



Dermatology Centered Student-Run Free Clinics: A Community Necessity

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Abstract

Background: Student-run free clinics (SRFCs) play a crucial role in providing preventive healthcare and addressing disparities, especially in underserved communities. However, dermatologic care remains largely unavailable in SRFCs. This review examines the need for dermatology-centered SRFCs, evaluates current literature, and suggests ways to enhance dermatologic access for underserved populations, focusing on Camden County, New Jersey.

Methods: A comprehensive literature review was conducted using PubMed, Embase, Cochrane, and Google Scholar databases to identify studies on dermatologic services in SRFCs and barriers to care, particularly for minority and uninsured populations.

Results: The review identified limited availability of dermatologic services in SRFCs, with only a few successfully integrating dermatology clinics. Partnerships between SRFCs and dermatology departments have shown positive outcomes, such as reduced wait times, improved access to care for conditions like acne and skin cancers, and better early disease detection. Challenges include logistical barriers, financial limitations, and limited provider availability, with minority and uninsured patients most affected.

Conclusion: The findings highlight an unmet need for dermatologic care within SRFCs. Collaborations between SRFCs and dermatology departments offer promise in improving care access and outcomes, enhancing medical education, and fostering community engagement. Establishing dermatology-focused SRFCs could address healthcare disparities and boost dermatologic health literacy in underserved communities. Further research is needed to assess the long-term impact of these initiatives on health outcomes.

Introduction

Residents in underserved communities, particularly those who are uninsured, encounter barriers to accessing dermatologic care, including financial, geographic, and racial barriers. These obstacles have a detrimental effect on health outcomes and quality of life. Patients with more resources, of a higher socioeconomic status have increased access as well as greater use of specialist services such as dermatologists compared to patients with less resources, who come from lower socioeconomic backgrounds.¹ One study found that Hispanic and Black patients were less likely to receive outpatient care for their dermatologic conditions compared to non-Hispanic White patients.² Additionally, patients with Medicaid or Medicare coverage had lower odds of receiving outpatient dermatologic care than privately insured patients.² This disparity is highlighted in a study examining time to definitive surgery in patients with melanoma. Patients who were Black, and patients with

Medicaid experienced the longest wait times to definitive surgery as compared to patients with private insurance who experienced markedly shorter wait times.³

Student-run free clinics (SRFCs) are an essential component to preventative medicine, particularly in underserved areas. They help bridge gaps in healthcare access, offering valuable learning experiences for both patients and students. These clinics contribute to reducing healthcare disparities. Numerous studies have demonstrated that SRFCs provide impactful care and improve health outcomes by managing patient's chronic conditions, increasing health literacy through educational seminars, and providing essential cancer screening services.⁴⁻⁷ In New Jersey, several medical schools including Rowan-Virtua School of Osteopathic Medicine, Rutgers Robert Wood Johnson Medical School, and Cooper Medical School of Rowan University have SRFCs that provide primary care services. Additionally, many medical schools across the country offer SRFCs.⁸⁻¹⁰ Yet there still is a notable gap in dermatologic health services at SRFCs with most lacking a dedicated dermatologic clinic or focused hours for dermatologic care. This review explores the necessity of dermatology-focused SRFCs, assesses existing literature, and proposes strategies to improve dermatologic access for underserved populations, with an emphasis on Camden County, New Jersey.

Methods

A literature review was conducted using PubMed, Embase, Cochrane, and Google Scholar databases to evaluate the current studies assessing SRFCs. Search dates were limited from 2002 until 2023. Primary search terms included student run free clinics, SRFCs, free clinics skin screening, melanoma, Hispanic populations, dermatology and SRFCs, and dermatology SRFCs. Inclusion criteria included articles written in English, and various study types including systematic reviews, clinical trials, retrospective single center studies, and case reports. Exclusion criteria consisted of studies not in English. All resulting studies were assessed for relevance.

