Establishing the First Student-Run Clinic to Provide Free Health Care to a South Texas Colonia

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Abstract

The University of Texas Rio Grande Valley School of Medicine (UTRGVSoM) opened its student-run clinic (SRC) in March 2018 to provide free health care for the residents of Pueblo de Palmas colonia in Hidalgo County. Located along the United States-Mexico border near some of the country's poorest and most medically underserved communities, UTRGVSoM has the unique opportunity to extend quality primary care to those who otherwise would go without. The physical location of the clinic was determined by a partnership with Proyecto Desarrollo Humano, a nonprofit organization within the Pueblo de Palmas colonia. The free clinic, located in the town's community center, opens its doors to the public every month on a chosen Saturday. This article hopes to detail the experience of being the first SRC to operate inside a Texas colonia.

Introduction

Hidalgo County has been classified as a "persistent poverty"[1] county by the United States (US) Census Bureau with more than a third of its residents living below the poverty line, and twice as many people living without health insurance compared to the national average.[2] Hidalgo County faces a significant shortage of healthcare providers, especially primary care physicians.[3] It is also home to more than 900 colonias, some of the most impoverished neighborhoods in the country.[4]

Colonias are a consequence of historic exploitation of migrant agricultural workers near the US-Mexico border. Unkept promises from land developers on regulatory-free zones sold to these migrant workers led to such residents without access to clean water, safe housing, or medical services. These

unsafe living conditions expose residents to environmental hazards like flooding, mosquito infestation, pesticide exposure, and lack of potable water.[5] This is reflected in statistics like the elevated incidence of viral and bacterial disease in colonias compared to state levels.[6] In the Rio Grande Valley (RGV), there are no public hospitals. The closest public hospital is over 150 miles away, in Corpus Christi, TX. Compared to the Texas state average, the RGV has a lower rate of insured people under 65 and a lower ratio of primary care physicians to people.[7]

In 2016, students at the University of Texas Rio Grande Valley School of Medicine (UTRGVSoM) sought to help alleviate health disparities in Hidalgo County by creating a student-run clinic (SRC) to provide free health care services to colonia residents. The clinic conducted a Health Needs Assessment (HNA) to learn more about the socioeconomic barriers to health and to guide the range of services to be offered. The HNA consisted of three focus groups with community health leaders and twenty-three surveys to community residents. Key findings include over 70% of participants being of Hispanic heritage and female. Low levels of literacy may be a health barrier, as 38% did not have a high school diploma. The most prevalent health issues include kidney disease, diabetes, and chronic pain. UTRGVSoM faculty and residents of the Pueblo de Palmas colonia were additional stakeholders who shared the mission of the clinic and supported its development. Additionally, a donation was received from the Dean of UTRGVSoM's discretionary funds to supply the clinic's medication closet with drugs and medical devices that we give out free-of-charge to patients that use our services. The board of the SRC and the School of Medicine collaborate in continuous fundraising to sustain operations indefinitely.

Since opening clinic day, the patient population served by the SRC directly reflects that of colonia residents. Many of the patients seen thus far are Hispanic, female, aged > 40-years-old, and primarily Spanish-speaking. This descriptive report aims to share the process of operating in the Pueblo de Palmas colonia, as well as our clinic location of the town community center.

The Program

SRCs are an important part of bridging the healthcare gap in low-income areas and provide benefits to both patients and students.[8] Studies have shown that these clinics provide quality care with

high patient satisfaction rates, increase patient compliance and treatment outcomes, and may encourage more students to choose specialties in primary care.[9,10] Students have reported increased self-efficacy in patient education and communication skills after participating in SRCs.[11,12] Additionally, we are committed to improving patient experience and feedback. We firmly believe that more formal methods of tracking patient experience and feedback are necessary to make targeted improvements and serve our patients better. Therefore, we are actively working on implementing these methods to achieve our goal.

