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Perspective

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Beyond Boundaries: Elevating Continuity of Care in Student-Run Free Clinics

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Abstract

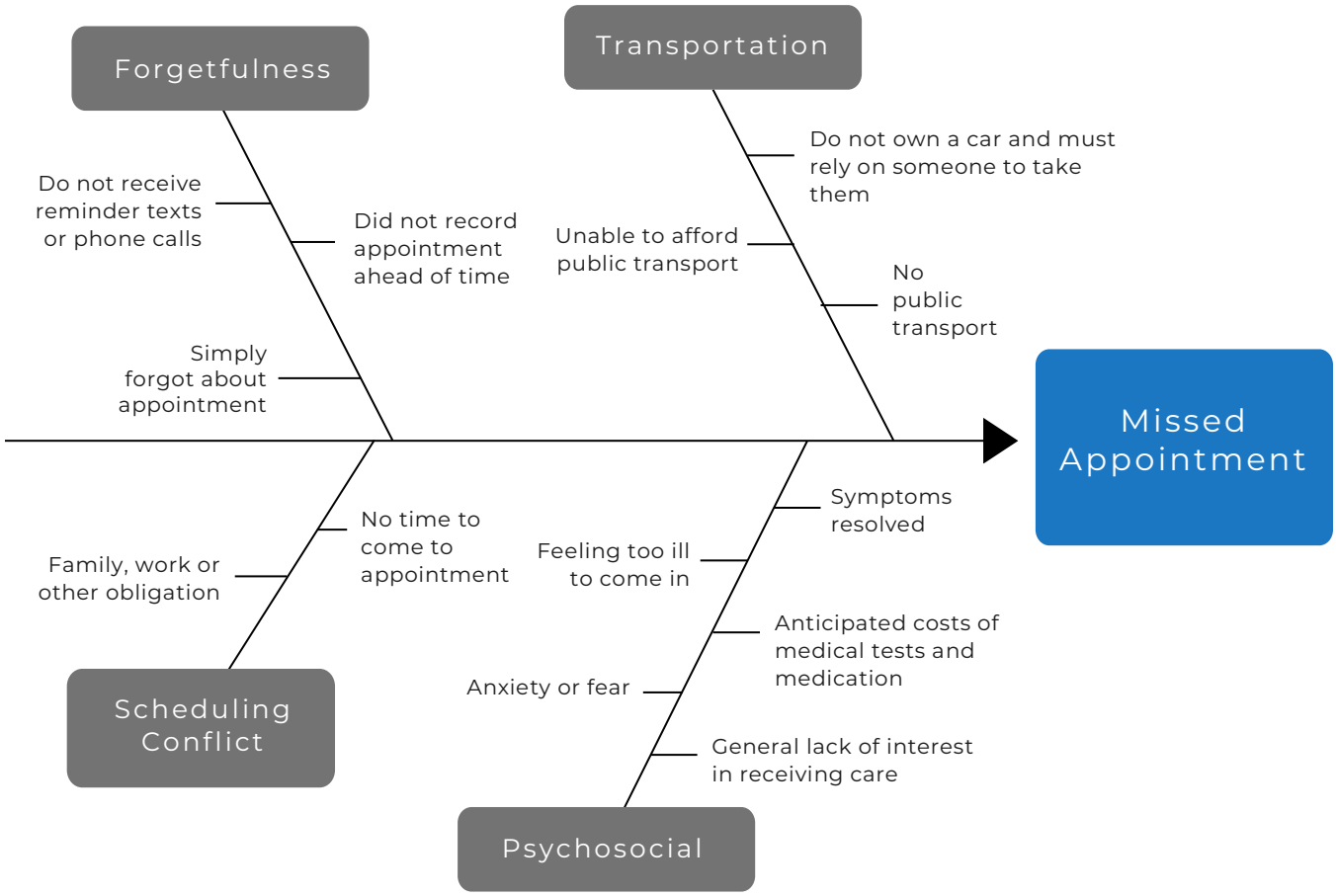
We discuss the challenge of continuity of care in Student-Run Free Clinics (SRFCs) across the nation due to barriers of transportation, variation in care teams, communication, coordination, and improper utilization of resources. Discussion at the 2023 Society of Student-Run Free Clinic's Annual Conference "Bridging the Gap" session with various medical schools and respective SRFCs allowed us to identify after-care teams as a common and effective modality to improve continuity of care. Patient-centered care is at the heart of SRFCs, and we strongly believe that communicating outside of clinic hours allows for effective longitudinal patient care. Such initiatives allow for improvements in health status via motivational interviewing, discussing medications, and addressing socioeconomic issues. Each clinic we consulted during this session had its individualized program focused on the same ideology. By instituting an after-care team, SRFCs can improve continuity of care while fulfilling the Triple Aim outlined by the Institute of Healthcare Improvement (IHI). Our perspective article emphasizes the importance of after-care teams to improve continuity of care and patient value in relation to the Triple Aim.

