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By Faculty for Faculty

Transition of Nurse Practitioner Faculty Practice and Student Clinicals to Telehealth: Response to the COVID-19 Pandemic

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A B S T R A C T

The COVID-19 pandemic forced the US health care system to evaluate alternative care delivery strategies to reduce the risk of coronavirus transmission to patients and health care providers. Telehealth modalities are a safe and effective alternative to face-to-face visits for primary and psychiatric care. Federal policy makers approved changes to telehealth reimbursement coverage and allowed flexibility of location for patients and providers. This article describes the transition of patient visits to telehealth by nurse practitioner faculty at an academic medical center to maintain continuity of care of underserved patient populations. This pivot facilitated resumption of clinical learning experiences for nurse practitioner students.

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In response to the COVID-19 global pandemic, the US Department of Health and Human Services (HHS) declared a national public health emergency in January 2020.[1] In March, the governor issued an executive order closing the University of Illinois Chicago (UIC) campus, impacting its academic medical center health care operations. In response, our college of nursing (CON) pivoted faculty practice services from face-to-face patient visits to telehealth. Implementing a telehealth delivery model provided the flexibility necessary for nurse practitioners (NPs) to maintain continuity of delivery of health care to patients at remote locations. The purpose of this article is to describe how primary and specialty care NPs adopted telehealth to deliver care and create clinical practice opportunities for NP and other interprofessional health science students.

Background

Faculty Practice

The National Organization of Nurse Practitioner Faculties (NONPF) endorses administrative support for faculty teaching in NP specialty courses to engage in clinical practice to maintain current knowledge.[2-4] At UIC CON, faculty practice is defined as, "Direct patient care professional services and indirect professional services provided by the faculty to individuals, families, groups, communities or other organizations" (p. 1).[5] Faculty practice models increase the availability of high-quality clinical placements for enrolled NP program students and has a positive impact on maintaining current practice skills of faculty NP providers. [2,6]

The UIC CON has a well-established faculty practice encompassing multiple business lines, including NP practice. Two examples of the faculty practice models are a nurse-managed Federally Qualified Health Center (FQHC) integrating primary and behavioral health care in an underserved neighborhood, and faculty NPs with contracts to practice at our affiliated academic medical center.

Definition of Telehealth

Historically, telehealth has had multiple definitions across US federal agencies.[7] The World Health Organization definition of telehealth is as follows: "The delivery of health care services, where distance is a critical factor, by all health care professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of disease … in the interests of advancing the health of individuals and their communities" (p. 1).[8]

Federal Changes to Telehealth Reimbursement due to COVID-19

The COVID-19 pandemic forced the US health care system to reevaluate delivery of health care services to reduce the risk of virus exposure to providers, staff, and patients.[9] The US HHS issued a policy statement advising implementation of telehealth modalities as a safe and effective alternative to face-to-face care.[10] The Coronavirus Aid, Relief, and Economic Security (CARES) Act extended coverage for telehealth visit modalities including audio-only telehealth, adjusted reimbursement rates for telehealth compensation to be on par with in-person visits, and flexibility of location for both the patient and telehealth provider.[9,11] Additionally, the CARES Act

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made provisions for use of telehealth technologies, such as Facetime or Skype, without penalty for violation of patient privacy under the Health Insurance Portability and Accountability Act (HIPAA).[12]

Telehealth Education for NP Students

Incorporating telehealth into NP education curricula includes didactic content, clinical practice experiences, and simulation.[13,14] Best practices for NP telehealth education support the core NP competencies outlined by NONPF for traditional in-person patient encounters. Education must include specific etiquette recommendations to prepare students to use effective strategies unique to telehealth communication, such as looking directly at the camera to simulate direct eye contact and incorporating nonverbal cues such as a nodding the head to convey empathy.[13,14] Providing NP students with opportunities for faculty-mentored telehealth experiences is necessary to promote development of best practices for telehealth, specific communication skills, and using telehealth technology to effectively deliver health care.[13]

Transitioning Faculty Practice Sites to Telehealth Platforms

Telehealth Transition of a FQHC Faculty Practice Clinic

The Mile Square Health Center Humboldt Park (MSHP) is an FQHC located in a low-income, medically underserved community of Chicago. This nurse-managed practice is operated by the CON serving a diverse population predominately insured by Medicaid. Clinic providers are interprofessional and include family and psychiatric mental health nurse practitioners, a licensed clinical social worker (LCSW), and a nutritionist. The Center uses the AIMS Center Collaborative Care model to integrate primary medical care with behavioral health.[15] Center NPs have completed Medication-Assisted Treatment (MAT) training and hold Drug Enforcement Agency license waivers to treat opioid use disorder. Many patients are managed by both an NP and an LCSW for treatment of anxiety, depression, and substance use disorders.

