

## ACCP WHITE PAPER

Providing Comprehensive Medication Management in  
Telehealth

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The goal of this white paper is to provide direction for clinical pharmacists providing telehealth. Telehealth care is rapidly emerging to improve patient access to health care and optimize patient health outcomes. With the increasing ability to access electronic health record portals, as many as 75 million telehealth encounters are expected in North America annually. Although electronic “point of access” undoubtedly increases the use of medical and pharmacy services, the real value of telehealth lies in improved access to patients in remote areas lacking adequate medical and pharmacy services and to high-risk patients requiring frequent monitoring. This document is intended to serve as a guide for those interested in or already using telehealth to provide direct patient care. Specifically, it focuses on general concepts of telehealth and demonstrates how the delivery of comprehensive medication management (CMM) by telehealth aligns with the *Standards of Practice for Clinical Pharmacists* set forth by the American College of Clinical Pharmacy. Although clinical pharmacists must be appropriately credentialed and privileged to provide CMM, their process of care must also be adapted to suit the remote patient. Patient assessment, evaluation of medication therapy, development and implementation of a plan of care, follow-up, monitoring, and documentation of all processes of care are influenced by the technology available, the collaborations established, and the applicable regulations and requirements for telehealth practice.

**KEY WORDS** telehealth, clinical pharmacy, collaborative drug therapy management, clinical pharmacist, comprehensive medication management, direct patient care, technology.

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Telehealth is the use of electronic information and telecommunication technologies to provide long-distance health care and education to patients.<sup>1</sup> Telehealth strategies are used to provide patient care services and optimize subsequent outcomes from a distance.<sup>2, 3</sup> Key terms related to telehealth are defined in Table 1.<sup>1-7</sup>

The incorporation of telehealth patient care services into geographically limited settings is an efficient use of health care professionals' time, resources, and expertise. In addition, telehealth may promote cost savings by decreasing hospitalizations, assisting in transitions of care, or reducing transportation costs for both the patient and the health care professional. Overall, telehealth expands patient access to care.

Although separated by distance, clinical pharmacists can engage in and provide comprehensive

Table 1. Key Terms in Telehealth

Telehealth <sup>1</sup>	Use of technology to deliver health care, health information, or health education at a distance
Telemonitoring (remote patient monitoring) <sup>4</sup>	Use of digital technology to collect medical and other forms of health data from individuals in one location and electronically transmit that information securely to health care providers in a different location for assessment and recommendations Examples include blood pressure, blood glucose, electrocardiogram, fluid status, INR, oxygen saturation, pulse, spirometry, temperature, and weight
Store-and-forward (asynchronous) <sup>5</sup>	Electronic transmission of medical information such as digital images, documents, and prerecorded videos through secure e-mail transmission Examples include MRIs, X-rays, photos, and patient data
Video conferencing (synchronous) <sup>6</sup>	Two-way interactive audio-video technology to connect users in a live, real-time, face-to-face encounter Examples include videoconferencing stations, videoscopes, and web cameras
Distance (hub) site <sup>2</sup>	Site at which the licensed practitioner delivering the service is located at the time the service is provided by telecommunications system
Originating site <sup>2</sup>	Location of the patient at the time the service occurs by a telecommunications system
Interoperability <sup>2</sup>	Ability to exchange data between systems or devices, allowing for interpretation of shared data

medication management (CMM), as outlined by the American College of Clinical Pharmacy (ACCP) *Standards of Practice for Clinical Pharmacists (SOP)*<sup>8</sup> through remote monitoring and/or real-time encounters in conjunction with in-person visits as deemed necessary. The goal of this white paper is to provide guidance on how clinical pharmacists can provide CMM within an interprofessional telehealth care team.

