

Practicing during a pandemic: The role of a new pharmacy practitioner

When transitioning from pharmacy resident to clinical pharmacist specialist, there are many challenges and uncertainties that one might face. From answering complex clinical and operational questions to finding your place on the interdisciplinary care team and defining your own career path, as a new practitioner you may experience uncertainty without preceptors to oversee and guide you. However, most practitioners are not fully prepared to practice during a pandemic soon after completing postgraduate training. While students and residents may be introduced to the concept of emergency preparedness in pharmacy school and throughout residency, nothing can fully prepare a new practitioner for the experience of being involved in management of a crisis such as the coronavirus disease (COVID-19) pandemic.

While there is published literature that describes the role of the pharmacist in a pandemic, it is mainly limited to outpatient pharmacy practice¹ and past pandemics, such as the novel H1N1 influenza outbreak.² Additionally, recent publications regarding the pharmacy profession's response to the COVID-19 crisis are often generalized to pharmacists at various stages of their careers,³ and there are limited resources that emphasize the role of the new practitioner in emergency preparedness. The purpose of this article is to describe the unique roles that new practitioners can serve on a disaster response team. The scenarios discussed below are based on the experiences of 4 new practitioners in a large, urban academic medical center located in New York City, the epicenter of the initial phase of the COVID-19 pandemic in the United States.⁴

Finding your place. Health systems and institutions have handled the COVID-19 pandemic in different ways, with many decisions having to be made rapidly by hospital leaderships. This dynamic can apply in any pandemic. Within a pharmacy department, it is crucial to quickly establish daily calls with operations, clinical, and purchasing teams across the health system to share information and make decisions. These decisions pertain to repurposing space within hospitals to open new units, redeploying provider teams to treat critically ill patients, and creating new treatment guidelines with little or no evidence to serve as a guide. Being included in decision-making processes can provide new practitioners

the opportunity to take the lead on many initiatives and apply the necessary skill sets acquired during residency to real-life practice. The typical command structure during emergencies tends to follow the day-to-day hierarchical structure of the department: director, assistant directors, managers, pharmacists, and technicians. Information is disseminated down hierarchy so that everyone is appropriately and routinely informed. Residents, as well as new practitioners, can align with this structure in a variety of ways, such as by working with operational managers to open new units and retrieve medications to stock medication rooms and assisting clinical managers with literature reviews to create medication-use guidelines. They can even support directors with the various miscellaneous tasks that need to be accomplished. Ultimately, the most important means for new practitioners to find their place in the departmental structure is by being flexible and attuned to all operational, clinical, or systems-based opportunities that arise.

For a new practitioner, major challenges early in professional practice can cause insurmountable fear, apprehension, and uncertainty. It is easy to fall victim to impostor syndrome, described as “a collection of feelings of inadequacy that persist despite evident success.”⁵ Affected individuals suffer from feelings of “being unable to internalize and accept personal success without feeling like these accomplishments are due to luck rather than ability.”⁵ Many of the techniques used to overcome impostor syndrome can also be applied in a pandemic situation. These involve focusing on improving one's strengths, asking mentors for professional feedback, and acknowledging previous successes to tackle new challenges.⁶

Managing operations during a pandemic. Starting as a new pharmacy manager after completing a residency entails additional challenges that other new practitioners may not face. These challenges include making the transition from preceptor oversight and self-management to supervising other members of the department and establishing oneself as a leader at a new institution. When working as a new practitioner in a pharmacy administrative position, it is important to always call on department directors, senior members of the hospital leadership, and other pharmacy advisors within your mentor network for guidance. Taking advantage of these resources can provide enormous insight and can be helpful when addressing some of the unintended consequences that may arise from opening new inpatient units in the absence of additional pharmacy support. Pharmacist burnout, increased staff requests to use sick days, and drug shortages can be common, and looking to others for guidance on how to manage these issues can be beneficial. For example, if staff shortages arise, an option is to

The New Practitioners Forum column features articles that address the special professional needs of pharmacists early in their careers as they transition from students to practitioners. Authors include new practitioners or others with expertise in a topic of interest to new practitioners. AJHP readers are invited to submit topics or articles for this column to the New Practitioners Forum (newpractitioners@ashp.org).

pull back on unit-based pharmacy services to provide centralized pharmacy coverage. If drug shortages occur, work with clinical staff to develop backup protocols and explore other therapeutic alternatives with the purchasing team. Finally, communicating these changes to frontline pharmacists to ensure that they are given the opportunity to pose any questions or suggestions is of the utmost importance.