Results

While it is clear that free clinics offer a great opportunity for members of underserved communities to access primary care services, the number of clinics that offer dermatological care services are extremely limited¹¹ (Table 1). In efforts to increase free dermatologic care for the uninsured population, the American Academy of Dermatology's SPOTme skin cancer screening campaign listed free dermatology clinics on their website. This campaign aimed at increasing awareness and early detection of skin cancer, particularly melanoma. The campaign provides free skin cancer screenings across the United States, targeting individuals who may not otherwise have access to dermatologic care. However, Augusta University surveyed a total of 357 clinics which showed that only 17 of those clinics offered on site dermatology services. The study showed that more than half of the clinics listed by SPOTme were unresponsive, closed, or did not offer medical services. Additionally, A 2018 nationwide cross-sectional survey found that only 16% of the clinics surveyed in the study had board-certified dermatologists available on site.¹¹

Over 3.5 million skin cancers are treated each year in the United States. Several SRFCs have implemented their own programs to address this issue. Paul Hom Asian Clinic (PHAC) at the University of California, Davis is one of only free clinics in Sacramento that provides dermatology services. From 2017 to 2020, there were a total of 109 dermatological encounters.¹² In 2021, Yale School of Medicine's SRFC (HAVEN) partnered with Yale School of Medicine's Department of Dermatology to provide dermatologic referrals for their patients, the majority of which required diagnostic biopsy to rule out a malignant lesion.¹³ University of Michigan Health System (UMHS) and Hope Clinic (HC) partnered together to form Hope@UMHS to provide free specialty consultations to uninsured residents of Southeast Michigan. A retrospective chart review looked at referrals to the UMHS Dermatology clinic from April 2012 through February 2020. There were a total of 294 referred patients.

Table 1. Summary of dermatology-centered student-run free clinics (SRFC)

Author	Year	Location	Name of SRFC	Outcome
Hai et al. ¹²	2021	University of California, Davis	Paul Hom Asian Clinic (PHAC)	Provided 109 dermatological encounters.
Mirza et al. ¹³	2021	Yale School of Medicine, New Haven	HAVEN	Partnered with Yale's Dept of Dermatology. Majority of referrals were to rule out malignant lesions requiring diagnostic biopsy.
Hester et al. ¹⁴	2021	University of Michigan, Southeast Michigan (UMHS)	Hope@UMHS	Retrospective review of 294 referred patients; 9 skin cancers diagnosed, including 1 melanoma; (201/229 patients) 87% received full evaluations and treatments.
Lee et al. ⁵	2021	Rhode Island	NA	Held 27 free skin cancer screenings; 2354 people screened, 597 people (25%) referred; identified 7 malignant melanomas, 32 keratinocyte carcinomas, and 34 actinic keratoses.
Lin et al. ¹⁵	2021	Texas Tech University	Texas Tech University Health Sciences Center's The Free Clinic	Held Dermatology Nights with biopsies done on-site; most patients had never seen a dermatologist before, many with nonmelanoma skin cancers, actinic keratoses, eczematous rashes, etc.

There were nine skin cancers, which included one melanoma which was diagnosed and treated; 87% of patients received full evaluations and treatments.¹⁴

From 2015-2019, a team of dermatology volunteers consisting of dermatologists, medical students, and cancer control advocates held 27 free skin cancer screenings in Rhode Island to raise skin cancer awareness. A total of 2354 people were screened for malignant lesions with 25% being referred to dermatologists. Seven were reportedly malignant melanomas, 32 keratinocyte carcinomas, and 34 actinic keratoses, all of which required immediate medical attention.⁵

Since 2011, Texas Tech University Health Sciences Center's The Free Clinic began to hold Dermatology Nights under the lead of a local dermatologist. During these sessions, medical students first perform a history and focused skin exam and present their patient to the volunteer attending. Depending on the cases' urgency, biopsy procedures were done on site. Most patients at Dermatology Nights have never seen a dermatologist before and many presented with nonmelanoma skin cancers, actinic keratoses, eczematous rashes, fungal infections, psoriasis, acne, and ulcers.¹⁵

Discussion

Access to Dermatologic Care in Underserved Populations

The Affordable Care Act notably reduced the number of people without insurance. Projections indicate that approximately 20 million individuals will still lack coverage.¹⁷ One study found that uninsured adults report far more unmet health needs than insured adults.¹² Free clinics aim to provide healthcare services to these patients who are unable to receive medical care. By 2014, 75% of United States Association of American Medical Colleges institutions established their own SRFCs.¹⁹ These free clinics not only brought medical care to the uninsured populations, but also provided training for medical students and residents to hone their patient care and interprofessional collaboration skills as a medical team.²⁰