Introduction

Student-run free clinics (SRFCs) continue to serve as mutually beneficial infrastructures between medical students in need of medical training and uninsured and underinsured community members. For example, a study at the Indiana University Student Outreach Clinic (IUSOC) found their SRFC provided free health care valued at roughly $150,000. The estimated benefit to the community was calculated in the cost of the medical services provided in addition to eligible tests that were ordered at the clinic. Nearly two-thirds of the money came from the medical services, which shows SRFCs can assist financially disadvantaged members of the community.[1] In addition, they reduce the burden on emergency and urgent care settings in underserved populations. Their focus on preventative medicine (e.g., maintaining metabolic outcomes and blood glucose levels) yields better patient outcomes and reduces adverse health events secondary to chronic illnesses, which cuts costs for associated hospital systems.[2] A simulation conducted by Arenas et al. estimated that the preventative interventions provided at the University Community Clinic, a SRFC in Philadelphia, Pennsylvania, saved over 6.5 quality-adjusted life-years, which corresponded to over $850,000 in savings for the local health system.[3]

While there is value to the physician-patient relationship by providing continuous care, the students at Northeast Ohio Medical University (NEOMED) and University of California, Davis, have noticed a trend of no-shows in some patients. Given the importance of continuity of care

Figure 1. Fishbone diagram demonstrating the most common reasons for missed appointments in a free clinic setting



on health outcomes and the unique challenges that SRFCs face in operationalizing longitudinal relationships with patients, a group of leaders from SRFCs across the United States collaborated at the 2023 Society of Student Run Free Clinic's Annual Conference to discuss how we might improve the continuity of care within our respective clinics.

A study analyzing the National Health Interview Survey from 1997-2017 found 5.8 million individuals in the United States postponed receiving medical assistance in the year 2017 specifically due to lack of transportation. This led to increased hospital readmissions, lack of necessary medications, and increased complications of chronic illnesses.[4] As of 2022, the Centers for Disease Control and Prevention (CDC) reported in the National Health Interview Survey that 5.7% of adults did not have reliable transportation for the previous year.[5] Not only is a lack of transportation causing poorer health outcomes by reducing continuity of care, but it is also impacting a large amount of our population. With the increased rates of physician turnover per year from 5.3% in 2010 to 7.6% in 2018, we can see how these barriers magnify the difficulties in continuity of care.[6] Continuity of care is essential in improving patient outcomes and satisfaction as it allows health care providers to specify their encounter to the patient based on their last appointment, understand the emotional/spiritual aspects patients share over the years, and allow for higher quality care by improving the timeline of chronic illness diagnosis.[7]

Methodologies

The Bridging the Gap session held at the 2023 Society of Student-Run Free Clinics Conference brought together students from across the country to discuss two important topics regarding free clinics: the creation of continuity of care and the utilization of referral services. Students could choose between the two topics and join a group of other students to discuss similarities and differences between their respective free clinics. During the session, participants were divided into equal groups to discuss multidimensional barriers that challenge most SRFCs. Our group was originally composed of two groups of 10 students, some of whom were student leaders for their respective SRFC, and others were volunteers of the following categories: medical students, pharmacy students, or undergraduate students. All volunteers ranged from new undergraduate students to fourth-year graduate students, indicating a well-represented diversity of thought in our future discussions and this article.

