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Assessing the Effectiveness of Outreach Measures at a Student-Run Free Clinic

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Abstract

Background: Student-run, free clinics (SRFCs) seek innovative and cost-effective outreach strategies to recruit new patients and raise awareness of their services. The current literature presents several approaches to increase community engagement, but the formal evaluation of these outreach efforts is scarce. The present study aims to fill this gap by measuring the effectiveness of outreach efforts on patient visits, which was implemented over the past year at an SRFC in Omaha, Nebraska.
Methods: A retrospective review of clinic traffic and outreach efforts deployed at our SRFC for 13 months. Six formal outreach methods were identified and included in the analysis. Patient recruitment was measured by calculating the difference in total patient volume 30 days before and after the implementation of an outreach effort. An effort's efficacy was evaluated by calculating the financial expenses and time spent per patient recruited for the corresponding outreach methodology.
Results: Two-thirds of the efforts resulted in increased patient volume, with the additional third being associated with decreased traffic. The most successful outreach effort, which resulted in an average increase of 9 patients, only required the investment of 0.67 hours per patient, with no financial cost. The least successful effort required 2 hours and cost $11 per patient.
Conclusions: This study provides an approach to evaluate the efficacy of outreach efforts to increase patient recruitment at our SRFC. The financial expenditure, volunteer time, and corresponding efficacy of previous efforts should be considered prior to their re-utilization. Additionally, these findings support future prospective tracking of patient recruitment and retention data to optimize the quality and quantity of patient care. By addressing these challenges, clinics can better serve their target population and fulfill their mission of providing quality medical care to underserved communities.

Introduction

Approximately 3 million uninsured individuals in the United States fall into the "coverage gap".[1] This group comprises adults residing in non-Medicaid expansion states with income above the Medicaid threshold but less than the Marketplace subsidy threshold, adults who do not qualify for Medicaid based on immigration status, and adults who do not qualify based on income but do not make enough to cover insurance.[1] Student-run free clinics (SRFCs) attempt to close this gap by providing essential primary care and specialty services for uninsured and underinsured patients nationwide.[2-5] Despite offering high-quality, cost-effective care to low-income populations, many SRFCs struggle with successful patient recruitment.[6] Two common barriers to community outreach include limited funding and variable student and faculty time commitment. As such, SRFCs are tasked with finding creative ways to implement innovative outreach efforts that target their local communities, recruit patients, and advertise their services in a time- and

cost-effective manner. Several SRFCs across the nation have reported patient recruitment strategies stemming from partnerships with local homeless shelters and churches, university hospital primary care departments, and their utilization of consulting services.[1,2,6-8]

The University of Nebraska Medical Center (UNMC) SRFC, located in Omaha, Nebraska, is called the Student Health Alliance Reaching Indigent Needy Groups (SHARING) Clinic. The SHARING Clinic is run by interprofessional student volunteers from medical school, physician assistant, nursing, pharmacy, medical laboratory science, and physical therapy programs under the supervision of attending physicians and pharmacists.[9,10] Patients are eligible for care at our clinic if they do not have health insurance, earn an annual household income below 200% of the Federal Poverty Level, and complete a proof of income application. Our clinic attempts to recruit patients by campaigning on social media, distributing postcard initiatives, attending local health fairs, utilizing call centers, and leveraging partnerships with the UNMC Department of Family Medicine and other community organizations, housing organizations, and local shelters.

Though a significant proportion of the United States population falls into the coverage gap and SRFCs face difficulties with patient recruitment and retainment, published literature evaluating specific SRFC outreach initiatives is limited. As such, the goal of the current study is to outline our clinic's recent outreach initiatives and evaluate their efficacy. Reporting the effectiveness of the SHARING Clinic's outreach efforts may provide a framework to help SRFCs optimize financial and volunteer expenditure while maximizing patient recruitment by identifying efficacious outreach initiatives.

Methods

The SHARING Clinic runs every Tuesday, and clinic administrators record the total number of patients that are present during each clinic day. Clinic traffic and outreach efforts for 13 months from October 2021 to November 2022 were reviewed. Six outreach efforts were identified: a Quarter-card Campaign, a Patient Call Center, a Healthy Omaha Health Fair, a World Refugee Health Fair, a Bridge to Care Refugee Health Fair, and a Community Alliance partnership.

