

# THE DANIEL K. INOUE COLLEGE OF PHARMACY SCRIPTS

## Co-curricular Activities to Prepare Students for the Expanding Role for Pharmacists in Telehealth

Matthew Clemente; Roy Goo PharmD

*HJH&SW contributing editor of the Daniel K. Inouye College of Pharmacy (DKICP) Scripts column is Jarred Prudencio PharmD, BCACP, BC-ADM. Dr. Prudencio is currently Associate Professor of Pharmacy Practice and Chief of Experiential Education, with expertise in healthcare education and outpatient family medicine.*

Prevention, early detection, consistent patient monitoring, and follow-up are all cornerstones of essential primary care. COVID-19 has had a profound impact on chronic disease management. During the COVID-19 pandemic, chronic disease management has experienced treatment delays due to canceled in-person appointments and a reallocation of resources towards acute care services. Patient-sided stigma associated with healthcare facilities is another contributing factor in the underutilization of healthcare services. In June 2020, 4 in 10 adults surveyed reported a delay or avoidance in routine or medical care because of the pandemic to reduce the risk of infection.<sup>1</sup> As a result, patients with chronic diseases such as diabetes and lipid disorders could experience a cumulative risk and delay in treatment that may eventually result in complications of disease progression and preventable hospitalizations.

Several key contributing factors in the optimal management of chronic disease states include preventative screening and monitoring as well as new medication therapy. In a study conducted in Tennessee and Massachusetts and reported in the *Journal of General Internal Medicine*, found rates of preventative screening and monitoring fell by 91-90% and rates of new medication therapy fell by 52-60% between February and April 2020.<sup>2</sup> This shortage of healthcare resources and a need to fill gaps in the continuity of care have provided pharmacists with a unique opportunity to assist physicians with the management of patients' chronic diseases.<sup>3</sup> Such services include telehealth appointments for device counseling, more frequent follow-up for high-risk patients, and other medication management services that don't require a physical exam. During the COVID-19 pandemic, the role of telemedicine has expanded to facilitate patient-provider interactions in times of social distancing and provider shortage. Providing pharmacists with an expanded role in chronic disease state management via telehealth has been shown to be beneficial to both patients and the overall healthcare system.<sup>4</sup>

The expansion of telehealth services during the COVID-19 pandemic has allowed pharmacists to fill a unique role in the

management of chronic diseases. Such roles include specific interventions directed at 3 distinct tiers: primary prevention, early detection, and management of chronic diseases. Pharmacists providing telehealth services has been shown to provide a statistically significant positive impact on patient-centered outcomes in the management of chronic disease. In 2012, McFarland et al found statistically significant improvement in achievement of hemoglobin A1c goals in patients accessing clinical pharmacy services via telehealth compared to patients who did not utilize telehealth. Improvements in chronic disease outcomes via telehealth management has also been shown in patients with hypertension.<sup>5</sup> Pharmacists provide frequent monitoring between regularly scheduled appointments with primary care physicians to improve continuity of care. Both clinical and community pharmacists can implement telehealth interventions directed at chronic disease state management through a collaborative healthcare model with physicians. These interventions can include education on chronic disease states and promoting a healthy lifestyle for primary prevention. A second tier of interventions can include early detection of chronic disease states such as hypertension. Rapid evaluation and interpretation of laboratory values coupled with efficient referral protocols can lead to improved patient outcomes and reduced costs by allowing early detection of chronic disease. Lastly, pharmacists can also play a role in the management of chronic disease. They can provide new medication counseling upon diagnosis and treatment of a new chronic disease. Pharmacists can also provide medication management, such as medication administration, review, dose adjustment or titration, monitoring, and reconciliation. Additionally, oftentimes working with patients to improve medication adherence can have a positive impact on patient outcomes rather than adjusting medications. It's estimated that adherence to chronic medications is about 50%.<sup>6</sup> The implementation of pharmacists in telehealth can allow for frequent follow-up and rapid identification of barriers to medication adherence. Interventions can include simplifying medication regimens, using adherence packaging, and minimizing adverse effects.<sup>7,8</sup>

The COVID-19 pandemic has also necessitated significant changes in the delivery of pharmacy education and training. Prior to 2019 the pharmacy students at the Daniel K. Inouye College of Pharmacy (DKICP) participated in many co-curricular activities designed to instill professional values, attitudes and behaviors required of pharmacists. Most of these activities were focused on community benefit providing health resources to the public through health and wellness education in the form of posters and presentations at public gathering places as well as in person immunization clinics, medication counseling, and blood pressure screening. COVID-19 caused barriers to pharmacy students participating in the traditional co-curricular activities they have provided to the community in the past. However, this also provided students with the invaluable opportunities to interact with the public in new ways, including virtually-delivered health education and providing exposure to the growing role of pharmacists in telemedicine related to the management of chronic disease states. As a result of funding from several private entities in 2020, DKICP was able to shift its student-led co-curricular activities to a virtual platform through the creation of monthly video-based webinars on common health topics as well as partnering with assisted living facilities to provide hypertension related education, medication counseling, blood pressure monitoring, and dietary and lifestyle recommendations. Residents of partnering assisted living facilities were sent blood pressure monitors and were scheduled to meet with 2<sup>nd</sup> and 3<sup>rd</sup> year pharmacy students over the phone or utilizing a teleconferencing platform. During these meetings, the pharmacy students had the opportunity to interview patients about their medication compliance, recent blood pressure readings, lifestyle and other health related concerns. Residents were provided with education related to chronic disease states such as diabetes, hypertension, and hyperlipidemia

The implementation and training of pharmacists in this expanded telehealth role can aid in the goal of delivering high quality care while reducing inherent costs. This approach is specifically useful in providing care to rural populations throughout the Pacific region. There are, however, several legislative and procedural barriers that prevent pharmacists from fulfilling this role. These barriers include the identification of pharmacists by payers as “auxiliary personnel” and the requirement for pharmacists to be tied to a Medicare-eligible provider to bill for services. Appropriate pharmacist-driven telehealth models are already in place at several institutions. A shortage of resources, coupled with other burdens of the ongoing pandemic necessitate a change in the healthcare model to one that includes resource and workflow changes that further involve pharmacists as healthcare providers improve patient care during COVID-19 and beyond it. It is also important that educational institutions keep pace by providing opportunities for students to participate in these emerging roles and workflows.

Authors' Affiliation:

- Daniel K. Inouye College of Pharmacy, University of Hawai'i at Hilo, Hilo, HI

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