

Impact of COVID-19 pandemic on pharmacy learners and preceptors

Coronavirus disease 2019 (COVID-19), caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), continues to significantly impact individuals worldwide, including healthcare professionals in training.¹ In accordance with recommendations by the Centers for Disease Control and Prevention,¹ many organizations have instituted policies to protect their employees and slow the spread of the infection. The practice of social distancing has been widely adopted by businesses across the public and private sectors, resulting in restrictions of work hours, mandated leaves of absence, and/or remote work. Pharmacy learners are among healthcare providers on the front line and are faced with unique challenges to complete their training and program requirements during this unprecedented time.

Rotation experiences have been dramatically altered, primarily by limiting numbers of on-site learners, thus impacting the training of student pharmacists as well as postgraduate year 1 and 2 (PGY1 and PGY2) pharmacy residents. The global shortage of personal protective equipment has further limited the ability of healthcare learners to have direct patient contact. Learners on hospital or community rotations are having to adapt to alternative methods to gain experience and practice clinical skills, such as participating in telemedicine and electronic medical record (EMR) communication with patients and families. Nondirect patient care activities such as topic discussions, journal clubs, and lectures are moving to a virtual platform.

Preceptors are altering their rotations and learning strategies to accommodate virtual learners. Preceptors should be open-minded and consider how learners can participate in clinical pharmacy services during this time. Teleconferencing and virtual communication is essential in order to achieve rotational goals and objectives. Innovation and creativity are critical skills to ensure that preceptors are preparing and training pharmacists in the optimal capacity. Buy-in from the entire interdisciplinary team is paramount to

the success of telemedicine and virtual clinical services when a majority of the care team are working remotely and utilizing nontraditional modes of communication and trust-building.

Incorporation of technology has been instrumental to provide learners with an avenue to continue clinical rotations. Virtual learning may be achieved using video chat applications, such as FaceTime (Apple Inc., Cupertino, CA), Zoom (Zoom Video Communications, San Jose, CA), Skype for Business (Microsoft Corporation, Redmond, WA), and Microsoft Teams. Hospital-based learners granted remote access to the EMR can review patients' profiles and provide clinical pharmacy services. The US Department of Health and Human Services has temporarily modified telemedicine requirements,² which has enabled many clinicians to provide pharmacy services though daily interdisciplinary inpatient rounds and patient education. Additional pharmacy services may be coordinated or provided using email, Microsoft Teams chat, phone calls, and teleconferences. For learners without secured remote access to the EMR, fostering the development of competencies and specialized skills necessary for clinical pharmacists may be achieved through deidentified patient cases, topic discussions, research projects, developing presentations, completion of CORE Readiness modules (CORE Higher Education Group, West Warwick, RI), and attending webinars. Furthermore, learners could be responsible for projects including creation of drug monographs, treatment guidelines, educational resources, and educational videos. The COVID-19 pandemic additionally provides learners with unique learning opportunities regarding formulary management, policy development, emergency preparedness, and how to adapt their practices in a rapidly changing situation.

The management team and residency program directors have an important role in the success of virtual learning by providing support and understanding to the preceptors and learners. The willingness to be flexible is essential as pre-

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ceptors brainstorm ideas to modify experiences. Preceptors and learners should recognize there may not be a one-size-fits-all approach; adapting to the patient population and clinical situation is crucial. Developing resources on how to utilize virtual platforms and keeping a friendly, nonjudgmental environment are important when supporting individuals who are learning new platforms. In addition, leaders should emphasize self-care and provide well-being and resilience resources such as webinars related to burnout, mindfulness, and mediation.³⁻⁶

The magnitude and duration of the effects of the COVID-19 pandemic are uncertain. Numerous questions remain unanswered, including the expected duration of social distancing, anticipated need for alternative methods to train and prepare pharmacists, and what the future will hold for pharmacy students and the nearly 2,600 PGY1 and PGY2 residents currently enrolled in ASHP-accredited programs.⁷ Regardless, it is imperative that pharmacy preceptors and learners adapt and implement novel educational methods in order to achieve learners' goals and objectives. Strategies incorporating technology and telemedicine are critical for preparing pharmacy learners entering the profession or advancing their training in order to continue to provide optimal patient care. From great trials come great rewards, and the lessons we learn from the COVID-19 pandemic will likely have a major impact on not only the future of healthcare but how we educate future pharmacists.

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