The clinic's standard practice and patient care processes were disrupted with the onset of the COVID-19 pandemic. The decision to transition from in-person visits to telehealth was supported financially by the CARES Act, but the implementation was both rapid and uncertain, and the flow of care processes to maintain patient contact changed daily. Center administrators and staff had to take into consideration multiple factors to best determine what methods of telecommunication patients would be comfortable using, as well as the potential for patient access to a device and internet connection. Clinic providers cycled through 3 telehealth platforms in 4 weeks, ultimately settling on Doximity Dialer Video as the primary visit platform (https://www.doximity.com/dialer). Alternative platforms such as InTouch were too complex for patients and providers to master quickly. Doximity Dialer accommodates multiple participants to be easily merged to participate in a telephone call or videoconference by the person who initiated the call to the patient. The application's software allows health care providers to predesignate a business number for display as the caller ID. This feature protects the caller's personal cell phone number identity, as well as alerting the patient that this is a call they are expecting from their clinic provider.

The Center remained open during the first 3 months after the transition to telehealth with one NP provider and one support staff on site to support patient walk-in emergencies. All other providers and staff worked from home conducting visits via telehealth. Providers have now resumed in-person, telephone and Doximity Dialer telehealth visits on site.

Data demonstrated a significant drop in the clinic patient no-show visit rate and an increase in the number of new patient visits after the transition to telehealth. The clinic's average no-show visit rate for both NP and social work visits hovered around 30% during 2019. The no-show rate dropped to 10% for behavioral health patient visits and 15% for primary health care visits when services were offered via telephone and videoconference (Figures 1 and 2). Telehealth enabled providers to continue the recommended practice of weekly and biweekly MAT treatment, which prevents overdoses and deaths.[16]

Challenges with Telehealth Transition at MSHP FQHC Clinic

A new patient visit is time-consuming because it includes taking a thorough history of the present illness, review of systems, and past, family, and social history. The telehealth visit lends itself well to these components, but lacks the ability to complete a physical exam, baseline laboratory work, or biometric screening. Some patients are capable of self-monitoring of blood pressure, glucose levels, and weight, but others are not, and a telehealth visit provided necessary support for assessment of those measures. For established patients who needed a routine follow-up visit to review laboratory diagnostics results or referrals, telehealth was ideal, allowing patients to shelter safely at home during the pandemic.

Of note, FQHC patients preferred audio phone calls to video conference visits. This preference eliminated the provider's ability to observe the subtle nuances visible by videoconference. In response, different skills had to be developed by NPs to assess patient status solely via audio. For example, questions to patients need to be more specific and sensitive to elicit focused answers while still demonstrating empathy, and patient responses required careful active listening skills without visual communication cues from a patient. The implementation of telehealth primary care visits enabled patients to have individual one-on-one visits with their established primary care provider. This allowed NPs to support patients who expressed feelings of abandonment, isolation, and hopelessness as a result of the mandated shelter-in-place order during the initial phase of the coronavirus pandemic in Chicago. Telehealth also allowed the provider to screen patients for COVID-19 symptoms, using audio or video evaluation of shortness of breath and cough, which was particularly valuable for those living alone. Additionally, it also facilitated teaching opportunities for COVID-19 prevention, screening for food insecurity, and assisting patient connection to vital community resources.

Incorporating NP Students Into Telehealth Visits: MSHP FQHC

Incorporating telehealth into NP education proved to be challenging. Most providers transferred their clinic schedule to telehealth visits from their home offices. Until the state mandated shelter-at-home order was lifted in May, students did not participate in the telehealth visits. Once the university allowed NP students to return to clinical sites, they participated in telehealth visits on a shared HIPAA-compliant videoconferencing site with their preceptor. There were still challenges to resolve, such as the space for physical distance while still being in proximity to the preceptor for consultation. After becoming accustomed to wearing masks and appropriate distancing, it was an effective learning experience.