Given the overall anxiety of caring for patients in a pandemic or other crisis situation, it is crucial to lead by example. Additionally, it is important to emphasize the mentality that no job is too small and every role is valuable in keeping the department running. This sense of teamwork can make an immeasurable difference, and it can be a big help when morale is low. Working alongside staff members and creating a safe space for them to voice concerns allows the pharmacy team to become comfortable with being uncomfortable so that a “new normal” can be established.

Managing clinical practice during a pandemic. While the pharmacy operations team works to establish a new normal and find new ways to tackle the unprecedented challenges posed by a pandemic situation, the clinical pharmacists must also adjust their practices to meet patient care demands, including practices to ensure safe and effective medication use. It is crucial to establish a tangible action plan; however, it is important to remember that alternate strategies may be required if systems to curb inappropriate drug utilization are not adequate. A first step to address this challenge could be to create a priority list of medications commonly used in treatment of patients with COVID-19, including analgesics, sedatives, neuromuscular blocking agents, vasopressors, and electrolyte preparations. Additionally, it is critical to work with purchasers and operational managers to prepare for the inevitable shortages in medications and to guide them towards appropriate alternatives. It may be difficult to illustrate the necessity of having critical care medications available while the focus is on antivirals and other experimental treatments. However, treatment guidelines can be used to reinforce the utmost necessity of supportive care.

In situations where supportive care is a top priority, in conjunction with a rapid rise in the number of admitted patients, protocolization of care becomes a necessity. This is especially true when hospitalists unfamiliar with critical care medicine will likely be tasked with caring for mechanically ventilated patients. Moreover, the use of supportive care may be limited by institutional guidelines prohibiting the use of certain medications outside of an intensive care unit (ICU) due to lack of proper monitoring and supervision. Despite these restrictions, sedative use at the authors' institution rose over 700% during the early weeks of the COVID-19 crisis; despite the pharmacy department providing proper initial guidance on appropriate usage, medication shortages became inevitable. It is essential for new practitioners who have established relationships with the medical teams to develop procedural protocols that outline the processes for an-

algnesia and sedation in general medical units. For instance, clinical pharmacists can emphasize the use of oral agents and bolus dosing to wean infusions and prevent inappropriate oversedation. Such actions can help minimize medication waste, conserve drugs in scarce supply, and ensure that patients are safely treated using evidence-based practices.

Regarding appropriate care of patients infected with a novel virus, it is important to be cognizant of original research published at a rapid pace, which may result in the development and dissemination of protocols within the health system without intensive review or discussion. Specifically, policies not involving input by the pharmacy department can often overlook certain patient factors, including organ dysfunction, the need for weight-based dosing adjustments, and drug interactions. A multidisciplinary approach, especially during a pandemic situation, should be employed to ensure that there is an established and standardized process in place for development, approval, and dissemination of new policies and procedures.⁷ One approach is to require that all new protocols established during a pandemic be vetted by the institution's pharmacy and therapeutics committee before being introduced into practice.

With the possibility of the adult census within an institution exceeding bed capacity during a pandemic situation, it is important to look to personnel on other units and floors to extend care and assist.⁸ Examples of units that can be quickly transformed to admit adult patients include general pediatrics floors, pediatric step-down units, and ICUs of an affiliated children's hospital.^{9,10} It is imperative for a new practitioner to work with adult and pediatric intensivists, hospitalists, nurses, and other pharmacists to ensure that such converted units are adequately supplied to expand pediatric services to adult patients. It is crucial to optimize automated dispensing cabinets by stocking medications commonly used in adult patients, including those required for advanced cardiac life support, rapid sequence intubation, and postintubation management. This can be achieved by creating an extensive checklist of medications that could be used in any of the above scenarios. Finally, it is necessary to develop a materials checklist that incorporates protocols ensuring that converted units have an adequate supply of cardiac monitors, adult blood pressure cuffs, intravenous (IV) poles, and tubing for IV medications.

