

Use of telemedicine to provide clinical pharmacy services during the SARS-CoV-2 pandemic

The emergence of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which led to the coronavirus disease 2019 (COVID-19) pandemic, has resulted in unprecedented stressors on international healthcare systems.¹ The healthcare environment is changing rapidly.¹ An increasing number of allied healthcare professionals, including pharmacists, are practicing social distancing and engaging in non-face-to-face clinical care to slow the spread of infection.¹ As a result, pharmacists are providing clinical services from remote locations such as nonclinical areas of healthcare facilities and their own homes.

At Children's Mercy Kansas City (CMKC), 33 clinical pharmacists are typically on-site at the 400-bed pediatric hospital. At the beginning of the pandemic, the pharmacy leadership team (PLT) developed a 3-phase staffing plan. In the first phase, the PLT identified 7 pharmacists in nonclinical roles (eg, medication safety coordinator) or areas where clinical pharmacist services overlapped (eg, the bone marrow transplantation [BMT] clinic and the inpatient BMT service) to begin working remotely. These efforts were escalated within a week in the second phase of the staffing initiative, which included 14 additional pharmacists and all pharmacy learners (pharmacy residents and students). Additionally, the PLT began working remotely under a rotating schedule that called for 1 team member to be on-site each weekday. These redeployments left approximately 14 pharmacists (42% of the typical on-site staff) with direct patient care duties on-site and 19 (58%) working remotely to provide consistent clinical services. The third phase of the staffing initiative will involve implementation of an "essential pharmacy distribution" model comprising 8 pharmacists on-site and additional telemedicine support. At the time of writing, the third phase had not been initiated.

To provide optimal patient care and meet healthcare system needs, state pharmacy boards and the US Department of Health and Human Services (DHHS) are temporarily modifying requirements for telemedicine.²⁻⁴ Specifically, DHHS will "exercise enforcement discretion" for covered healthcare

providers that use "professional judgement" and implement a videoconferencing application that is not fully compliant with HIPAA rules, such as Skype for Business (Microsoft Corporation, Redmond, WA), Microsoft Teams, Updox (Updox LLC, Dublin, OH), or VSee (Vsee Lab LLC, Sunnyvale, CA).² Furthermore, state pharmacy boards have either temporarily allowed remote work by pharmacists or emphasized allowing nondispensing activities outside of a licensed pharmacy.^{3,4} Additionally, several boards have either considered or implemented waivers regarding the "remote processing" of medications.³⁻⁵

A variety of nondispensing functions can be performed using teleconferencing, enabling pharmacists to continue to provide quality healthcare services during the COVID-19 pandemic. Such services include but are not limited to patient education, review of patient profiles and medication histories, medication therapy management, and drug utilization review. At CMKC, remote pharmacy services are being provided through various processes and platforms. Daily, interdisciplinary inpatient rounds are being conducted using Microsoft Teams. Patient profile reviews to assess the safety and efficacy of medication therapy are completed using secure remote access to patient information in the electronic medical record (EMR). Patient education and counseling are occurring via telephone and Microsoft Teams. Additional activities, such as quality improvement projects, formulary and inventory management, and research, have been continued through conference calls, email, and telephone communication as well as Microsoft Teams and other videoconferencing platforms.

Although most routine ambulatory care clinic appointments have been cancelled and rescheduled, some ambulatory care services are still being provided remotely by pharmacists. Examples of these services include completion of prior authorizations via Adobe Acrobat Pro (Adobe Systems, San Jose, CA) or CoverMyMeds (CoverMyMeds LLC,

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Columbus, OH); assessment of medication therapy monitoring data (eg, laboratory test results, electrocardiograms); answering medication-related questions from providers, patients, and/or families; and patient education through the EMR system's communication functionality or by telephone call. Additionally, pharmacists may aid with medication access by making telephone calls to outside pharmacies, insurance companies, and patients or families. Access to medications may become even more critical as the healthcare community starts to see supply issues and shortages of some medications precipitated by the COVID-19 pandemic.

Because not all pharmacy services can be provided remotely, some pharmacists must remain on-site to provide patient care. When this is the case, pharmacies and pharmacists can take steps to mitigate the risks of transmitting infection. These steps may include using drive-through medication pickup facilities (if available), temporally and physically separating patients and pharmacy staff as much as possible, and practicing enhanced cleaning techniques as recommended in Centers for Disease Control and Prevention guidance.²⁻⁴

As the SARS-CoV-2 pandemic continues and the number of cases of COVID-19 increases, pharmacists will continue to play a critical role in the provision of healthcare services nationally. Although no allied healthcare professionals expected or were prepared for the current crisis, pharmacists have an opportunity to explore and embrace novel paradigms to continue to provide high-quality patient care and pharmacy services.

- Centers for Disease Control and Prevention. Coronavirus (COVID-19). <https://www.cdc.gov/coronavirus/2019-ncov/index.html>. Accessed March 25, 2020.
- US Department of Health & Human Services. Notification of enforcement discretion for telehealth remote communications during the COVID-19 nationwide public health emergency.

<https://www.hhs.gov/hipaa/for-professionals/special-topics/emergency-preparedness/notification-enforcement-discretion-telehealth/index.html>. Accessed March 25, 2020.

- Missouri Division of Professional Regulation. Missouri Board of Pharmacy. <https://www.pr.mo.gov/pharmacists-covid-19.asp>. Accessed March 25, 2020.
- Kansas Board of Pharmacy. Daily updates on COVID-19: memo from the Kansas Board of Pharmacy. <https://pharmacy.ks.gov/>. Accessed March 25, 2020.
- California State Board of Pharmacy. <https://www.pharmacy.ca.gov/>. Accessed March 25, 2020.

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Exenatide ER-induced eosinophilia

Exenatide extended release (ER) is a glucagon-like peptide-1 (GLP-1) receptor agonist and is indicated for use in the treatment of type 2 diabetes mellitus. In a randomized phase II trial reviewing efficacy and safety of exenatide, most adverse events were mild to moderate in nature, and none required discontinuation of therapy.¹ Eosinophilia was not reported as an adverse drug reaction in the trial, nor is it specified in the package insert.^{1,2} We report a case of eosinophilia secondary to exenatide ER use. A 52-year-old Caucasian female presented with uncontrolled type 2 diabetes mellitus. Her past medical history includes type 2

diabetes mellitus, hypertension, and hyperlipidemia. Her drug allergy profile consisted of penicillin, sulfamethoxazole, and ciprofloxacin, for which her physical adverse reactions are unknown. The outpatient medications that she has been stable on for several years consisted of insulin glargine 24 units subcutaneously nightly, repaglinide 2 mg orally 3 times a day with meals, pravastatin orally 40 mg daily, telmisartan 40 mg orally daily, aspirin 81 mg orally daily, and vitamin D3 1,000 units orally daily. The patient was not on any over-the-counter medications or supplements. The patient had previously been on metformin ER 750 mg, 1 tablet by mouth