

# Learning from the COVID-19 Pandemic: Designing and Implementing a Telehealth-In Person Hybrid Care Model

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In early March 2020, COVID-19 cases first appeared in New York City. During the worst two-week period, 74,223 New Yorkers were tested positive for COVID-19.<sup>1</sup> By March 20, Governor Cuomo announced the New York State on PAUSE executive order.<sup>2,3</sup> This order included the directive that all New Yorkers should limit public transportation and non-essential gatherings of individuals of any size must be canceled. The ZSOM Student-Run Clinic officially suspended regular operations on March 15 due to the escalating nature of the pandemic.

The ZSOM Student-Run Clinic was established in 2013. It provides primary care services like annual exams, pap smears, sexually transmitted disease testing, and immunizations. It is located in Queens, which is well known for being one of the most ethnically diverse urban areas in the world.<sup>4</sup> Our clinic has a unique opportunity to serve patients of a multitude of backgrounds who have largely been unable to access medical care.

## Early 2020 COVID-19 Outreach Initiative

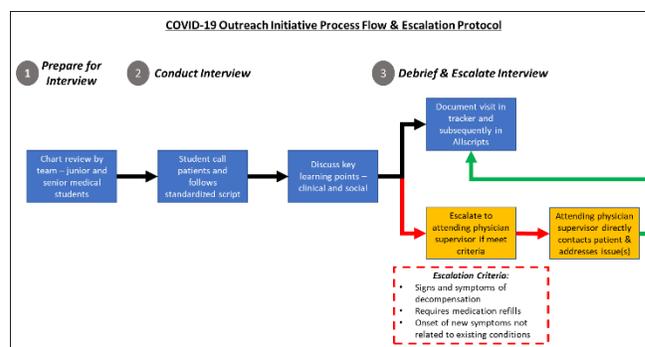
We serve as the primary care provider (PCP) for our patients and continued to provide support after clinic operations and medical school classes were suspended. Information coming from the city, state, and federal government was constantly changing and sometimes even conflicting. The clinic leveraged this to answer patient questions and continue to serve as their PCP.

The Clinic Chairs and Outreach Committee came together to design a telephone outreach initiative that would entail contacting 27 existing patients. They created workflow and escalation

protocols; standardized script for clinic members, including following up on patients' existing medical conditions, inquiring about COVID-19 symptoms, and answering questions regarding the pandemic; documentation of red flag symptoms that was used to connect patients to the attending physician sponsoring this initiative; and a tracker with pertinent patient information that students used to write notes from the calls.

Workflow included instructions on preparing, conducting, and debriefing and escalating, if necessary, telephone interviews with patients, as shown in [Figure 1](#).

**Figure 1.** COVID-19 Outreach Initiative Process Flow & Escalation Protocol designed and implemented by Donald and Barbara Zucker School of Medicine Student-Run Free Clinic.



We used Doximity Dialer, a free and user-friendly platform that protected the students' personal information, as the primary tool to conduct interviews. Microsoft Teams was used to host internal meetings, store patient data and interview notes, and troubleshoot any patient-related concerns. This platform allowed for HIPAA compliance and was accessible to students

through Northwell Health. Student teams made their initial documentation in the tracker described above, and then the senior medical student submitted a telephone visit note in Allscripts, Northwell's outpatient electronic medical record system that the student-run clinic also uses.

Student leaders shared their vision with the administrative and medical faculty leadership of the clinic, who approved the project. Out of 27 patients, 15 were successfully contacted, and of the 15 contacted patients, three patients were escalated to the attending physician sponsor. One patient required a medication refill; the second patient had blood pressure that was higher than the patient's baseline; and the third patient reported acute onset of vertigo.

Through this outreach initiative, we were able to accomplish our goals of providing COVID-19 education, checking in with our patients, and further enhancing our relationship with our patients, who expressed satisfaction with the telephone visits. We were also able to experiment with telehealth and realize its utility and efficacy in providing care to our patients. The outreach initiative helped us to feel more comfortable with providing care virtually and provided the impetus to integrate telehealth into our future care model.