It is crucial that any SRC intending to serve an underserved population define its objectives. Our ultimate goal is to transform the health of the RGV and provide advanced academic medicine.[13,14] By serving uninsured RGV residents pro bono care through the clinic, the institution can improve the health of its community.

There is a wealth of literature on the creation of SRCs, much of which have focused on osteopathic medicine,[15,16] quality improvement,[17-21] or specialty care.[22-25] For example, the Rowan School of Osteopathic medicine writes about a unique system that utilizes an angle of social support through community health workers or family members. This "buddy system" used by the clinic is explored in its effects of managing hypertension in the Camden area. Other clinics which operate more traditionally focus on improving the quality of care, such as medicine pick-up rates and laboratory follow-up.[26] Specialty care clinics include those for oral health, eye health, and physical therapy—many of which are projects meant to expand on an already existing SRC model. Some even go beyond medical health and into human rights education, such as the work of Praschan et al. (2016) which writes about services provided to improve the health outcomes of asylum seekers in the Maryland area while drafting medical-legal affidavits for use in immigration court.[27] Accounts of unique medical populations such as this one recognizes creative ways to look after their patients.[28-32]

However, none have specifically looked at vulnerable colonia populations or transformed a town community center as their site of care. This paper hopes to fill this gap in the literature by describing clinic organization, strengths, and limitations distinct to this situation. As the clinic expands, we envision opening more SRCs in RGV colonias and wish to serve as a demonstration for other institutions to initiate

similar projects in low-income areas. We encourage students elsewhere interested in starting their own SRC to compare their available community resources, target demographic, and student body to those of other programs and tailor the details of their operations in the context of any meaningful differences. The first steps might include explicitly defining non-negotiable elements of the project, perhaps: budget, frequency, or patient population within commute range.

To accomplish the organizational, financial, and logistical aspects of hosting a free clinic day in a distant colonia while maintaining a high standard of productivity, student involvement with the SRC project has evolved over the past six years. This adaptation to clinic days and expansion of the operation was achieved mainly through the creation of the SRC Executive Board, with 10 positions comprised of medical students. These positions and their roles are as follows:

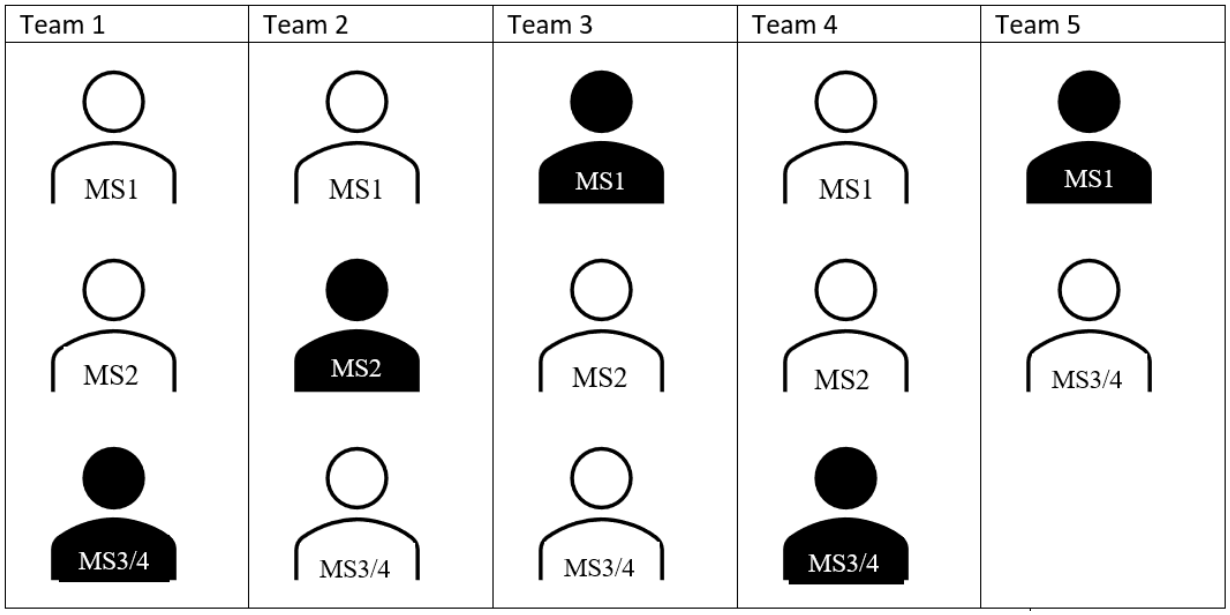
Table 1: UTRGVSoM SRC Executive Board Titles and Descriptions