For this session, we chose to investigate the struggles of continuity of care and defined it in accordance with the American Academy of Family Physicians (AAFP) as "the process by which the patient and his/her physician-led care team are cooperatively involved in ongoing health care management toward the shared goal of high quality, cost-effective medical care."[8] For 10-20 minutes the two groups brainstormed topics individually about how to better manage continuity of care within SRFCs while identifying key barriers. Many of these ideas came from preexisting solutions that each SRFC currently implements, which led to further discussion on the strengths and benefits of the potential solutions that will be deliberated later. After 10-20 minutes, the two groups came together and compared solutions. The combination of such ideas is what inspired this article and will be expanded upon throughout. Barriers to continuity of care at SRFCs include variation in attending physicians, improper use of facility resources, frequent staff turnovers, coordination, and communication.[9,10] Our team has identified additional barriers that patients face, such as transportation, finances, contact methods, and limited appointment availability. We created a fishbone diagram (Figure 1) to demonstrate how these barriers can challenge the continuity of care within free clinics. After the session's final discussions, we organized future communications to meet and expand on what we deemed potential solutions. However, many students did not respond to communications after the meeting which led to NEOMED and UC Davis being the only represented SRFCs in this article. Therefore, limitations to note for this perspective article include a lack of follow-up with the original student members during the Bridging the Gap session. This lack of follow-up decreases additional conversations beyond the allotted time at the 2023 session which inhibits our ability to further examine each SRFC's methodology, rationale, and continued success/weakness.

Discussion

Health Coaching and After-Care Teams

At NEOMED, we address continuity of care through a health coaching program that improves patient health outcomes by closely monitoring the patient's medications and insurance status, addressing stressors, and assisting them with lifestyle modifications. This health coaching program is sponsored by the Social Justice Pathway where NEOMED students who were accepted through an application process before their first year of medical school learn to address equality, equity, and justice within marginalized populations. Two second-year medical students from the pathway are assigned to one patient, as health coaches, to assist with any needs or concerns the patient may have over the next year. The goal of each biweekly conversation is to make navigating chronic and/or acute medical issues a simpler process. When the assigned patient attends the NEOMED SRFC, one of the health coaches will join them for the appointment and accommodate the student team and patient as needed. This close follow-up allows our care teams to appreciate the complexity of each patient and their specific barriers. Accompanying patients during appointments introduces an individualized approach because, as discussed later, other SRFCs implement broader initiatives to target barriers such as a lack of transportation or forgetting appointments. Our approach allows us to focus on barriers outside of clinic and

integrate patient limitations from a health perspective.[11]

To address the persistent challenges that our clinics face with continuity of care, student leaders discussed potential interventions. One such proposal involved implementing "after-care teams" to manage patient care and ensure continuity of care. After-care teams, which are groups of individuals that offer ongoing support and monitoring for patients after they have received initial treatment, present a strategy for enhancing continuity of care. After-care teams are crucial in ensuring continuity of care through enhanced communication between patient and provider. Optimizing communication to enhance the quality of patient care works towards the three pillars of the Triple Aim developed by the Institute for Healthcare Improvement (IHI). The three pillars include: 1) reducing cost per capita, 2) improving population health, and 3) improving the patient's experience of care.[12,13] Improvements in continuity of care and communication particularly enhance the patient's experience of care. Furthermore, SRFCs provide quality and affordable care to vulnerable populations, ultimately reducing the healthcare cost per capita of such populations. Thus, successful SRFCs can effectively strive to attain the Triple Aim, now also known as the Quadruple Aim, in the populations they serve. This goal is the motivation for quality improvement initiatives in SRFCs.

While health coaching and after care teams are likely to provide a subjective improvement in patient health outcomes and continuity of care, future projects that investigate these entities should implement methodologies to collect data. Comparing missed appointments before and after enrolling in these programs can demonstrate their efficacy. Regarding health outcomes, factors that likely relate to patient health can be compared before and after entering the programs. For example, comparing average HbA1C values, blood pressure recordings, lipid panel values, and medications currently prescribed can be markers of the patient's health and involvement in their care.[14,15]

At the Imani Clinic, missed appointments were frequently due to transportation challenges and constrained schedules among patients. To ensure consistent care, Imani Clinic started an initiative providing funding for Uber/Lyft rides, covering travel to and from the clinic, laboratory, and pharmacies. Additionally, consultations were offered remotely through user-friendly technology interfaces. These changes led to a decrease in no-shows and an increase in patient motivation to actively engage in their care.

Beyond one-on-one consultations, students involved in this UC Davis program also teach health education classes at locations outside of the clinic (i.e., community centers, food distribution locations). Imani Clinic patients and other community members are invited to join these educational sessions and participate in interactive group activities like exercising and taking their blood pressure together. These biweekly classes foster trust and establish rapport between the community and our students, which encourages patients to return to SRFCs and promotes continuity of care. To assess the effectiveness of these implementations, missed appointments can be compared for those that utilize each of these resources at Imani Clinic versus those who do not. Regarding health outcomes, objective data, such as lab values as discussed above, can be used to compare before and after utilizing these resources. This will allow patients to serve as their own controls and minimize confounding variables, such as differences in separate patients.