With critically ill adult patients being admitted to a children's hospital, pediatric teams will be required to manage adult patients. A new practitioner can help prepare the clinician teams for this scenario by providing education, clinical pearls, and treatment algorithms to pediatric pharmacists, nurses, medical residents, hospitalists, and intensivists. Additionally, although adult providers are familiar with caring for adult patients, they may also be required to treat patients outside of their practice specialty throughout the institution. New practitioners can facilitate such transitions by giving lectures to hospitalists shadowing ICU rounds on topics such as analgesia and sedation or by publishing information on the health system's network. Once education has been provided,

new practitioners can run reports on targeted medication therapies using the electronic medical record to track and assess for appropriate use of sedatives, analgesics, paralytics, and vasopressors; this can allow pharmacists to “identify and intervene” on units that may be struggling with evidence-based therapies and to provide a venue to identify candidates for active clinical trials.

Lastly, it can be expected that there will be an increase in the number of code calls and rapid responses, and a new practitioner can play a valuable role in these emergent situations. This role includes but is not limited to drawing up medications into syringes, priming tubing for medication infusions, and setting up the IV infusion pumps, all of which are skills practiced during residency training. Additionally, new practitioners can further solidify their essential role on the patient care team by assisting residents and hospitalists with ordering medications that were administered during intubations and/or cardiac arrests. Furthermore, the new practitioner can play a pivotal role in the care of a patient who does not receive an ICU bed for hours and, as a result, for whom postintubation and/or cardiac arrest care has to be started on the general medicine floor. In such cases a new practitioner can educate the nurses on the proper administration of critical care medications and ensure that appropriate patient monitoring is implemented.

Managing informatics systems during a pandemic. As operational and clinical workflows quickly change in response to a pandemic, it is crucial that the informatics systems used within the institution are updated to reflect the most up-to-date treatment protocols. These changes are required so that patient safety is not compromised and can be accomplished through active communication and teamwork among pharmacy, informatics technology, medicine, and nursing teams. New practitioners can put their residency training into action by applying their recently acquired and extensive knowledge in critically evaluating literature for applicability to a specific patient population. This can be especially valuable in a time when changes are required at a rapid pace and there is very little available literature to help guide practice. New practitioners can contribute to the team by evaluating a requested change to practice, which will also require subsequent changes to the systems and can help prioritize these needs.

Another strength that new practitioners possess is that their residency training likely taught them to view informatics systems as a whole. They understand the entire workflow—from the moment the medication is requested and verified in the electronic medical record to the time of preparation in the pharmacy using the IV workflow system and, finally, administration by smart infusion pump. This knowledge is essential when validating all requested changes to informatics systems to ensure that each system is updated correctly while promoting safe patient care. This task can be accomplished by using tools taught during residency. Examples include developing checklists to make sure that no system or step along the way is missed

and maintaining open communication between the pharmacy and providers. Another example is assessment of systems for possible risk points by performing informal failure mode and effects analyses for new medications and/or concentrations introduced into practice. Ultimately, informatics systems will be used to support all clinical and operational activities within the institution, and new practitioners can play a valuable role in ensuring the safety and accuracy of the systems.

Closing notes. The transition from pharmacy resident to clinical pharmacy specialist comes with its own set of unique challenges under normal circumstances, and it can be even more demanding during times of uncertainty. While practicing during a pandemic is hopefully a once-in-a-lifetime experience, it is imperative that residency programs incorporate more emergency response training into their curriculums. This training can include emergency response simulations, literature reviews, and discussions on past pandemic responses, as well as active involvement in an institution’s emergency preparedness committee.

New practitioners have a vast array of previously developed skill sets, including communication, active listening, teamwork, decision-making, clinical knowledge, and flexibility. Despite these skills, new practitioners may still doubt their own abilities; however, they should be confident in their training and never overlook their mentor network. It is important for them to rely on leaders within their institutions for guidance but also remember that they are leaders themselves. By doing so, they can establish themselves as essential members of the emergency response team by following the chain of command. Knowing when to ask for help is another important attribute that new practitioners should not forget, especially during a time of instability and uncertainty. While new practitioners have a wealth of knowledge gained from residency training, their colleagues have more practical experience. The additional proficiencies that seasoned practitioners bring, coupled with new practitioners’ extensive and diverse training experiences, can contribute to the development of a well-rounded patient care team.

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