### Clinical Pharmacist Qualifications

Clinical pharmacists are licensed professionals who have completed accredited postgraduate clinical training (or obtained equivalent postgraduate clinical experience), have achieved board certification in a Board of Pharmacy Specialties (BPS) clinical specialty [if available], and are practicing in team-based, direct patient care environments.<sup>9</sup>

This definition and the associated qualifications for practice do not change because care is delivered through telehealth services. Most clinical pharmacists achieve CMM competence by acquiring additional knowledge, skills, and experience during postgraduate clinical training, but competence can also be obtained and enhanced through clinical practice.<sup>9</sup>

Providing direct patient care in telehealth settings requires additional specialized skills and proficiencies. Achieving the knowledge and experience with the technology and systems used—and gaining the ability to effectively communicate using these systems—is essential (see Table 2). Knowledge of the laws regulating telehealth use, including interstate delivery of care and state licensure requirements, is a prerequisite for any clinical pharmacist delivering this type of care. Clinical pharmacists may gain this knowledge through on-the-job experience, but

Table 2. Technology Requirements for Telehealth

Patient	<ul style="list-style-type: none"> <li>• Motivation to adhere to monitoring and telehealth visits</li> <li>• Ability to maintain and operate devices</li> <li>• Telephone and Internet access preferred; at minimum, a reliable telephone connection</li> <li>• Insurance coverage or other means for reimbursement</li> </ul>
Telehealth Team	<ul style="list-style-type: none"> <li>• Infrastructure to support telehealth services with the patient and remote health care professionals</li> <li>• Ability to print and mail information to patients who lack Internet access</li> <li>• Knowledge of the availability, features, and limitations of remote monitoring devices</li> <li>• An EHR or alternative mechanism to transfer data and care responsibilities among team members</li> <li>• Data sharing and trust agreements in place</li> <li>• Adherence to HIPAA regulations to ensure confidentiality of patient information</li> </ul>
Clinical Pharmacist	<ul style="list-style-type: none"> <li>• Knowledge of the features and limitations of remote monitoring devices</li> <li>• Ability to access monitoring data, manage alerts, and input plans into the EHR</li> <li>• Adherence to HIPAA regulations to ensure confidentiality of patient information</li> <li>• Data sharing and trust agreements in place</li> </ul>

EHR = electronic health record.

as telehealth expands in scope and delivery, professional degree and postgraduate training programs are expected to incorporate telehealth experiences into their formal education and training experiences.

### Process of Care

#### General Concepts

Clinical pharmacists providing CMM through telehealth to optimize patient outcomes use the

same process of care as in traditional in-person patient–pharmacist encounters.<sup>4</sup> However, to ensure appropriate payer coverage of telehealth services, many issues must be addressed, including maintaining patient safety and privacy, protecting the patient–pharmacist relationship, and enhancing communication and coordination of care. These issues align with the American Medical Association’s *Report of the Council on Medical Service* on payment and coverage of telemedicine.<sup>10</sup>

Protecting the patient–pharmacist relationship is of utmost importance when deploying telehealth technology. Clinical pharmacists should facilitate clear communication through proper use of tele- or videoconferencing. When arranging synchronous telehealth encounters (either video or telephone based), clinical pharmacists must ensure that patients are in a private and secure area. If additional technologists or assistants are needed in either the originating or the distant site, the patient must be made aware of this and authorize their presence.<sup>11</sup> Proper lighting must also be ensured, and camera placement and angle must provide clear visibility of the patient’s face and allow for adequate eye contact.<sup>11</sup> Regardless of the technical challenges involved, patients express satisfaction with telehealth when the health care professional is focused on providing care rather than technology.<sup>12</sup>

Although asynchronous delivery of CMM may be possible through texting or e-mail, real-time interaction is preferred to allow for a thorough collection of subjective patient data, including medication-taking behaviors, adherence, and identification of medication-related problems. In addition, some states require real-time encounters to receive compensation for telehealth services.<sup>10</sup> Whether communicating asynchronously or in real-time, the clinical pharmacist, in conjunction with the other health professionals on the team, must always use clinical reasoning and astute communication skills to identify the patients who require escalation of care or in-person assessment.