After a thorough discussion among representatives from several other clinics, we discovered that other SRFC representatives had programs like our health coaching program at their student-run free clinics, which they referred to as "after-care teams." Most of our health coaching programs encompass a team of undergraduate and medical students who communicate with their assigned patient via phone calls at least once every other week. Similarly, the "after-care teams" provide additional health care management and assistance to their respective patients to maintain constant communication and promote consistency in their care.

Initiatives at Other SRFCs

SRFCs at other institutions have explored methods to address the ongoing issue of continuity of care and improve patient care. Mollie Wheat Memorial Clinic (MWMC), a SRFC in

Indiana, surveyed patients who showed up to appointments about barriers to care. Patients who did not were called to gather more information regarding their absence. They implemented a text message system to remind patients of their appointments to reduce no-show rates and enhance continuity of care. While their results were not statistically significant, they could better understand their population's demographics.[16] Health coaches at NEOMED and after-care teams at UC Davis offer novel and more individualized measures of both gathering information on patient limitations and addressing them as discussed above.

A SRFC at Creighton University distributed surveys to identify barriers to care and attendance. The survey results indicated forgetting appointments, substance use, unmet medical needs, and lack of social support as key barriers. Although it was not statistically significant, the survey found case managers or social support systems decreased the number of barriers that patients faced. The SRFC planned to address this issue by assigning patient liaison teams or case managers to closely follow patients to improve communication and perform personal health assessments to provide further social support.[11]

At the 2023 SSRFC Annual Meeting, another group discussed strategies to improve continuity of care by focusing on the consistency of healthcare services, the breadth of services, and the mobility of healthcare resources. They suggested that SRFCs could enhance consistency by integrating with community healthcare infrastructures, which would provide more resources and allow timely follow-ups. Additionally, they recommended expanding SRFCs' scope from single to multi discipline services to better meet patient needs as most patients have comorbidities. Often, SRFC patients who get referred elsewhere for imaging/consults get lost in follow-up, which negatively impacts their outcomes. To address this, the group proposed creating a national directory of SRFCs to facilitate smoother referrals and improve access to care.[17]

Further Strategies for Improving Continuity of Care

Other SRFCs originally represented at the 2023 conference stated they perform follow-up calls, maintain a designated phone number for patients to follow up with questions, and even provide printed patient instructions with clinic contacts, hours, transportation routes, etc. These clinics assign patients to the same care team of medical students and providers to provide consistency in the patient's care and mitigate the need for introductions while establishing a culture based on patient-centered care and comfort. A consistent care team prevents key details from slipping through the cracks allowing for effective diagnosis, treatment, and/or timely follow-ups. Another clinic representative mentioned they confirm preferred communication methods before the patient leaves their appointment. This empowers the patient to become more involved in their care and establish long-term communication with the clinic.