Titles	Descriptions
Operations	Designs and executes the day of operational flow, leads board meetings
Administration	Equipment tracking and storage, medical supply and inventory
Volunteer Coordinator	Send out volunteer sign-up sheet, delegates roles to volunteers during clinic
Physician Coordinator	Schedules and assigns UTRGVSoM physicians to clinic dates
Community Outreach (2)	Patient intake, organizes SRC events, maintains communication with the community center
Finance	Financial reporting to administration and student government, orders necessary supplies and equipment
Grants and Research	Grant identification and writing, leads SRC publications
Clinical Mentors (2)	Senior medical students with previous student clinic experience who advise other board members

Based on previous years' needs, the positions of Community Outreach and Clinical Mentor have been expanded to be held by two students rather than just one. We recommend a similar approach to leadership designations, as an ensemble of board members with specified responsibilities is crucial for a well-functioning SRC to distribute duties in a logical manner.

Clinic Operations

Figure 2: Example visual of UTRGVSoM SRC Teams



Key: Shaded student images represent team members who can speak proficient Spanish

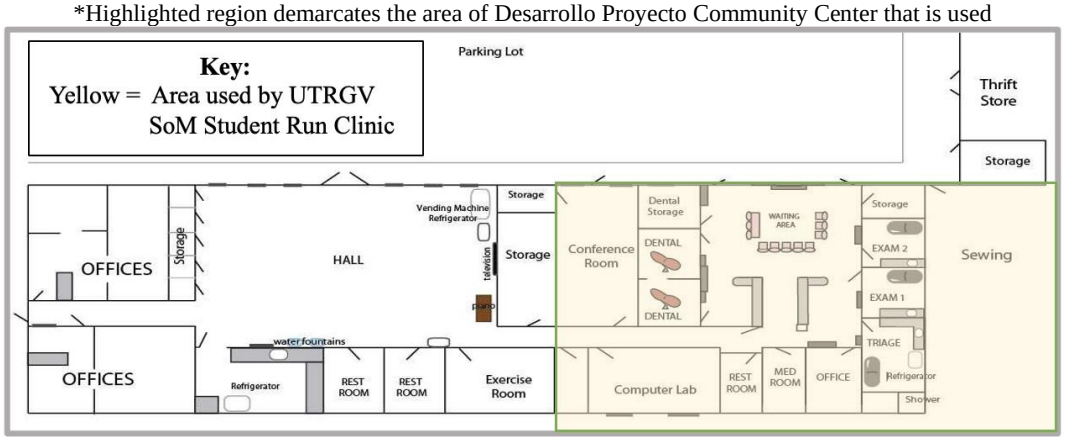
The UTRGVSoM SRC opens its doors one Saturday every month in the Proyecto Desarrollo Humano community center from 8:00AM to 4:00PM. Two weeks before the clinic date, up to twenty-eight medical student volunteers sign up first-come first-serve online via a SignUpGenius online poll. Student teams are split up as seen in Figure 2 according to year and Spanish-speaking ability to optimize patient communication and clinical skills experience. This is done twice—once for the morning shift and once for the afternoon shift. The Physician Coordinator reaches out to multiple UTRGVSoM primary care physician faculty months in advance of the planned clinic day to schedule them. Many of the diseases we see at this SRC are chronic conditions such as diabetes mellitus (DM), hypertension (HTN), and hyperlipidemia (HLD). Cases that necessitate specialty-specific care have the patient referred to affordable clinics in the area by the front desk staff, a group of non-student volunteers who have been with the clinic since its inception.