In the United States, there are over 57 million Americans residing in 5,864 designated primary care shortage areas.⁶ Access to SRFC's can be of substantial help to individuals living in primary care shortage areas, providing essential healthcare services, and addressing critical gaps in underserved communities. A 2010 national survey of free clinics in the United States found that free clinics serve patients who are unable to access primary care services.²¹ Patients who benefit from free clinics typically include those who are uninsured, homeless, living in poverty, from minority backgrounds, and have limited English proficiency, hindering their access to medical services. A retrospective chart

review of a dermatology-focused free clinic found similar demographic characteristics among its patients.¹² The review found that more than half of the patients seeking services at a dermatology free clinic were non-English speaking (62.4%) and uninsured (52.3%).¹² A 2008 paper found that Hispanic and Black Americans had an increased risk for poor prognosis and metastasis in melanoma when compared to non-Hispanic white Americans.²²

SRFCs also help decrease the financial burden on our healthcare system. SRFCs operate with a median budget of \$12,000 and have over 36,000 patient visits each year.²³ One study found that a free clinic in Philadelphia had an annual budget of \$50,000 but provided preventative services valuing over \$850,000; a greater than 17 fold return on investment.²⁴

Dermatology in Camden County

Access to affordable and quality dermatologic care has been a long-term challenge for many residents in Camden County. The addition of a dermatology focused SRFC would improve access to dermatologic healthcare services and provide health literacy education on the presentation of skin cancer and other dermatological conditions in minority populations. According to the U.S. Census, 33.6% of Camden City residents live within the Census Bureau's poverty threshold compared to the 9.7% of identified New Jersey residents. Additionally, 52.8% of the population of Camden City identifies as Hispanic or Latino and 42.9% as Black or African American compared to the overall state estimates of 15.4% and 21.9% respectively. According to the same census, 43.9% of Camden City's population reported speaking a language other than English at home. When combined with the demographic information of community members seeking services at a dermatologic-focused free clinic, these statistics strengthen the case that Camden County would gain advantages from the establishment of a dermatologic-focused SRFC.

The 2022 Camden Community Health Needs Assessment listed Camden County in the top three New Jersey counties with the highest incidence of all cancers. The State has set screening targets for breast, cervical and colon cancers, however skin cancer screenings were not on the list for early screening and identification goals. SRFCs would give healthcare professionals an opportunity to improve health literacy on the various presentations of dermatologic conditions in different racial and ethnic groups, expand local medical school's partnerships and rapport with the Camden community, and reduce the burden on dermatologists, which ultimately reduces wait time to consultation.

According to the 2022 Camden Community Health Needs Assessment, fear of coronavirus disease 2019, the growing mistrust of healthcare, and increasing barriers to routine health screenings were identified as qualitative data influencing delayed detection of cancer and limiting treatment options. A 2022 review on the benefits of mobile mammography for underserved women gives insight into the potential benefits of a dermatological focused SRFC could have in the community. Effective approaches to enhance the success of mobile mammography programs in dermatology-focused SRFCs involve integrating examinations with educational services and collaborating with respected local community figures, along with medical institutions and schools. Mobile mammography units successfully reached populations in rural and low-income urban areas, where financial, geographic, and systemic barriers often hinder routine screenings. As a result, these programs led to a decrease in advanced-stage breast cancer cases by providing timely screenings to individuals who otherwise faced delays due to lack of transportation, insurance, or healthcare access. By diagnosing cancer at earlier stages, mobile mammography programs improved survival rates, reduced metastasis, and lowered overall treatment costs. These findings provide valuable insight into the potential benefits of dermatology-focused SRFCs. Like breast cancer, skin cancer disproportionately affects underserved populations, with many patients presenting at advanced stages due to delayed detection. By offering free screenings, early detection, and community education, a dermatology-focused SRFC could bridge this gap, ultimately improving outcomes and reducing disparities in skin cancer care.