Concluding the fall 2021 semester, the SHARING Clinic organized the Quarter-card Campaign. Students were responsible for distributing prepackaged quarter cards (postcards) containing crucial information about SHARING clinics, including services provided, clinic schedules, location details, and eligibility criteria for free treatment, at designated locations such as food banks, pharmacies, and gas stations.

Leveraging the Patient Call Center, students systematically utilized a standardized script to apprise identified eligible patients of the available services at the SHARING Clinic. The criteria for eligible patients include the following: age greater than 18, uninsured status, and earning under 200% of the federal poverty guidelines. A list of eligible individuals was identified through their uninsured status, which allowed us to streamline the volunteering process. The call center was organized and completed during the summer semester of 2022.

During the Bridge to Care Annual Fall Refugee Fair, volunteers affiliated with SHARING Clinic disseminated informational pamphlets to participants. These documents contained important details about the clinic, including operational hours, address, parking instructions, website link, and contact information. The Bridge to Care fair was held in November 2022. Concurrently, at the Healthy Housing Omaha Outdoor Summer Health Fair and the World Refugee Health Fair, a collaborative initiative between SHARING Clinics and Nebraska Methodist College's Mobile Health Unit aimed to provide indispensable screenings to fair attendees. Noteworthy laboratory testing offered during the health fairs encompassed cholesterol, A1C, blood glucose, and blood pressure screenings. Complementary to these screenings, brochures and pamphlets delineating definitions, significance, and common treatment regimens for blood pressure and diabetes were distributed. Importantly, these informational materials were crafted in both English and Spanish to ensure comprehensive understanding by the diverse participants. The Healthy Housing and World Refugee Health Fairs were both in June 2022.

Finally, in a strategic collaboration, UNMC's

Table 1. Outreach effort breakdown

Outreach effort	Volunteer requirements	Patient recruitment	Total financial expenditure	Totals hours invested
Quarter-card Campaign	Six hours planning of designing quarter card, generating QR code, printing, and picking up materials. Total 22 volunteers signing up to deliver around 4-5 locations each, estimated 26 hours total.	-10	$237 for printing quarter cards and letters to businesses.	43.5
Patient Call Center	Four hours planning, 20 volunteers spending 30 minutes each calling patients.	1	$0	14
Healthy Omaha Health Fair	Six volunteers spending 4 hours each at the health fair distributing fliers and talking to fair attendees.	-4	$0	24
World Refugee Health Fair	Six hours of planning and meetings to acquire a table at the fair, 3 hours of set-up on the day-of fair. Four volunteers spending 4 hours each at the fair talking to fair attendees and distributing fliers.	6	$207.85 for a portable scale and brochures in English and Spanish.	19
Bridge to Care Refugee Health Fair	Two hours of planning, 2 volunteers spending 4 hours at the fair each to recruit new patients.	9	$0	6
Community Alliance Partnership	Average of 30 min per week discussion between Community Alliance and student volunteers, resulting in a total of 12.5 hours.	4	$0	12.5

Outreach efforts and their associated patient recruitment, total financial expenditure, volunteer requirements, and total hours invested.