Figure 3: UTRGVSoM SRC Operations Timeline

Time	Activity
Two months before clinic date	Physician Coordinator schedules attending doctors
Two weeks before clinic date	Volunteer Coordinator schedules medical student volunteers
8:00 AM	SRC Board Members come in and set up
9:00 AM	First shift volunteers come in and are divided into teams and begin seeing patients
11:00 AM	First shift volunteers consult with attending physician before deciding upon treatment and discharging patient Second shift volunteers come in and are divided into teams and begin seeing patients
1:00 PM	Second-shift volunteers consult with the attending physician before deciding upon treatment and discharging the patient
2:00 PM	All patients seen SRC Board Members pack supplies back into storage

Members of the Executive Board arrive at 8:00 AM to set up and ready patient intake stations and laboratory equipment held in the building's storage room. There are three rooms with patient beds that are used as examination rooms, an old computer laboratory that serves as a student-physician debrief room, a vitals station and a room for laboratory equipment such as a urinalysis and Piccolo Xpress machines.

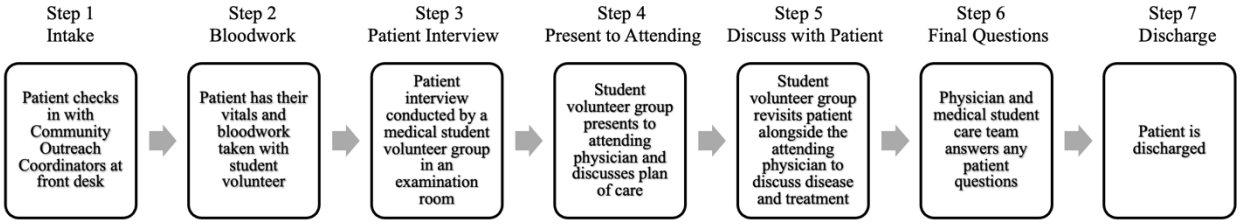
Figure 4: Floor plan of UTRGVSoM SRC
*Highlighted region demarcates the area of Desarrollo Proyecto Community Center that is used



Patients arrive and are checked in by our Community Outreach Coordinators before having their vitals and point-of-contact blood glucose taken. All patients get their HbA1c checked every three months

and a lipid panel done each year. Once complete, the patient is assigned to an examination room and a team of student volunteers conduct the patient interview and perform any relevant physical exams before leaving the examination room briefly to present to the attending physician and identify a care plan. The student team and physician then return to the patient's room to discuss the diagnosis and treatment with the patient. A priority of the SRC is the delivery of health education from medical student volunteers directly to the patient. The goal is to have the patient able to explain back to the care team about their disease management by the time of discharge.

Figure 5: Flow of patient visit at UTRGVSoM SRC



Students participate in every step of a patient's visit. Under the supervision of a nurse practitioner, students are taught decision-making skills for performing lab draws. Students also have the opportunity to attend trainings on phlebotomy. Regular lab work is crucial for managing conditions prevalent in the RGV's uninsured population, which include DM, HTN, and HLD.[35] The regular monitoring of patient lab work allows us to adjust our treatment plans depending on how the patient is responding to certain lifestyle modifications or medications that our doctors have prescribed. Besides labs meant to monitor these chronic conditions, the clinic is also stocked with other equipment that allows us to perform tests like urinalysis and pregnancy tests, if indicated. Any lab work patients need that we don't have stocked, our clinic will attempt to purchase, if possible. If it is not possible, then we send the patient to an outside lab that can fill the order.

Students also practice clinical skills learned in the classroom, such as conducting physical exams on patients, collecting vitals, and presenting medical findings to the physician. This experience also offers

an intimate exposure to social determinants of health, where students consider factors like the patient's financial status, primary language, community resources, and familial obligations while proposing treatment plans. For many students, this unique experience of working through a language barrier allows them to better appreciate the importance of medical Spanish and interpreter services.