### **Official Incorporation of Telehealth: The Hybrid Model**

In June 2020, the Clinic Chairs planned the reopening of the clinic while abiding by new public health guidelines. The initial conversations were based on the foundation provided by the outreach initiative, which inadvertently served as our pilot for providing effective virtual care. Given the success of the telephone outreach initiative, faculty leadership felt comfortable with both providing patient care and educating student teams via hybrid model. In addition, we became familiar with documenting telehealth visits. Furthermore, we solidified the process of obtaining patient consent, protecting patient privacy, and engaging patients in a virtual setting. These key takeaways from the outreach initiatives accelerated our transition to the hybrid model.

Officially implementing telehealth into existing clinic workflow introduced a new set of considerations, including a telehealth platform, patient privacy and consent, virtual physical exam, lab work, and closed loop communication. The chairs also considered the reality that some patients require in-person appointments. These considerations were again brought to the stakeholders. Through these meetings, a hybrid telehealth, in-person model came to fruition.

The hybrid model consists of alternating in-person and telehealth visits. New patient appointments are virtual, and initial follow up appointments are in-person. New patient appointments often place heavy emphasis on detailed history. This can be completed via telehealth which, by design, is more conversation focused. Follow-up appointments are initially scheduled as in-person visits, given that many of these appointments require problem-focused physical exams and blood work. Subsequent visits can be telehealth if this seems appropriate to the patient, student team, and attending.

We switched our telehealth platform to AmWell instead of Doximity. Northwell was already using AmWell for telehealth, so it was accessible to our attendings. AmWell has a function that allows translators to be used during the interview. Additionally, it is accessible by smartphone or computer. Since some of our patients may not have regular access to a computer, this was a significant advantage.

Closed-loop communication, consisting of preparing for a patient visit, debriefing as a team, and following up with patient, is a vital part of our clinic. The team, which includes two medical students and an attending, signs on to the appointment 10 minutes beforehand to discuss the plan for the appointment and stays on the call 15 minutes after the patient exits for teaching points. The senior medical student follows up on their labs and communicates the results to the patient after discussing them with the attending.

The telehealth physical exam is largely based on the official ZSOM telehealth physical exam. It

relies on the power of observation and empowering patients to assist in performing their own physical exam. While the interview and parts of the exam could be done remotely, bloodwork requires in-person contact. For new patients who were seen via telemedicine, we asked them to come to the clinic the following week when the in-person clinic day was held for a blood-draw only visit. For patients who came to the clinic for a follow up visit, we performed blood draw at the end of their visit. For any urgent labs, patients were asked to come into the clinic the following day during the daytime to have the blood drawn by the daytime clinic.

Although not part of our current operations, we are currently evaluating the feasibility of LabFly, a mobile app created by Northwell Health Labs. This app allows patients to schedule blood draws at a convenient time in their own home, and a lab technician would come to the patient's home to draw labs. LabFly typically costs patients \$19.99, but our clinic secured funding from the School of Medicine to cover the costs.

The hybrid model has many advantages. It allows for triage and screening to prevent unnecessary contact, observation of the patient in their home environment, and expansion of attending membership by providing the flexibility of working from home. We hope that it will also improve patient attendance for similar reasons. The ZSOM student-run clinic already operates outside of business hours, but telehealth further expands these hours, adding benefit. The initial telehealth outreach initiative operated on flexible hours, attempting to reach more patients in our catchment area.

Disadvantages to this model include limitations on incorporating education during the telehealth visit and variance in technological literacy and access of our patient population. As with any new model, there are always nuances that evolve during implementation.

## Conclusion

Our student-run clinic is adapting so that it can continue to serve patients during the COVID-19

pandemic. The development of the hybrid model built off the outreach initiative and required multiple planning sessions from student clinic leadership and guidance from faculty. The hybrid model incorporates alternating weeks of telehealth and in-person visits. It utilizes innovative approaches to providing patient care. The mission of the ZSOM student-run clinic is to serve those who have traditionally faced many barriers to medical care, and the clinic will continue to do so in the face of the COVID-19 global pandemic.

## References

1. Elliott K, Akpan N. "How the new coronavirus surges compare to New York City's peak." *National Geographic*. Published July 9, 2020.
2. New York State on PAUSE. *New York Department of Health*. Published 2020.
3. Cuomo AM. "Governor Cuomo Signs the 'New York State on PAUSE' Executive Order." Published March 23, 2020.
4. "New York City, Queens." *New York State*.