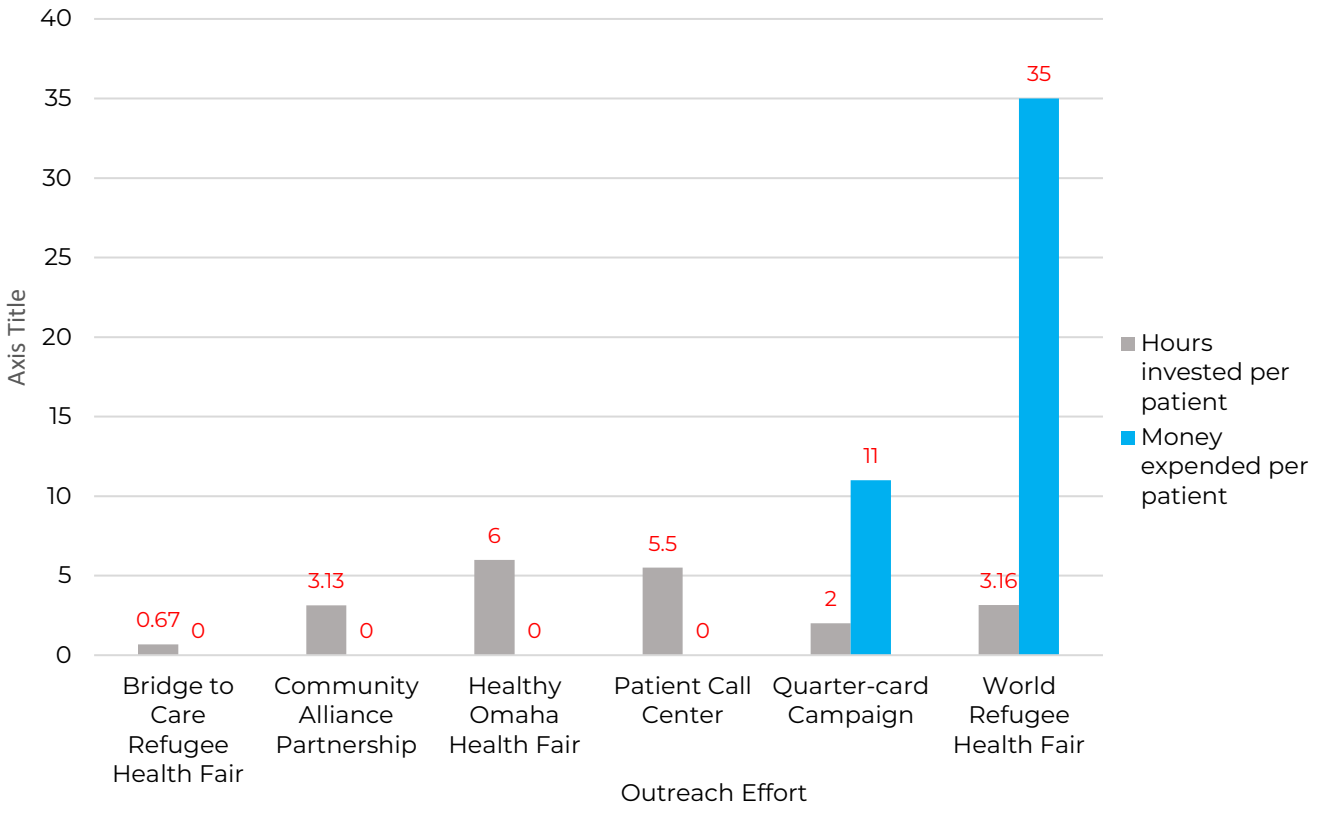
SHARING Clinic has partnered with Community Alliance, a local non-profit mental health agency. This alliance combines the specialized psychiatric services, mental health and substance use counseling, and primary medical care offered by Community Alliance with the outreach and community-focused initiatives championed by SHARING Clinic. Together, these organizations foster a holistic environment where recovery becomes a tangible reality for those grappling with mental illness and related challenges. The Community Alliance partnership was continued from September 2022 to February 2023.

Patient volume at each clinic date during the 13 months was recorded. To track patient recruitment, the difference in patient volume 30 days before the outreach effort and 30 days after the outreach effort was calculated. The financial efficacy of each outreach method was calculated by dividing the total monetary investment of each effort by the total number of patients recruited by the effort. Time efficacy was similarly calculated by dividing the total hours invested in each method by the total number of patients recruited. The change in patient recruitment determined the effectiveness of an effort, whereas the efficiency of an effort was determined by the required time and financial expenditure.

Results

A total of 215 patients were seen at the SHARING Clinic during the 13 months included in the analysis of six different outreach efforts. Each outreach effort, along with their associated volunteer requirements, financial expenditure, hours invested, and observed change to patient recruitment, are tabulated in Table 1. Each initiative required an average of 6 volunteers to spend 15 hours to conduct. Only two of the outreach methods required financial expenditure. On average, 13.1 patients were seen in the 30-day interval after an outreach effort was deployed, compared to a baseline clinic volume of 8.3 patients per month for 3 months before interventions. Four of the six (66.7%) outreach efforts resulted in an increased patient volume, with decreased patient volume observed when the remaining two (33.3%) outreach efforts were active, compared to a 30-day interval before an outreach effort was deployed. The successful and unsuccessful outreach efforts resulted in an average increase of 5 and a

Figure 1. Outreach effort efficacy



Outreach efficiency for each outreach effort, measured by the time and money expended per patient.

decrease of 8 patients, respectfully.