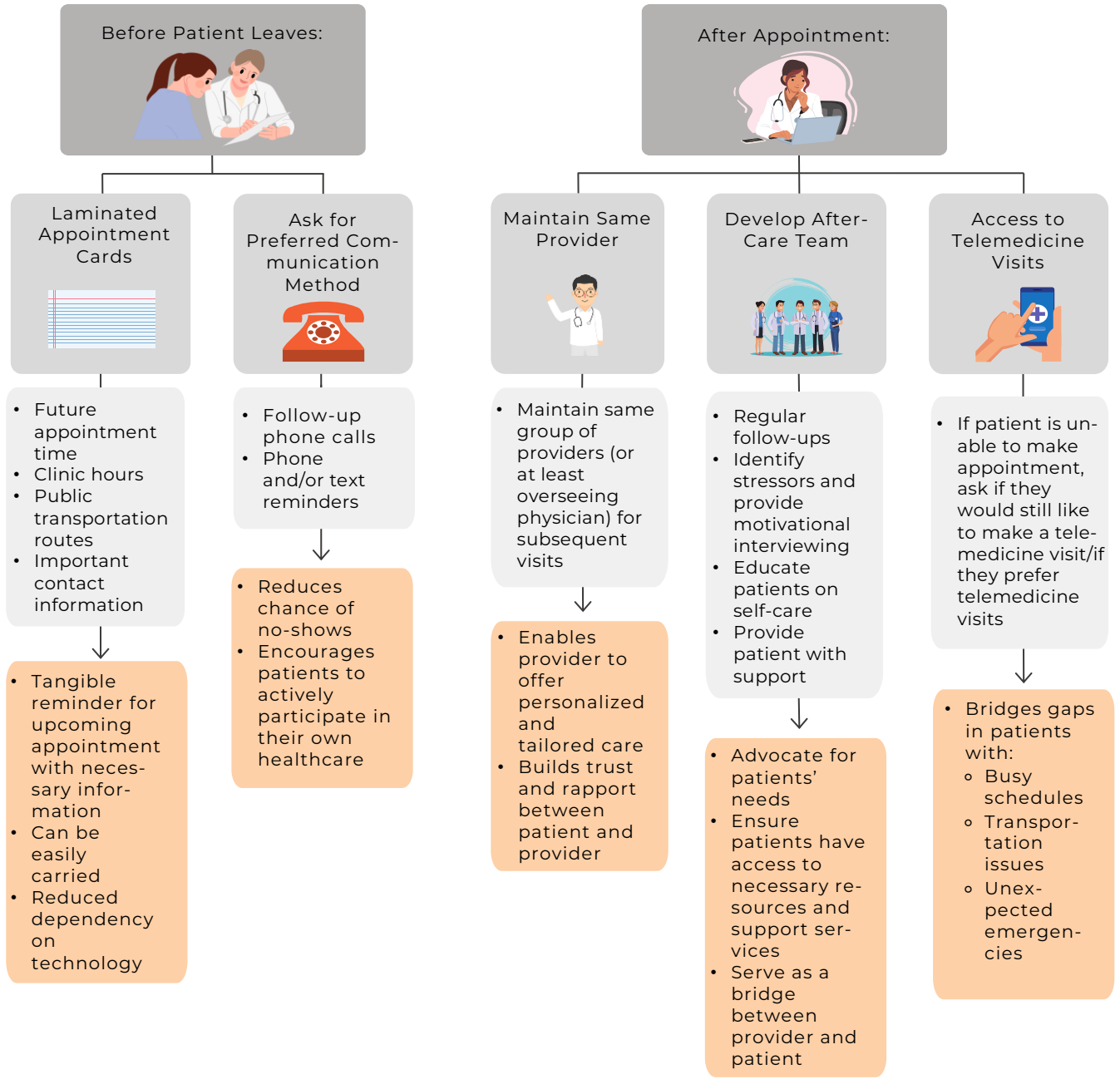
While these interventions are effective in promoting access to the clinic and continuity of care, they may have limited generalizability. For example, while providing access to public transportation and ride sharing may be effective in urban centers, these are unlikely to be effective in rural settings, where such services are unavailable. Additionally, there are limitations in data collection to support the effectiveness of these interventions. While it is possible to document which patients receive printed instructions, there is no clear metric to measure its usage to relate to appointment attendance. Overall, each intervention has its benefits and downsides depending on the setting in which it is implemented.

Conclusion

SRFCs provide a mutually beneficial relationship between medical students and community members; however, a major struggle for many clinics is continuity of care. We have identified numerous barriers that contribute to this national struggle. Establishing a well-organized team to communicate with patients outside clinic hours addresses this gap in communication. With the help of the SSRFC and their respective Bridging the Gap session, multiple representatives from different SRFCs came together to discuss current quality improvement projects that aim to resolve the discrepancy (Figure 2).

We strongly believe that a consistent,

Figure 2. Ways to improve continuity of care in a free clinic setting before and after a patient's discharge



designated team working outside of normal clinic hours will improve continuity of care for SRFCs and their patients while contributing to the Triple Aim. Continuous innovation is necessary to improve SRFCs while maintaining a fee-for-value approach. In this scenario, value in healthcare is defined as quality divided by costs.[18] Quality reflects the patient's outcomes and costs are representative of the total expenditure required to care for the patient.[19] By utilizing after-care teams, we can enhance the quality of our services via an emphasis on communication and assistance beyond regular clinic hours. Simultaneously, increased communication will potentially reduce costs by promoting interdisciplinary teamwork within the clinic. In conclusion,

communication will improve quality and reduce cost, which maximizes value. Adapting collaborative approaches, such as after-care teams, should be considered for implementation in SRFCs facing challenges with continuity of care.

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Disclosures

The authors have no conflicts of interest to disclose.

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