#### Assessing the Patient and Evaluating Medication Therapy

Clinical pharmacists providing CMM by telehealth technology should ensure that patient assessment and evaluation of medication therapy are achieved in accordance with the SOP.<sup>8</sup> Although preparing for the telehealth patient

encounter is similar to preparing for a typical daily practice of in-person care, several additional steps unique to a distance encounter are necessary. First, patients participating in telehealth clinical pharmacy services must complete a telehealth informed consent that explains the technology, mode of transmission, level of security, need for sharing of the patient’s information with other members of the care team, limitations of telehealth encounters and e-prescribing, after-hours/on-call expectations, and expected turnaround time for follow-up communications between the pharmacist and the patient. The consent form must be maintained in the patient’s electronic health record (EHR), and the patient should be provided a copy.<sup>13</sup>

Second, the clinical pharmacist should retrieve patient data from the EHR, patient medical records, remote monitoring data, and any available facsimile or secure e-mail communications. Clinical pharmacists participating in telehealth can remotely obtain a complete medication history from the patient or caregiver by identifying the patient’s current medications, medication-taking behaviors, adherence, allergies, attitudes, and medication experience. Finally, the clinical pharmacist should organize and interpret these data to develop a prioritized problem list and detail the patient’s medication-related needs.<sup>8</sup>

#### *Technology Requirements for Assessing the Patient and Evaluating Medication Therapy*

Telemonitoring has been used to assess a patient’s health status and progress toward clinical goals. In some cases, patients use remote medical devices that transmit data directly to an electronic portal. Others require manual entry using a computer interface, online patient portal, or smartphone before the data can be accessed and assessed by a health care professional.<sup>14, 15</sup>

To be eligible for remote assessment and monitoring, patients must be willing and able to monitor and manage their disease. The initial patient encounter may require either an in-person or in-home meeting to train the patient on appropriate assembly and operation of the monitoring devices and equipment. A reliable Internet connection is preferable, but a telephone connection is essential to provide data transfer for telehealth care. Moreover, high-speed Internet connectivity may not readily be available in rural areas.

Technology should be selected that best meets the patient’s health care needs. Video interaction

in real-time allows for a patient's facial expressions to be assessed, providing additional non-verbal cues regarding his or her health status and understanding of clinical advice. Telepointer technology allows both interactive voice and display of a document or image that can serve as a teaching tool to draw attention to certain aspects of information or images on the screen.<sup>16</sup> However, the reliability and accuracy of the technology require some research before implementation. The American Telemedicine Association website has a directory of telehealth products and services for both health care professionals and patients to learn about devices and/or services.<sup>17</sup>

### Developing and Implementing a Plan of Care

In collaboration with patients, caregivers, and other health care professionals, clinical pharmacists continue to develop and implement plans to optimize medication therapy as a component of telehealth. Clinical pharmacists must collaborate with other health care professionals to determine a process for developing and implementing medication-related patient care plans. They can then apply the process with other health professionals at the originating site or at other remote sites through the EHR. State regulations, collaborative practice agreements, and established lines of communication will determine how the plan of care is implemented. Consistent with traditional in-person encounters, the clinical pharmacist performs CMM to implement a patient-specific therapeutic plan in collaboration with the medical team, recommends appropriate monitoring strategies, and facilitates or carries out needed follow-up. In carrying out this work, the clinical pharmacist should be able to provide verbal education and counseling in real-time to the patient and/or caregiver using synchronous video conferencing.

### *Technology Requirements for Developing and Implementing a Plan of Care*

Health care professionals must be able to communicate and share data through the EHR with members of the patient's primary health team, even if they are located at different institutions. Health information exchange (HIE) is the mobilization of health care information electronically across organizations within a region, community, or health system to improve the ability to access

and share patient-specific health information. In the United States, the Office of the National Coordinator for Health Information Technology can inform clinicians of the status of HIE in each state. Although every state has received funding to modernize HIE, the degree of implementation and functionality varies by state.<sup>18</sup> However, a systematic review published in 2014 found that despite availability, HIE was used in only 2%–10% of encounters.<sup>19</sup> Desired functionality for HIE includes the ability to access and exchange information to coordinate care while increasing patients' access to and control of their own health information.<sup>20, 21</sup> Unfortunately, however, HIEs prevent sharing data with entities outside their controlling network, which limits the ability to assemble a complete EHR.<sup>22</sup>