The efforts resulting in positive patient recruitment were the Bridge to Care Health Fair, the World Refugee Health Fair, the Partnership with Community Alliance, and the Patient Call Center, with an increase of 9, 6, 4, and 1 patient, respectively. On average, each of these required $7 and 3.1 hours per patient recruited. Of the successful efforts, only the World Refugee Health Fair required any financial expenditure, totaling $208. The Bridge to Care Refugee Health Fair was the most successful effort, which only required 0.67 hours of time investment for each patient recruited and no funding. Similar but relatively less efficacy was observed during the World Refugee Health Fair and Partnership for Community Alliance, each requiring 3.1 hours per patient recruited. Each outreach effort and its associated financial and volunteer expenditure are displayed in Figure 1.

Alternatively, decreased patient volume was observed during the deployment of the Quarter-card Campaign and the Healthy Omaha Housing Fair, where patient volume decreased by 10 and 4 patients, respectively. The Quarter-card campaign required 2 hours, and the Healthy Omaha Housing fair required 6 hours per change in patient recruitment. Of these less successful efforts, financial expenditure was only required for the Quarter-card Campaign, which cost $237.

Discussion

With over 3 million Americans falling into the "coverage gap", medical schools have partnered with their University Hospitals to create SRFCs.[1] Nevertheless, many SRFCs struggle with successful patient recruitment, and as a result, clinics are required to utilize a variety of innovative outreach efforts to recruit individuals in the "coverage gap".[1,2,6-8] We postulate that unsuccessful recruitment may be attributed in part to the absence of a validated framework for assessing the efficacy of outreach measures. This framework will aid

SRFCs in objectively identifying successful outreach initiatives that optimize both financial and time constraints. The present study offers a new approach to tracking outreach effectiveness based on associated patient recruitment and the hours and money expended per patient. We found that the most successful outreach event, Bridge to Care Refugee Health Fair, resulted in an average increase of 9 patients and only required 0.67 hours to be invested per patient with no monetary investment. On the other hand, the least successful effort, Postcard Campaign, required 2 hours and $11 of investment per patient. Generally, health fair activities and partnerships were the most successful, which may be in part because many individuals from our target population were located at a central event. Also, these events were through trusted entities within the community that have established relationships within the community and completed most of the work for planned health fair activities.

The results of the study overall show that successful efforts typically required lower time and money commitments, with the average money and time for efforts resulting in positive patient recruitment being $51.96 and 12.88 hours respectively over four efforts. The averages for unsuccessful efforts, however, were $118.50 and 55.5 hours for two efforts. This data supports researching and adequately planning outreach efforts to maximize recruitment, as simply investing money and volunteer time into efforts may not always result in successful outcomes. It additionally highlights the need to continue tracking patient recruitment and correlating recruitment with current outreach efforts to recognize the efforts resulting in the greatest increase in recruitment. Other SRFCs may also employ similar strategies to increase patient volume and better allocate resources to successful efforts.

While this study is the first to analyze the efficacy and efficiency of outreach efforts at an SRFC, it is not without limitations. Some limitations of the study include a lack of literature to guide a time frame to track patient recruitment for each associated outreach study. As such, a time frame of 30 days was selected, but patients may have presented to clinic after the 30-day timepoint. For example, because we did not have data from which specific outreach efforts patients were recruited from, it may be possible that patients may have presented at clinic in a different 30-day interval from when the outreach effort was initiated. Further data will need to be collected and analyzed to inform the selection of an appropriate timeframe to record patient recruitment. The coronavirus disease 2019 (COVID-19_ pandemic overlapped with the selected dates for data, and thus the pandemic may have also affected patient volume and the ability of students to volunteer at outreach efforts. Patient volume and volunteer hours may have been artificially deflated due to the limitations associated with the pandemic. Another limitation of the study is that there was limited retrospective clinical data that could be used for analyzing patient recruitment. This limited the number of outreach efforts we were able to evaluate as well as the overarching time frame for the study. Additionally, clinic closures due to holidays such as Thanksgiving and Christmas can affect the total patient volume recorded over the month following the intervention. Notably, the Bridge to Care Refugee Health Fair and Quarter-card campaign are the most affected, as these outreach efforts occurred in November 2022. Lastly, weather could have also affected patient flux, which was not controlled in this study. Winter months may have reduced patient flow due to winter storms, resulting in increased difficulty in getting to our clinic. On the other hand, spring/summer months may have caused an inflation of our patient volume due to increased accessibility of resources and better weather conditions.

