AIM: Improve clinic efficiency and patient care by decreasing visit times, while increase educational value for student volunteers.

Background

Student-run free clinics are popular in U.S. medical schools, and the number of these clinics has more than doubled in the past 10 years. Student-run clinics, run by pre-clinical and/ or clinical medical students with the support of volunteer physicians, have the ability to improve access to care, foster relationships in the community, and provide valuable medical education to students. However, despite the popularity and recent proliferation of student clinics, relatively little data on quality of care and patient satisfaction from these clinics exists.

The Good Samaritan Student-Run Clinic at Emory University works in partnership with Good Samaritan Health Center, a full-time comprehensive primary care center for uninsured and underinsured patients from the Atlanta community. By operating two clinics a month on Saturday mornings, Emory medical students extend the Health Center’s hours and increase access for patients. Providing care at a student-run free clinic presents unique challenges and opportunities. Over the past year, we worked to identify areas for improvement in our clinic’s delivery model and to enact changes to address these problems by carrying out a plan-do-study-act (PDSA) cycle.

Goals

1. Improve patient experience:
   - Decrease patient wait times, as measured by patient in/patient out (PPO) times
   - Decrease patient time waiting to be seen by students and/or physicians
2. Improve educational value for student volunteers:
   - Increase the number of patient interactions
   - Improve the continuity of care patient waiting time (Figure 4)

Planning

1. Conducted a survey to solicit feedback from medical student volunteers about their experience at the clinic.
2. Performed a site visit to observe another student-run clinic at Good Sam.
3. Generated a process map (Fig. 2) of patient flow through the clinic and optimized patient scheduling.
4. Developed data capture tool (Fig. 1) to track patient variables and visit times.
5. Used time-motion studies to identify opportunities for improvement (and to better understand the problem).
6. Decided on PPO (Patient-In-Patient-Out), measured in minutes, as our most relevant primary outcome variable.
7. Implemented changes based on findings from surveys, process map, fluid notes, and time motion.

Changes Made

- Clinic model: Modified patient encounter model to allow for more teaching time between clinical and preclinical students and less waiting time and repetitive evaluation for patients.
- Monitoring visit time and setting expectations: Student volunteers were told they had 20 minutes with the patient to complete a history and physical. Clinical coordinators monitored students’ time in the exam room.
- Optimizing patient scheduling: Patient scheduling modified to increase the number of patients seen, maximize patient interaction and minimize patient waiting time (Figure 4).
- Orientation and arrival times of volunteers: Volunteers arrive time changed to 30 min before the first patient, allowing time for setting expectations around visit time and to review the charts of returning patients, improving continuity of care.
- Tracking flow of patient visits: Created a method of data collection to continue monitoring visit times as changes were implemented (Figure 3).

Preliminary Results

- Improved clinic efficiency by 50%: Optimized scheduling increased number of patients seen from 4 to 6 without increasing volunteer or resource commitment.
- Decreased PPO times by an average of 9 minutes.
- Having labs drawn increased visit time by an average of 24 minutes and being a new patient increased visit time by an average of 9 minutes.
- Informal feedback from volunteers suggests satisfaction with and value of their educational experience with the combined model.

Lessons Learned

“...I thought that Good Sam was very well organized and it made it very easy to volunteer there. Working with the clinical partner and writing a note were really good learning lessons.”

- Student volunteer

Next Steps

1. Continue capturing patient visit data to monitor effect of the new model over time
2. Expand data collection to include other variables potentially affecting PPO time: e.g. pelvis exams, x-rays, ECGs, etc.
3. Experiment with different models in one of the patient rooms and track flow data for the specific encounter
4. Train a second coordinator in drawing labs, and perform a more detailed analysis of the flow of the laboratory portion of patient visits
5. Create feedback forms for both patients and volunteers to track satisfaction and suggestions for improvement
6. Use this model of QI for other problems facing our clinic, including reducing patient no-show rates, and improving patient outcomes and quality of care.

References

2. Klinker, S., Klinker, K., & King, J. (2005). Medical Student-Directed Clinics: The Role of Student-Run Clinics in Primary Care and Medical Education. American Journal of Internal Medicine, 141, 30-40.