

# Pharmacy Student Involvement in the Implementation of a Student-Run Free Clinic

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## ABSTRACT

Three-quarters of medical schools in the United States report associations with operational student-run free clinics (SRFCs), but less than half report student pharmacist involvement. Addition of student pharmacists to the SRFC environment advances inter-professional team models and allows for more comprehensive medication management for underserved populations. Here we describe student pharmacist involvement in implementing a new SRFC, the roles that student pharmacists continue to serve in administrative and clinical patient care activities, impact on inter-professional opinions of the pharmacy profession, and areas of future growth with pharmacy involvement in a SRFC. The implementation process revealed that when student pharmacists are given opportunities to lead in both traditional and non-traditional pharmacy roles, they are critical to the success of establishing and running a SRFC and impact other healthcare professionals' opinions on the value of the pharmacy profession. Pharmacy students working to their full potential within their scope of practice on an inter-professional team can allow other professions to maximize their own skills and improve medication management. Pharmacy students' abilities to thrive in both traditional and non-traditional pharmacy roles and work together

with inter-professional students should be capitalized on by those who are implementing similar community health initiatives or projects such as a SRFC.

**Key words:** Inter-professional, student-run free clinic, public health, implementation, pharmacy student

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## INTRODUCTION

Student-run free clinics (SRFCs) serve as unique opportunities for pharmacy students to gain clinical experiences caring for underserved populations and learn alongside other healthcare professionals. A 2014 analysis found that of 141 medical schools surveyed in the United States, 106 (75%) were associated with operational SRFCs, and 81 of 86 (94%) SRFCs provided pharmacy services; however, only 36 of 86 (44%) SRFCs surveyed reported student pharmacist involvement, and 34 (42%) reported pharmacist involvement.<sup>[1]</sup> Aside from this data, there is limited literature describing the value of pharmacy student involvement in the implementation of a SRFC. Here we describe student pharmacist involvement in implementing a new SRFC, the roles that student pharmacists continue to serve in administrative and clinical patient care activities, impact on inter-professional opinions of the value of the pharmacy profession, and areas of future growth for pharmacy involvement in the SRFC, which may serve as an adaptable model for those wishing to implement similar inter-professional initiatives.

## DESCRIPTION OF THE SRFC

Dedicated to Aurora's Wellness and Needs (DAWN) clinic is a SRFC located two miles from the University of Colorado's Anschutz Medical Campus. Immediate areas surrounding the medical campus report medically uninsured rates between 28% and 48%, and research suggests that these areas have multiple barriers to accessing healthcare, sustainable income, education, and housing options.<sup>[2-5]</sup> After a two-year planning and implementation period, the DAWN Clinic officially opened in March 2015 to provide care to adult, uninsured patients in the Aurora community. Since opening, the clinic has built capacity to provide acute and chronic care for an average of ten patients per week over a three-hour timespan. Nearly all (92%) of patients seen at the DAWN Clinic have no primary care provider. The DAWN Clinic also has the potential to prevent negative and costly healthcare complications, as than half (55%) of patients report had they not come to the DAWN Clinic they would have stayed home without receiving medical care, and 27% of patients would have gone to the emergency department to receive care. In addition to medical care, the DAWN

Clinic is able to provide multiple inter-professional services for no charge to patients such as dental care, physical therapy, laboratory tests, and enrollment in Medicaid.

## MATERIALS AND METHODS

Implementation of the SRFC was completed by student volunteers, and institutional review board approval was not required, as this was considered a quality improvement (QI) initiative. After conceptualization of the clinic, students of all professions on the medical campus were solicited via e-mail to participate in the implementation of the SRFC. Based on expressed interest, students from all professional programs were assigned to workgroups strategically designed to address areas of necessity for the implementation of the SRFC; these workgroups focused on research and documentation, subspecialty referrals, pharmacy and procurement, integrated care, testing and imaging, and community partnerships. Pharmacy students led and were members of multiple workgroups that identified with both traditional and nontraditional pharmacy roles. Crucial tasks undertaken by pharmacy students included building relationships within the community, advocating for the SRFC to executives in the community, organizing the supply and clinical needs for the clinic, seeking realistic and sustainable procurement solutions, designing and testing the clinic flow, and facilitating effective communication with other inter-professional students and faculty. Pharmacy students and faculty advocated for the pharmacy student's role to be in a clinical, rather than dispensing, capacity. Tasks completed by pharmacy students in the implementation phase demonstrated vital communication, teamwork,

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advocacy, organizational, and humanistic skills essential to the success of all inter-professional and public health initiatives.

### Administrative and clinical roles

Due to strong pharmacy student presence in the implementation of the SRFC, pharmacy students are present for each weekly DAWN Clinic session in both administrative and clinical roles that allow them to work at the top of their scope of practice with their inter-professional colleagues, including medicine, physical therapy, nursing, behavioral health, and dental students.

#### Administrative roles

Pharmacy students work interprofessionally with other healthcare professional students as clinic managers and directors, testing and imaging personnel, and QI champions. These roles capitalize on the strengths of specific individuals within the profession of pharmacy, namely those who express interest in leadership and administrative roles in their future careers.

