Journal of Student-Run Clinics
Descriptive Report

The Creation of a Free Outpatient Surgical Clinic: A Descriptive Report

Natalie Schelbar[1]; Rahel Eshete[1]; Kaya Nies[1]; Robert D Winfield, MD, FACS[1,2]

[1]Chapter for Socially Responsible Surgery, University of Kansas School of Medicine, Kansas City, Kansas, USA
[2]Department of Surgery, University of Kansas Medical Center, Kansas City, Kansas, USA

Corresponding Author: Natalie Schelbar; email: natalieschelbar@yahoo.com

Published: October 12, 2024

Abstract

Student run free clinics (SRFCs) are continuing to grow in scope and number given the significant benefits to both learners and disadvantaged patients. Despite recent growth, very few provide any form of surgical services. In order to address inequalities in patient access to care and clinical outcomes, it is imperative to include disadvantaged surgical patients, including in the settings of SRFCs. The Kansas City based chapter of Socially Responsible Surgery (SRS) opened a free, volunteer based, student and resident run outpatient surgical clinic. In this article we describe detailed steps to the establishment of the SRS Clinic to lay the framework for other SRFCs or chapters of SRS to continue to grow the number of free clinics able to provide surgical services.

Introduction

The benefits of student run free clinics (SRFCs) are twofold: providing care to underserved populations and allowing medical students early opportunities for direct patient care.[1] These advantages of medical volunteerism explain the significant growth in number and scope SRFCs over the past two decades.[2] A great number of SRFCs across the nation primarily focus on medical management of acute or chronic disease processes, with very few clinics offering surgical care to their patients. As of 2017, less than one fifth of SRFCs provided any form of surgical services.[3] Surgical services at a SRFC offer the advantage of surgical autonomy to residents during their training,[4] early medical student exposure to procedures and operating skills, and most importantly, equitable access to surgery that specific populations would otherwise be unable to obtain. Additionally, implementation of these services has the potential to decrease unplanned hospital utilization.[5] In order to address inequalities in patient access to care and clinical outcomes, it is imperative to include disadvantaged surgical patients, including in the settings of SRFCs. We thus provide the framework for the creation and establishment of the Socially Responsible Surgery (SRS) Clinic in Kansas City, which provides free outpatient surgical care under a SRFC model.

SRS is a nationwide organization that exists across medical schools to advocate to address and eliminate surgical inequalities to improve care for surgical patients.[6] Currently, there are 18 SRS chapters, one of which is at the University of Kansas Medical Center (KUMC). Establishment of a free surgical clinic became an initiative of the KUMC SRS chapter when students suspected a care gap within our community. KUMC already has a functioning SRFC—JayDoc Free Clinic—with a few specialty care nights; however, JayDoc does not provide general surgery or wound care services. Patients in need of surgical care are referred to the affiliated University of Kansas Health System, where they would be required to pay out-of-pocket if uninsured or underinsured. This is not financially feasible for many patients served by JayDoc Free Clinic, leaving completion of referral highly improbable. The SRS Clinic was thus founded to respond to this need in our community. In this article we will describe our methodology for the establishment of a free, volunteer

based, student and resident run outpatient surgical clinic.

Discussion

Community Partner

The SRS clinic was established in collaboration with Care Beyond the Boulevard (CBB), a community organization that provides interdisciplinary care to the unhoused, uninsured, and underinsured populations of the Kansas City Metro area. CBB runs both stationary and mobile clinics multiple days weekly. Typical patient concerns in the CBB clinic setting include chronic disease management, preventative care, and minor to moderate acute illness treatment, with provision of free transportation for patients requiring emergent or elevated care.

However, minor surgical concerns do exist in CBB's patient population. Cases like frostbite care, cyst drainage, lipoma excision, and wound debridement had presented, and the clinic was unequipped to address them. Comprehensive tracking of patient complaints is difficult at a clinic like CBB, because current procedural terminology (CPT) codes are not used (as patients are not billed), and there is high turnover with patient-facing volunteer staff, so International Classification of Diseases (ICD) code usage in the electronic medical record (EMR) is far from uniform. This need was informally brought to the attention of SRS students by the CBB clinic director, who is present for the majority of clinic evenings and had noticed the care gap herself. Management of these cases by CBB volunteers is limited depending on severity of the case and availability of the supervising physician. Full patient privacy, optimal operating space, and surgical equipment were minimal at the CBB clinic locations. These more in-depth procedures could also interfere with availability for patients with the aforementioned, more typical medical needs addressed by CBB.

When exploring options to provide surgical care, SRS leadership found that CBB would be an optimal organization to introduce free outpatient surgical care with given their years of service and established trust in the community. In January 2023, CBB was able to secure an additional clinic building called The Beehive in collaboration with the Downtown Council of Kansas City, Missouri. Compared to CBB's other location, a church hall with folding furniture and limited patient privacy, this served as an ideal space to provide surgical care. Benefits of The Beehive included access to surgical equipment, proper infrastructure for sterility, a newly renovated space, and multiple private exam rooms. CBB acquiring The Beehive was substantial for the progress of the SRS clinic night, as it allowed for sterile procedure performance and avoided interfering with CBB's other established services. The role of SRS in the partnership was providing surgically trained volunteers along with a group of medical students with the bandwidth to tackle other necessary foundational tasks.