Safeguards must be put in place to prevent any identifiable patient-specific information from being disclosed through direct access or as it is being transmitted over an electronic network.<sup>23, 24</sup> All points of access to the EHR must use and ensure compliance with safeguards such as encryption and technical policies that restrict access to authorized individuals. Pharmacists accessing sensitive data must be trained to ensure security of the documentation.<sup>23, 24</sup> Every data entry should be time-, date-, and entrant-stamped to ensure accountability and relevant tracking. Data storage available must also be sufficient to facilitate storage of voice, video, and rich-text information and to allow for secure backup of these data. Periodic security scans should be conducted and data entry metrics collected to identify potential high-risk security and compliance violations to facilitate quality assessment and improvement. In addition, technical procedures need to include mechanisms to record and review access to patient health information and to ensure information has not inappropriately been altered or destroyed.<sup>23, 24</sup>

Ideally, information (patient handouts, summaries, and care plans) should be made available to the patient to allow for discussion during an encounter. Then, follow-up educational materials addressing questions that arose during the encounter should promptly be sent to the patient. Secure e-mail is preferred. If facsimile is used, a legible document should be transmitted to reduce the risk of confusion. Instant messaging and texting may be used for limited communication, though these formats limit the amount of text and supplemental material that can be shared.

### Follow-up Evaluation and Medication Monitoring

The clinical pharmacist, in collaboration with other members of the team, should recommend follow-up appointments as often as clinically indicated. Telehealth and remote technologies provide an opportunity to more closely monitor patients, despite distance. The goal is to ensure that monitoring is optimally convenient for the patient. Like in traditional care settings, if a patient uses remote monitoring devices and an abnormal reading is detected, a notification is sent to a preidentified member of the health care team. If further intervention or evaluation is necessary, referral and triage to the appropriate level of care and facility should be recommended. Patients who no longer meet the criteria for telehealth must be referred for a traditional, in-person visit with the health care team.<sup>25</sup>

A patient may be receiving telehealth services outside a traditional health care facility. Therefore, the telehealth team should obtain all medical records and updates of the patient's clinical status and medications before or during the visit. If the patient requires modification to the plan of care, the clinical pharmacist, in collaboration with the telehealth care team, must document that modification and receive written or verbal confirmation of receipt from the traditional facility.<sup>25</sup>

### *Technology Requirements for Follow-up Evaluation and Medication Monitoring*

The clinical pharmacist should ensure access to data and alerts from either the remote monitoring device or the EHR that are available to monitor the patient's condition or warn of abnormal values to prompt further investigation of potential problems with the patient's pharmacotherapy.<sup>26-29</sup>

Monitoring devices vary in their modes of recording and transferring patient data. Some older devices incur transmission errors because of electromagnetic interference from other devices. When erroneous results are received by the telehealth care team, an assessment of transmission errors is warranted.<sup>30</sup>

Regardless of the device used, establishing adequate telephone or Internet access with sufficient signal strength should be discussed with the patient to ensure a clear communication channel. Moreover, the patient's monitoring

device, technical skills, and preferences should be thoroughly assessed and continuously monitored.

### Documentation

Documentation of telehealth encounters should be shared with the patient and other members of the patient's care team to facilitate coordination of care.<sup>13</sup> Use of an EHR allows for the management of a patient's medical care and provides the foundation for seamless continuity of care by different health professionals, including pharmacists. A clear process must be in place to document interactions (e.g., remote monitoring, video examinations, and video or telephone conversations) and entry of other health data (e.g., digital images and medical and pharmacy notations).<sup>25</sup> Data from monitoring devices such as electronic scales or electrocardiogram rhythm strip recorders, adherence monitors, video interviews, and physical examinations should also be uploaded into this central EHR system. Health care professionals and patients must have the necessary level of access to this system to optimize the provision of telehealth care services.<sup>25</sup> Although standards of documentation may vary by health care system, the EHR should be standardized with required medical and pharmacy data fields to ensure consistency across all data sources.

An emerging trend in health care today is to ensure increased transparency across all points of health care access. Interoperability of documentation systems will facilitate this within the delivery of telehealth care. An electronic medical record (EMR) is usually specific to a health care system, whereas EHRs are not.