Importance of Student Run Free Clinics

Data suggests that dermatological free clinics do indeed play a critical role in providing the uninsured population with dermatologic care such as free skin cancer checks. Some medical centers have been able to effectively incorporate dermatology into their care, including Texas Tech and Rowan Community Health clinic. It would be beneficial for SRFCs to incorporate more ways of partnering with dermatology departments as exemplified by Yale School of Medicine's HAVEN clinic.¹³ In addition to benefiting the uninsured population, dermatologic focused SRFC's would also benefit the medical students and physicians serving those populations. A dermatology focused SRFC would give students the opportunity to increase the community's health literacy on the presentation of dermatological conditions in various races and ethnicities in addition to training future physicians to recognize the diversity of physiological presentations. To further educate and raise awareness for dermatologic conditions, a monthly Preventative Health Series (PHS) could be implemented at SRFCs. Rowan Community Health Clinic successfully implemented a PHS in which a specific health topic was emphasized each month such as Diabetes Awareness.¹⁶ Of such, SRFCs can implement dermatology as a topic of choice to further educate the uninsured, underserved populations. Increased health literacy in the presentation of skin cancer has led to positive trends in detection and treatment.^{22,25} Public education at SRFCs on the risk factors and presentation of skin cancer in minority groups could result in a similar positive trend in early detection and more favorable prognosis. Studies have found that the students who are involved with free clinics and volunteer with underserved communities during their education and training are more likely to work with these populations throughout their career.¹⁷ One survey administered to residents working with a clinic offering dermatological care to underserved communities found that this experience increased their awareness of different social factors and disparities impacting dermatological care. In addition, they reported that this experience inspired them to be more involved with community outreach throughout their career.²⁰

SRFCs have the potential to provide specialty care to populations that may not be able to access it. Dermatology is one such specialty that poses a challenge to underserved and uninsured populations because there is a lack of providers, location of providers, and cost of care.^{18,24} Patients facing restricted access to specialists often turn to their primary care physicians or non-physician healthcare providers for all their medical concerns, including dermatologic issues²⁶. Furthermore, the heightened demand for dermatologic care has resulted in the proliferation of non-physician clinicians, such as physician assistants and nurse practitioners, stepping in to address the escalating dermatological needs of patients. The scarcity of dermatologic physicians has, in turn, translated into prolonged waiting times for both initial consultations and subsequent follow-up visits.²⁷ Reducing long wait times is essential to reduce time to treatment of skin malignancies, such melanoma. Beyond the direct expenses associated with appointments, medications, and potential follow-up treatments, there exists a realm of often underestimated indirect costs tied to dermatologic visits. Considerable financial implications arise from transportation expenses, encompassing the cost of gas, bus or train tickets, and taxi fares to reach appointments. This is exacerbated by the need for patients to take time off work, incurring additional costs.

Challenges and limitations

While the implementation of more dermatology-focused SRFCs benefits the communities they serve, they encounter common challenges faced by SRFCs nationwide. Supervision and quality of care in these settings vary. While certain free clinics are affiliated with major university medical centers, a considerable number operate independently without such resources. Any dermatologic clinic established must be supervised by a qualified physician. Additionally, many patients struggle with limited access to transportation, impacting their ability to reach the clinics.²⁸ Follow-up rates in SRFC settings tend to be lower compared to specialist clinic settings, warranting further research to improve follow-up rates in these populations.²⁹ Delays in the time between a patient's referral to a clinic and their actual visit hinder necessary care, potentially leading to poorer outcomes and

contributing to a high number of no-shows.²³ Reminding patients of follow-up appointments becomes challenging, particularly for those living in poverty or homelessness with limited access to phones, emails, or a reliable address. Despite these barriers, the implementation of SRFCs focusing on dermatological care brings substantial benefits. These clinics bridge the gap for a population otherwise deprived of dermatologic care, providing valuable hands-on experience and mentorship to students dedicated to serving patients in need.

Conclusion

Dermatology centered SRFCs have the potential to provide impactful care and improve health outcomes by managing patients' dermatologic conditions, increasing health literacy through educational seminars, and offering essential skin cancer screening services. Primary care related SRFCs do a tremendous job of managing care and providing education for patients. In response to the demand for dermatologic providers and resources, incorporating free dermatology clinics or dermatology days at primary care clinics not only addresses immediate healthcare needs, but also serves as valuable training grounds for medical students. Despite acknowledged challenges and limitations, the literature strongly advocates for the establishment and strengthening of dermatology focused SRFCs. Dermatologists, medical students, and residents have the potential to create meaningful change in underserved communities, calling for a concerted effort to integrate specialized care into these clinics. More research is needed to investigate the effectiveness of public health interventions in conjunction with dermatology SRFCs and its outcomes in underserved populations.

Disclosures

The authors have no conflicts of interest to disclose.

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