Future directions of the study include starting a prospective tracking of new patients with questionnaires in the clinic and recording the outreach effort they cite. With prospective data, additional variables such as the length of time from the start of the outreach effort to the time the first and last patient was recruited from that outreach effort can be analyzed. This can provide a framework for selecting a timeframe to track patient recruitment in the future and strengthen data analysis. Additionally, identical events can be compared year by year to identify if differences in number of volunteers or if the use of specific resources affects patient recruitment. Lastly, the present study only focused on the SHARING Clinic at UNMC, but there are two other clinics at

UNMC that are also student-run for specific concerns. The RESPECT Clinic focuses on sexually transmitted infection testing, treatment, and counseling. The GOODLIFE Clinic specializes on the treatment of type 1 and type 2 diabetes mellitus and its complications. The framework developed from this study to track outreach effectiveness can also be applied to the outreach efforts elicited for these clinics, and the results can be compared by individual clinics.

Conclusion

The present study offers a novel framework to evaluate the effectiveness of outreach methods. Specifically, we discuss how outreach effectiveness can be tracked by the total time and monetary investment made per recruited patient. The findings from this study can be applied to other SRFCs as they evaluate their recruitment events and practically allocate resources to optimize the quality and quantity of patient care. By maximizing the effectiveness of volunteer hours and financial expenditures on recruitment efforts, clinics can better serve their target population and fulfill their mission of providing quality medical care to underserved communities.

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Disclosures

The authors have no conflicts of interest to disclose.

References

1. Kominski GF, Nonzee NJ, Sorensen A. The Affordable Care Act's impacts on access to insurance and health care for low-income populations. Annu Rev Public Health. 2016 Dec 15;38:489-505. https://doi.org/10.1146/annurev-publhealth-031816-044555 LINK
2. Maniar YM, Bahethi RR, Naert M, et al. An innovative consulting group for sharing expertise on launching and sustaining student-run free clinics: a model for building student-run endeavors. Med Sci Educ. 2020 Feb 5;30(1):555-60. https://doi.org/10.1007/s40670-020-00925-0 LINK
3. Rupert DD, Alvarez GV, Burdge EJ, et al. Student-run free clinics stand at a critical junction between undergraduate medical education, clinical care, and advocacy. Acad Med. 2022;97(6):824-31. https://doi.org/10.1097/acm.0000000000004542 LINK
4. Simpson SA, Long JA. Medical student-run health clinics: important contributors to patient care and medical education. J Gen Intern Med. 2007;22(3):352-6. https://doi.org/10.1007/s11606-006-0073-4 LINK
5. Smith S, Thomas R III, Cruz M, et al. Presence and characteristics of student-run free clinics in medical schools. JAMA. 2014;312(22):2407-10. https://doi.org/10.1001/jama.2014.16066 LINK
6. O'Leary B, Gregoire J. A new approach to community outreach in student-run clinics. Free Clin Res Collect. 2015 Dec 30;1:12-4. https://www.themspress.org/journal/index.php/freeclinic/article/view/157/200 LINK
7. Weiss C, Traczuk A, Motley R. Reopening a student-run free clinic during the COVID-19 pandemic to provide care for people experiencing homelessness. Acad Med. 2022 Jun;97(6):855-7. https://doi.org/10.1097/acm.0000000000004480 LINK
8. Beck E. The UCSD Student-Run Free Clinic Project: transdisciplinary health professional education. J Health Care Poor Underserved. 2005 May;16(2):207-19. https://doi.org/10.1353/hpu.2005.0026 LINK
9. McIntire B, Greni S, Radil S, Menning M. A look into motivations and barriers to student involvement at the SHARING Clinic, a student-run free clinic. J Stud Run Clin. 2022;8(1). https://doi.org/10.59586/jsrc.v8i1.313 LINK
10. Menning M, Nabower A, Medder J, Geske J, Margalit R. The impact of a multifaceted intervention on the rate of preventive services offered in a student-run clinic. J Stud Run Clin. 2016;2(2). https://doi.org/10.59586/jsrc.v2i2.14 LINK