As EMRs and EHRs become more interoperable, transparency and access will increase, leading to more collaboration and better care coordination. In the telehealth arena, the practice of pharmacy will also evolve to better meet the care management needs of high-risk patients and those taking high-risk and high-cost medications. Although documentation is limited, telehealth services managing hypertension, pediatric asthma, and type 2 diabetes have described models to access EHRs effectively when conducting patient visits.<sup>31-33</sup> In addition, the Veterans Affairs (VA) health system was recently awarded funding to develop and implement an interoperable EHR, a paperless claims processing system, and additional telemedicine programs.<sup>34</sup>

Current examples of programs in which interoperability exists between the health plan payer and the medical and pharmacy services regarding access to documents across a system include those developed by Kaiser Permanente, Cigna, and Aetna.<sup>35–37</sup> Adequate communication must be part of the documentation, which determines the patient's eligibility for telehealth services. Current examples of telehealth services with systems that document patient interactions include Teladoc and McKesson's RelayHealth.<sup>38, 39</sup>

All pharmacist–patient interactions should be documented within a prespecified time interval and should include the patient's medication history, active problem list with an assessment of each problem, and plan of care to optimize medication therapy and patient outcomes. These components are commonly communicated in the traditional form of a SOAP (subjective, objective, assessment, plan) note.<sup>8</sup> For payment, clinical pharmacists must also use a platform compliant with pharmacy billing codes and medication therapy management requirements to communicate with the payer—whether working from a paper chart, a clinical decision support system, or a blended model—and ensure that these compensation metrics are periodically updated.

### Collaboration, Credentialing, and Privileging

A collaborative, team-based practice model in telehealth is essential to provide coordinated, patient-centered care. The availability of technology can enhance coordination of care by providing more interactions between the patient and the health care team. Furthermore, the Internet can be key in closing the communication loop between the different members of the health care team managing a single patient's care.

To ensure equitability, patients receiving telehealth services must still have the option to select their health care professional and be assured that their other providers are updated after any medication adjustments. This collaborative approach includes sharing of records as well as clearly communicating the scope of practice.<sup>25</sup> Navigating the infrastructure of care across health systems and providers at several distance locations is crucial for the timely dissemination of patient health information. An emergency protocol must also be in place to ensure timely in-person evaluation of telehealth patients.<sup>25</sup>

Establishing written collaborative drug therapy management agreements with individual physicians, medical groups, and health systems is essential in providing telehealth pharmacy services. The authority to enter into collaborative practice agreements is determined by state law and Board of Pharmacy regulations.<sup>40</sup> Currently, 48 of the nation's 50 states, plus the District of Columbia, have collaborative practice legislation in place.<sup>41</sup> Hence, not all states allow for collaborative practice, which may pose a barrier to the provision of CMM through telehealth practice by clinical pharmacists in some locales.<sup>8</sup> Moreover, despite the widespread enabling of collaborative practice agreements, specific regulatory challenges still exist<sup>42</sup> that may significantly affect CMM delivery nationally and across state lines.<sup>43</sup>

### Possible Costs and Compensation

All telemedicine consultative services must be real-time, interactive, and face-to-face between the telehealth care professional and the patient. Asynchronous “store-and-forward visits” are not covered if there is no direct patient contact.<sup>44</sup> Reimbursable telehealth services include consultations, office visits, and pharmacologic management.<sup>44, 45</sup> Of interest, medication management is considered a billable service by Medicare Part B, but only providers recognized by Medicare may submit for payment.

Compared with Medicare, Medicaid has less restrictive rules for compensation of telehealth services. At this time, telehealth is a reimbursable service in Medicaid programs in all but two states (Connecticut and Rhode Island).<sup>45, 46</sup> Conditions for Medicaid payment depend on the state and site of service, the technology used, and the distance between the patient's home and the clinic or provider's location. More than half of the states allow providers of telehealth services to bill and receive reimbursement by private insurers similar to that for patients seen in-person in the hospital or clinic setting, according to telehealth parity laws.<sup>46</sup> Furthermore, 36 states allow telehealth delivered primarily through interactive video to be billed and reimbursed by Medicaid.<sup>46</sup> However, even if a state allows pharmacists to be reimbursed for CMM services, the pharmacist must consult with the patient's insurance company to confirm coverage. The prevalence of clinical pharmacists providing CMM by telehealth has increased, but