#### Clinical roles

A first- or second-year pharmacy student helps to triage patients and confirm accurate medication lists and allergies assess and mediate barriers to medication adherence, and counsel on OTC and prescription products. In parallel to the first- and second-year students, third- and fourth-year clinical pharmacy students see patients with the medical teams, take consults, respond to drug information questions, and develop therapeutic assessments and plans. Students are given the opportunity to practice their clinical skills, interact with patients, and be integral members of the inter-professional team. Once diagnoses have been confirmed, the third- and fourth-year pharmacy students independently provide ongoing medication management for chronic disease states under attending pharmacist supervision via phone and in-person visits. This delineation of responsibilities by education level facilitates pharmacy students working at the top of their scope of knowledge. Students of all years document in the electronic medical record and participate in weekly surveys to assist QI and research initiatives.

## RESULTS

From the clinic's opening in March 2015 through the end of April 2016, the DAWN Clinic has provided care to 352 patients, and 71 pharmacy students and 18 pharmacy preceptors volunteered their time to provide patient care on clinic nights. Pharmacy presence in the SRFC mirrors nursing presence at 16% and 17% of student volunteers, respectively; medical student representation is highest at 25% of student volunteers. In 2016, the American Association of Colleges of Pharmacy nationally recognized the work by the pharmacy students through conferment of the Student Community Engaged Service Award.<sup>[6]</sup>

In general, students who have volunteered at the DAWN Clinic describe an increased commitment to the primary care field and underserved patient populations. Students utilize the DAWN Clinic as a mechanism to further their professional and educational development and gain exposure to other healthcare professionals-in-training.

One non-pharmacy professional student volunteer stated:

*"My perspective of pharmacy has probably changed the most through this experience. I didn't realize just how little I knew about their profession, partially because the only true manner in which I have interacted with pharmacists is when I pick up my medication ... In our clinic model, pharmacists truly are primary care providers and will manage our chronic patients. I never would have known this was within a pharmacist's scope of practice even with the inter-professional Education curriculum we participate in through school."*

## DISCUSSION

There are multiple strengths of our model of how pharmacy students are utilized at the DAWN Clinic. Pharmacy students are primarily utilized for chronic disease medication management, which allows students to work at the top of their scope of practice and enables non-pharmacist providers to focus on their areas of expertise, including physical assessment and diagnosis. Maximizing each profession's scope leads to the delivery of more comprehensive and higher quality patient-centered care. Furthermore, presence of pharmacy personnel at multiple levels of training reinforces the layered learning model within and across professions and exposes students of other healthcare professions to the benefits of student pharmacist involvement. By operating as vital ancillary staff in the multiple administrative roles at the DAWN Clinic, pharmacy students are able to break outside of traditional pharmacy roles and both develop and utilize other skills relevant to excelling in the healthcare profession. The use of pharmacy students as leaders in this capacity sets the expectation to other healthcare professional trainees that pharmacy personnel are capable and meaningful leaders in the healthcare field.

Non-pharmacy professional students were exposed to and verbalized the value that pharmacy students brought to the implementation of the DAWN Clinic. Our observations reinforce findings from the literature that while didactic inter-professional curricula provide introductory exposure to inter-professional roles in healthcare delivery, experiential integration of multiple healthcare professional students through the SRFC model may provide an advanced modality for students to gain practical experience in clinical care.<sup>[7,8]</sup>

Challenges previously identified specific to pharmacy students in SRFCs include role communication between inter-professional students during the patient's visit, restriction of pharmacy's role to traditional medication dispensing, and advocating for the student's clinical role on the team.<sup>[9,10]</sup> The culture of interprofessionalism embraced at the DAWN Clinic, beginning during the implementation phase of the SRFC and emphasized through medical director leadership, has perpetuated to provide students the freedom to respectfully communicate openly about each other's roles within the patient's care. The collegial interprofessionalism of the SRFC and the early leadership roles pharmacy students played facilitated pharmacy's clinical integration independent of a traditional dispensing role.

As the DAWN Clinic develops, there will be multiple opportunities for advancing pharmacy student involvement, including: curricular integration with the School of Pharmacy; development of clinical, QI, and research initiatives; arrangement of a dispensing outlet within the clinic; and implementation of collaborative practice agreements under faculty mentorship. The perpetual presence of pharmacy students as members of the clinic's leadership team is the key to the advancement of pharmacy student involvement within the SRFC. Later establishment of an on-site dispensing outlet will allow students who don't have advanced clinical skills to contribute to patient care. Future research will focus on patient outcomes resulting from pharmacy student involvement, implementation of QI and research initiatives, and integration of the SRFC with the pharmacy school curriculum through introductory and advanced pharmacy practice experiences. These advancements will be the key to ensuring sustainability of pharmacy student involvement and the clinic's ability to expand its reach to more patients in need.

## CONCLUSION

By utilizing pharmacy students in the implementation of a SRFC, underserved patients are exposed to clinical pharmacy care, pharmacy students can exercise leadership and clinical skills, and inter-professional students are given exposure to the value of other

disciplines such that these services are more likely to be appropriately utilized in future practices. The SRFC implementation process as described demonstrates that pharmacy students can succeed and are integral to the implementation of a SRFC when given tasks that may not be related directly to the provision of medication alone. Instead, the utilization of pharmacy students in both traditional and nontraditional pharmacy roles allowed the SRFC to prosper while giving students of all professional backgrounds exposure to clinical pharmacy care. By expanding beyond the boundaries of traditional roles, healthcare professional students are given the opportunity to grow personally and professionally when implementing a large, community health initiative such as an SRFC.

### Disclosures

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