Strengths

Our clinic offers a significant advantage due to its location. Many patients who live in colonias face challenges like limited transportation options and a lack of awareness about affordable healthcare services, which can prevent them from accessing primary care. To address these issues, we chose to establish our SRC in 2016 at a community center located in Las Penitas, a colonia that is accessible to the target population. By using Las Penitas, we can spread the word to the area's locals while they are accessing other resources from a place they already trust. When treating chronic conditions like DM and HLD, regular patient follow-up is crucial. By meeting patients where they are, we have been able to consistently see patients on a month-to-month basis to obtain routine bloodwork invaluable to long-term disease management.

It is important for any SRC to be conscious of the large cost of start-up and operation. By our clinic using a community center already equipped to handle a variety of healthcare services, we considerably reduce the cost of operations and limit the necessary labor involved in setting up the clinic. The use of this community center allows us to be supported by volunteer staff, consisting of a nurse and three community members who oversee the front desk. Together, they assist in handling patient information and highlighting any resources available to community members. As colonia residents themselves, the volunteer staff serve as a conduit between our medical school institution and the community.

By identifying a clear target population, an SRC board can request federal and local dollars to accomplish their goals. Our clinic’s target demographic lies at an intersection of three vulnerable and disadvantaged populations: Hispanic, female, and low socioeconomic status. This intersection of identities is historically underserved in health care and with the help of federal, local, and private grants, we can serve this population and lower the systemic barriers to quality care.

Limitations

The unique experience of practicing medicine in colonias comes with its unique challenges. Though a specific percentage would be difficult to determine, it is a well-known fact that colonias near the US-Mexico border have a significantly higher percentage of undocumented residents than most other areas of the country. In fear of being deported, many undocumented individuals avoid situations where their undocumented status may be disclosed to law enforcement.[36] Because of this, it can be difficult to effectively reach our target demographic.[37] Legal residency status is not a question we ask our patients, and we encourage patients to inform their friends and family that the SRC is a space for all community members. Creating an environment in which people in this situation feel safe can take time, especially when seeking healthcare may have previously led to negative consequences. We take pride in protecting our patients and encouraging colonia residents to take an active role in their health.

Secondly, Proyecto Desarrollo Humano currently does all its medical charting on paper as it lacks the resources to implement an electronic medical record (EMR), presenting the challenge of tracking patient outcomes and document management. Hand-written charts also introduce an issue with illegible handwriting. Sometimes, notes written of prior encounters are difficult for volunteers and doctors to decipher, slowing down productivity. Especially in managing the chronic illnesses prevalent in RGV, understanding how a patient has been managed in the past is crucial for informed decision-making at the current visit. Since the SRC does not own the community center and requires paper charting until an EMR is implemented, we must circumvent these limitations in creative ways. We plan to implement methods in the future to incorporate digital charting into our workflow, while also following the recommendations of the community center we work under. This way, we can maintain the structure and consistency of our charts while improving note readability. Paper charting, rather than digital charting, also makes data collection for research purposes a more time-consuming task. Therefore, we will support Proyecto Desarrollo Humano in transitioning to an EMR when they are able.

Discussion

A major goal of the UTRGVSoM SRC is to offer an example for the opening of other SRCs in colonias or similar low-income areas in the country, especially in locations with already developed infrastructure such as community centers. Such areas already see substantial foot traffic while being local to the medically underserved. With more of these types of initiatives, we aim to help alleviate health disparities, increase the cultural literacy of medical students, and encourage more students to participate in primary care.[38] We believe an effective SRC can overcome socioeconomic barriers to health that our patients face while bringing more awareness about these underserved communities. To accomplish these goals, the UTRGVSoM SRC is committed to supporting the health and wellness of the people of Las Penitas by regularly providing free, accessible, excellent care, regardless of citizenship status, income, or language spoken.

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None

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