Volunteer Recruitment

Another initial step in the foundation of the SRS clinic night was working with Graduate Medical Education (GME) to explore how we can utilize surgical residents in a way that does not interfere with their training. From this meeting we learned that residents could only practice under the supervision of an attending physician from the affiliated institution (KUMC). It was also essential to provide liability coverage to all our volunteering surgeons and ensure that volunteers have a Missouri License to practice. In collaboration with CBB, we found our volunteers are eligible to receive liability coverage through the "Volunteer Health Services Act" by Missouri Health and Senior Health Services. We also provide the necessary paperwork for any interested residents that do not yet have a Missouri license.

Promotion of our initiative to surgical residents and attending physicians via presentations and meetings enabled us to find a number of interested volunteers prior to opening. SRS now holds surgical clinics one Monday evening per month at CBB's Beehive location in Kansas City. Working on a volunteer basis with surgeons and surgical residents offers the added difficulty of optimal scheduling, thus we schedule the monthly clinic nights with consideration of available volunteers. We hope to move to an even more consistent schedule in the future, and eventually expand to include additional dates per month.

Clinic Operation and Flow

We utilized consultations with residents and a nurse practitioner with CBB to identify the necessary surgical equipment needed, which was then finalized by our attending physician advisor. The most common items necessary for minor outpatient surgical procedures include lidocaine with epinephrine, an antiseptic sponge, syringes, gauze, suture, a wound care kit, and generic antibiotics. Additional costs include reusable items, such as forceps, scissors, scalpel, and needle holder, all of which require autoclaving, with total cost per procedure ranging from $350-500. We were able to obtain all the above supplies via charitable donation, another essential benefit of partnership with a well-established, well-networked community organization such as CBB. Once necessary surgical equipment, including the surgical tools, local anesthetics, a fridge, and an autoclave, were moved to The Beehive, we were able to verify the sterility and viability of the items.

The SRS clinic evening functions as a referral-based system, either receiving referrals from Jaydoc Free Clinic, CBB, or self-referrals. We also welcome walk-in appointments on evenings with fewer appointments scheduled. The SRS clinic functions under a student and resident run model, with oversight by one attending physician per shift. Apart from two full time CBB staff members who help manage the facility and logistics, all other operations are run by volunteering students, residents, and attending physicians. We typically have three students and 1-2 residents per shift.

Medical students initiate each patient encounter by obtaining a patient history and focused physical exam. Patients are then screened for eligibility for surgery based on their signs and symptoms, along with the feasibility of the procedure in the clinic setting. Procedures are performed utilizing local anesthetics and are primarily performed by the resident physician with assistance from medical students. Resident volunteers are general surgery residents in their second through fifth years of training. Procedures performed at the SRS clinic are minor at this time, primarily including benign mass excisions and wound irrigations and debridement.

Sterility is maintained in preparation and during each procedure. The rooms contain sterile draping of the operating area and sterile surgical equipment. The building features an autoclave equipped for sterilizing all the surgical equipment utilized. Patients are instructed on wound care and are discharged following their procedure. If indicated, patients are provided with generic antibiotics in the clinic when samples are available, or a prescription for use at any pharmacy if unavailable, for postoperative wound infection prophylaxis. Additionally, wound dressing products like gauze and bandages are provided. Patients may be seen back for wound checks at any CBB location during their standard clinic operating hours outside of the SRS clinic, or the next month's SRS clinic. Given the patient population consists of many individuals experiencing homelessness, loss to follow-up is a post-procedure concern. We thus utilize absorbable suture to close most cases and ensure patients feel comfortable with wound care prior to discharge.

Inaugural Procedure

Our first patient procedure exemplifies our strengths while pointing out areas for growth. This was a man with a mass of unknown origin on his posterior shoulder that had been present for years. The mass felt firm to touch without any concerning symptoms of acutely worsening pain, skin changes, or rapid growth. The patient's primary concern with the mass was cosmetic, although he had noticed slight growth in the mass over recent years accompanied with minor pain with certain shoulder movements. As he was experiencing homelessness, it had not been his priority for removal. He was regularly seeking care for his hypertension at CBB, who had referred him to our clinic for surgical removal free of cost. The risks and benefits of the procedure were explained in depth with the patient utilizing the same format for procedure consent used KUMC's hospital system. Given this procedure was elective and primarily cosmetic, risks including bleeding, infection, injury to surrounding areas, and limitation of pathologic investigation in the free clinic were expounded upon. The patient agreed to proceed for potential benefits of pain relief and cosmetic improvement. For the procedure, the patient remained awake in the prone position. The area of the mass was prepped with betadine

solution and draped in the usual sterile fashion. Lidocaine was injected along the overlying skin and the first incision was made. The patient remained comfortable throughout the procedure, and more lidocaine was administered if any sharp pain was felt. Dissection was carried through until the mass was removed in its entirety. The subcutaneous and cutaneous tissues were subsequently approximately closed with absorbable suture and the wound was then covered in antibiotic ointment and sterile dressing.