Telehealth Transition of an Academic Medical Center Pulmonary Specialty Clinic

All outpatient visits at our university academic medical center were transitioned to telehealth in March 2020 in response to the state of Illinois' mandated shelter-in-place order. The telehealth

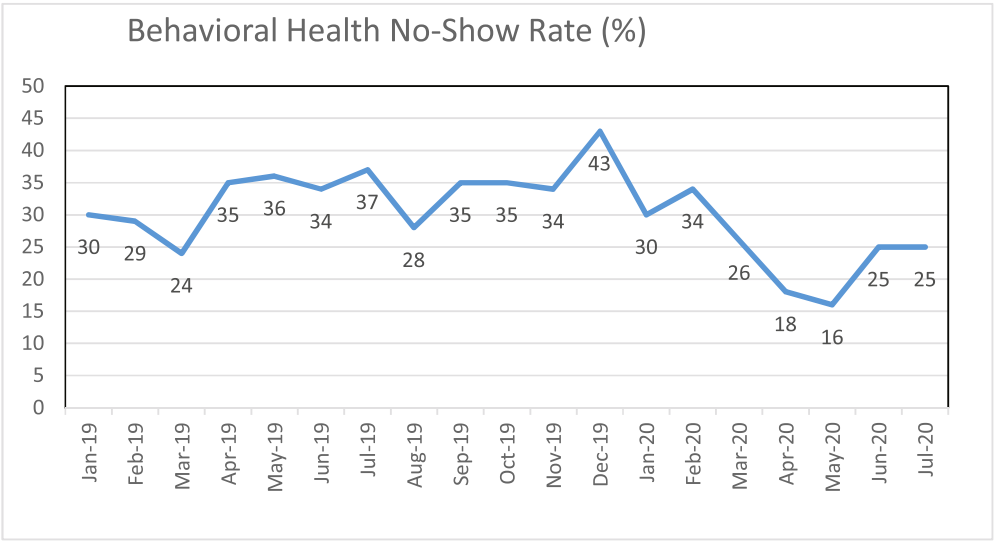

Figure 1. Behavioral health patient no-show rate during telehealth-only visits.

initiative at a pulmonary subspecialty outpatient clinic was co-led by a NP faculty member who practices at the clinic under the college's faculty practice model. Many of the physician providers in the practice were assigned emergently to manage COVID-19 patients in intensive care units, resulting in fewer providers for clinic patient care. The NP faculty-led transition to telehealth helped provide access to care for a population highly vulnerable for COVID-19.

In this specialty clinic, telehealth implementation began with selection and integration of a uniform telehealth platform. Both providers and patients required education on using telehealth. A redesign of workflow processes was necessary for a smooth transition and began with communication with all key stakeholders at weekly meetings. Stakeholders met weekly for approximately 2 months to improve processes and included the lead faculty practice NP, several physicians in the practice, a pharmacist, the clinic registered nurse, and an administrator who also supervises the medical assistants and front desk staff. The initial telehealth platform chosen (InTouch) was deemed too cumbersome, and a switch was made to Doximity Dialer Video. This telehealth app is HIPAA-secure, and patients can use it without downloading any software.

The weekly meetings included making informed decisions to standardize the transition to telehealth. New workflow processes were established, including patient scheduling and checkout processes, documentation, billing, and plans for continuous quality improvement for delivering care by telehealth.

The meetings provided a venue for education on effective telehealth visit practices, including communicating with patients, best practices for teaching patients the use of the telehealth platform, and tips for respiratory physical examinations via videoconference. For example, as with in-person clinic visits, asking patients to take a deep breath allowed assessment for coughing, prolonged expiration, or wheezing, as well as tachypnea and use of accessory muscles. Breathlessness on exertion could be assessed by observing patients walking in their home. Some patients own a home oximeter,

