data indicate that cynicism often rises through medical school; some medical school environments have been deemed abusive.[12,13] Projects such as the one described herein provide a setting in which the student's passions, compassion, and potential for leadership can thrive and be reinforced and in which the student can keep his or her values and dreams alive.

Student sense of ownership. Students strongly feel a sense of ownership in relation to the clinic project. Student leaders train and identify others who will lead after them; these new student leaders emerge as they demonstrate their commitment over time and their willingness to work hard and take on tasks as needed. Thus, the project nurtures humility, teamwork, ownership, and leadership. The students are

expected to monitor and police the mission statement; if students or attending physicians behave arrogantly or rudely, they are taken aside, privately, and asked not to do so at the free clinic project. In lectures and by role modeling, teachers encourage students to leave competitiveness, academic arrogance, and prejudice at the door.

Community as teacher. Community members are seen as important, trusted partners and a key source of learning for the student. Several community members, who were initially patients and then volunteers, have become health promoters, educators, and community liaisons, essential members of the health care team at each site. These community members/leaders are invited to teach in both the community advocacy elective and in the faculty development program to teach the students about advocacy and community and health issues.

Trust. The students are taught to show respect to all and to build trust. The students learn that only after she or he and the patient establish a "trust bridge" can they begin to help the patient take charge of his or her life.

Partnerships. Both the community and the professional partnerships are the foundation of the free clinic project. Respecting and maintaining these partnerships is of prime importance. The philosophy of the free clinic project as expressed in the mission statement is actively taught and maintained and is the essence of all activities at the clinic project.

The future. There is no plan to increase the number of sites of the project because there is a risk it might then no longer be student run. Rather, the goal is to continually increase the quality, depth, and capacity of the clinic. In addition, it is important to keep the projects in the community and to keep overhead low; thus, there is no desire to have a separate building, with its attendant costly overhead and distancing from the community. The almost 1,000 regular patients of the free clinic project get top priority, which means that prospective new patients often must be turned away. The need for access in the city as well as the country is vast, and the free clinic project can only address a infinitesimal bit. The current greatest unmet needs at the free clinic project are for specialty services that require a procedure or brief hospitalization. The San Diego community is attempting to address this problem by developing an Underserved Services Network to work with hospitals in the community to donate needed services on a rotating basis.

The Free Clinic Project and Transdisciplinary Health Professional Education

If health professional students from different fields work and train side by side in underserved settings with an empowerment philosophy, perhaps they will practice differently, consult each other more often, and perceive each other in a less hierarchical fashion. If health professional students are trained in environments where the students are expected to do all the tasks, whether large or small, and work together and learn from the community or with the community to achieve the goal of quality humanistic care of the patient,[14] perhaps system change is possible. The roles of health professionals as healers and teachers are at risk of being lost or mislaid during their training and subsequent practice.[14] Programs such as the UCSD

Student-Run Free Clinic Project may sustain students' passion, compassion, and desire to make a difference as well as provide the needed skills to help the student make his or her dreams of practice with the underserved a reality.

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