The mass was inspected visually after the procedure. It was then unroofed, expressing cyst contents that appeared consistent with an epidermoid (sebaceous) cyst. One shortcoming of our clinic at this point is a lack of laboratory and pathology services. Thus, we were unable to send the mass for pathology to confirm its suspected origin and discussed the risks of not knowing the exact pathology with the patient in depth. The patient was thoroughly instructed on wound care and was discharged that evening.

Moving Forward

Our limitations with this patient encounter serve as our future directions for this clinic. Firstly, we hope to establish laboratory and pathology services for encounters such as these where pathology is necessary for exact diagnosis. Laboratory services would also be useful for typical preoperative and postoperative lab values, such as white blood cell and red blood cell counts, blood glucose levels, and electrolyte monitoring. Long term we would like to consider working with anesthesiology colleagues for the options of sedation, or even general anesthesia via a "Surgery on Sunday" or equivalent model,[7] to expand our roster of operations that could be provided.

Aside from our limitations within the clinic, we are also experiencing an external obstacle - patient attendance. We have frequently experienced patients who are referred and scheduled but are unable to attend their appointment. So far, over 7 clinic nights offering 3-4 appointments each, 19 patients were scheduled, 12 patients received surgical care, 4 patients did not show, 2 patients canceled last-minute, and one patient opted for care at a different clinic for unknown reasons.

We appreciate the hardship of attending an appointment when one is unhoused as there are many existing obstacles between referral and completion of the surgical procedure. Recognition of this fuels our attempts to improve attendance. There are two solutions we are currently considering. CBB has admirable success with patient retention, in part due to their bundling of services - patients can receive medical, pharmaceutical, case management, and hospitality services all in one appointment. Our clinic currently coincides with a standing CBB clinic time; therefore, we are considering changing our clinic day and offering more clinic dates per month, so patients are not tasked with choosing between necessary surgical care and the myriad of services provided at CBB. We will continue to look into additional aspects of care we may be able to provide at our clinic, making a patient's time with us most beneficial.

SRS is also considering the importance of transportation access for the unhoused patient population. While CBB provides free transportation if emergent care is needed in an advanced setting, there is currently no program in place to transport patients to and from the Beehive for a SRS clinic appointment. Cost, logistics, and safety of non-emergency medical transportation are all areas of concern. A solution we are considering is securing grant funding to cover ride-share bookings for patients. This has been documented as an essential aspect for other SFRCs treating similar patient populations[8] and we hope to follow in their lead.

Lastly, we hope to improve upon CBB's methods used to track patient complaints, outcomes, and experiences at the SRS clinic night. A standardized process for implementation and evaluation of clinic performance, published in 2020 for SRFC management,[9] is promising. Specific outcomes the SRS clinic hopes to track in the future include surgical resident experience (increased autonomy, involvement in community), medical student knowledge (indication for surgical treatment, experience with surgical technique), and/or patient wellbeing (decrease in morbidity from chief complaint). We are hoping these future directions allow us to maximize our services to low-income and unhoused patients in need of surgical care.

Conclusion

In this report we describe the details involved in the establishment of the SRS clinic night – a free, student and resident run surgical clinic in Kansas City. As SRFCs continue to grow, we find it necessary to outline the steps taken to create a clinic able to provide free surgical services, as there are many barriers to overcome to offer these services.

Disclosures

The authors have no conflicts of interest to disclose.

References

1. 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
2. Smith S, Thomas R 3rd, 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
3. Cherkasskiy L, Haimovich A, Smith SD. Surgical services at student-run free clinics: results of a national survey. J Am Coll Surg. 2017;225(4):e101-2. https://doi.org/10.1016/j.jamcollsurg.2017.07.800 LINK
4. Wojcik BM, Fong ZV, Patel MS, et al. The resident-run minor surgery clinic: a pilot study to safely increase operative autonomy. J Surg Educ. 2016;73(6):e142-9. https://doi.org/10.1016/j.jsurg.2016.08.016 LINK
5. Evans PT, Ewing JK, Walia S, Miller RF, Hawkins AT. Implementation of general surgery care into a student-run free clinic. J Surg Res. 2020;255:71-6. https://doi.org/10.1016/j.jss.2020.05.031 LINK
6. Our Mission [Internet]. Socially Responsible Surgery; [accessed 2023 Sep 19]. Available from: https://www.sociallyresponsiblesurgery.org/ LINK
7. Our Mission [Internet]. Lexington (KY): Surgery on Sunday; [accessed 2023 Sep 19]. Available from: https://surgeryonsunday.org/ LINK
8. Warpinski C, Burke N, Dovell S, et al. Providing prenatal care in a student run free clinic. J Stud Run Clin. 2024;10(1). https://doi.org/10.59586/jsrc.v10i1.392 LINK
9. McAndrew R, Kaskutas V. A logic model for planning, implementing, and evaluating a student-run free clinic. J Stud Run Clin. 2020;6(1). https://doi.org/10.59586/jsrc.v6i1.132 LINK