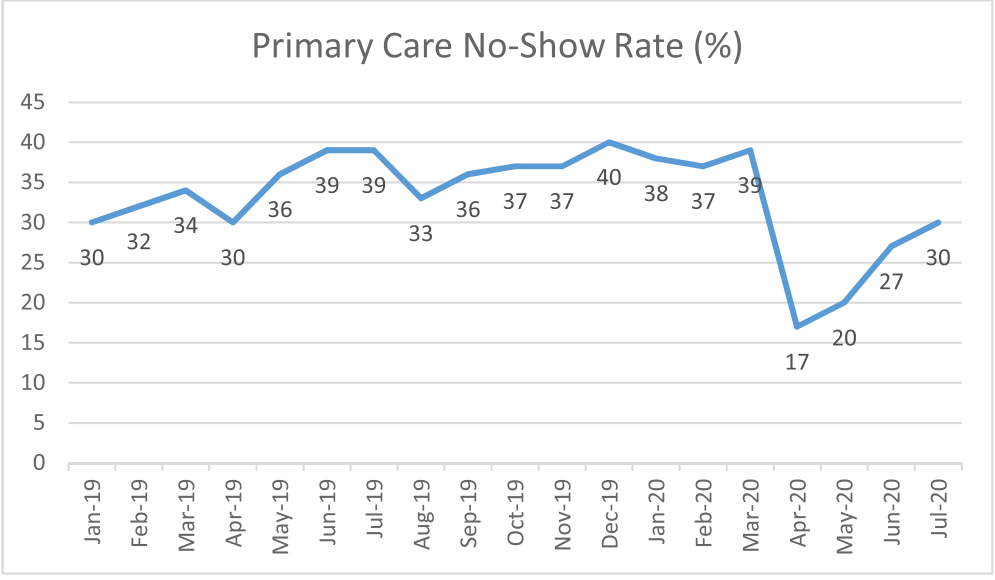

Figure 2. Primary care patient no-show rate during telehealth-only visits.

an inexpensive way to monitor oxygen saturation (cost is approximately $20). This is a helpful assessment tool for remote assessment of pulmonary patients. However, oximeters are not routinely covered by insurers and may be cost-prohibitive for some patients.

Discussions also focused on the individual patients' adjustments to the telehealth platform, as well as the successes and challenges encountered by providers and staff during the transition period. This became an opportunity for cross-professional education and appreciation.

Six months after initiation, telehealth continues to be an integral care delivery model in this clinic, as many patients fear leaving their homes. One important lesson is maintaining clear communication with all team members, including key administrators, staff, medical assistants, nurses, other providers, and patients and their families. The patient population is primarily underserved, and the team is evaluating barriers to and satisfaction with telehealth in our pulmonary, allergy, and medical oncology clinics.

Incorporating Interprofessional Students Into Telehealth Visits: Pulmonary Specialty Clinic

The pulmonary specialty clinic is a highly interprofessional practice, uses a team-based model, and serves as a training ground for many health science students. A focus of our telehealth transition included incorporation of students into telehealth care.

Case Example: Student Telehealth Visit

Standard procedure in the pulmonary clinic includes front desk staff contacting all patients the business day before their scheduled appointment. The appointment is confirmed, and patients are informed it will be a telehealth visit. Patients are asked whether they prefer a telephone or a videoconference visit. If a videoconference visit is preferred, the patient is advised that they will be sent a text during the appointment time window and instructed to click on the link received.

The NP, pharmacist, clinic nurse, and health science students assigned to clinical rotations in the practice communicate the day before by telephone to review the schedule and determine "precalls" to patients that will be completed by students. The student telephones the patient to collect updated information and identify patient concerns since the last visit, assess smoking status, and document current medications. They also complete routine assessment tools, such as the Asthma Control Test or COPD Assessment Test. Next, the NP and students connect by telephone or videoconference to review the patient information collected by the students before the patient visit. At the scheduled time, the NP connects with the patient for the telephone or videoconference visit, and (if the patient grants permission) the student is easily merged into the visit by telephone or videoconference via the Doximity Dialer application. When visits are completed for the day, the NP and students meet again virtually to discuss and review the rationale for each patient's management plan and formulate a plan for follow-up. This wrap-up has been done by telephone or videoconference, but because some telehealth visits are now conducted from the clinic, the NP and students may be in person together on site. Additionally, the NP incorporates education for the student regarding selecting the appropriate CPT and billing code for the telehealth visit and entering appropriate visit documentation.

Due to the COVID-19 pandemic, many clinic patients face issues including, but not limited to, social isolation, mental health and financial concerns, and lack of access to food and medication. Communication by the NP with other team members, such as the clinic social worker, pharmacist, and nurse, can help address outstanding patient issues requiring follow-up or referral. Students are always included in this communication to role-model effective interprofessional teamwork essential to preparing practice-ready clinicians. Although the pandemic has prohibited us from our in-person, team-based approach, student education and training opportunities have been sustained through telephone and videoconference platforms. This continuity is key to preparation of the next generation of interprofessional team providers.

Implications and Recommendations for NP Faculty Practice

Telehealth is an invaluable resource for maintaining viability of NP faculty practice during the COVID-19 pandemic. It allows NPs to continue delivery of essential health care to faculty practice patients, most of whom are ethnic and racial minorities residing in low-income communities and disproportionately affected by COVID-19.[17] For our nursing faculty, implementing telehealth provided opportunities for valuable experiences to support continuity of clinical education for NP and health science students.

Health care experts have long advocated for wider acceptance of telehealth services in patient practice and removal of regulatory barriers that hinder adoption.[18] NPs must lobby state and federal policy makers to continue the parity of reimbursement to sustain the use of telehealth as an adjunct to in-person patient visits and a choice for patients.

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