Table 3. Examples of Clinical Pharmacist Involvement in Telehealth Care

Setting	Intervention	Outcomes
DOC <sup>55</sup>	Clinical pharmacist and physician-based telemedicine clinic providing synchronous hepatitis C services in 25 Illinois DOCs	<ul style="list-style-type: none"> <li>• Slightly higher sustained virologic response rates than in the noncorrectional population</li> </ul>
VA integrated health care system <sup>51</sup>	Clinical pharmacist–led, synchronous CVT in CBOCs based on primary care provider referral	<ul style="list-style-type: none"> <li>• Significant improvement in A1C values as well as the overall percentage of patients meeting their A1C goals</li> </ul>
Federally qualified community health centers in Utah <sup>56</sup>	Clinical pharmacist–led diabetes management comparing telemonitoring with usual care	<ul style="list-style-type: none"> <li>• Significant improvements in mean A1C</li> <li>• Improvements that were not statistically significant included blood pressure, LDL, diabetes and HTN knowledge, and medication adherence to antihypertensives</li> </ul>
VA integrated health care system <sup>52</sup>	Clinical pharmacist–managed synchronous CVT in CBOCs for patients in need of anticoagulation services	<ul style="list-style-type: none"> <li>• Therapeutic INR achievement remained stable between CVT and previous face-to-face management with patient satisfaction maintained</li> </ul>
Renal transplant clinic <sup>57</sup>	Physician-pharmacist collaborative practice for asynchronous remote monitoring of HTN in renal transplant recipients	<ul style="list-style-type: none"> <li>• Preliminary results demonstrated a significant reduction in SBP and DBP 30 days after enrollment</li> </ul>
Rural and urban primary care clinics and an urban stroke center <sup>58</sup>	Clinical pharmacist served as a remote care coordinator for asynchronous remote monitoring of diabetes, HTN, and lipids	<ul style="list-style-type: none"> <li>• Significant improvements in mean A1C, SBP, and LDL</li> <li>• Improvements that were not statistically significant included knowledge of diabetes and medication adherence</li> </ul>
DOC <sup>53</sup>	Clinical pharmacist, physician, and case manager–based telemedicine clinic providing synchronous HIV services in 25 Illinois DOCs	<ul style="list-style-type: none"> <li>• Significant improvement in rates of virologic suppression and immunologic function</li> </ul>
VA integrated health care system <sup>59</sup>	Clinical pharmacist–managed home telehealth program using remote monitoring for poorly controlled type 2 diabetes	<ul style="list-style-type: none"> <li>• Although no significant reduction in A1C from baseline to 6 mo, the telehealth group achieved lower mean A1C values at 3 mo and 6 mo than did the non-telehealth group</li> <li>• Significantly more individuals in the telehealth group (69%) achieved an A1C &lt; 7% than in the non-telehealth group (36%)</li> </ul>
Tertiary referral academic medical center <sup>60</sup>	ePharmacy provided synchronous clinical pharmacy services to the adult intensive care unit during the overnight hours	<ul style="list-style-type: none"> <li>• Significant increase in daily sedative interruptions</li> </ul>

CBOT = community-based outpatient clinic; CVT = clinical video telehealth; DBP = diastolic blood pressure; DOC = Department of Corrections; HTN = hypertension; LDL = low-density lipoprotein cholesterol; SBP = systolic blood pressure; VA = Veterans Affairs.

challenges remain with compensation for clinical pharmacy services.

### Professional Development and Maintenance of Competence

Clinical pharmacists who provide CMM by telehealth are responsible for continued professional development and maintenance of competence in emerging, long-distance practice. Consistent with the ACCP *Clinical Pharmacist*

*Competencies*, practitioners engaged in CMM in team-based, direct patient care environments must maintain competence in direct patient care, pharmacotherapy knowledge, systems-based and population health, communication, professionalism, and continuous professional development (competencies). When adding remote technologies for delivering CMM, clinical pharmacists must maintain these competencies to provide care to patients as members of the interprofessional patient care team and

assume responsibility and accountability for optimal medication-related outcomes.<sup>47</sup>

The knowledge and skills necessary to deliver CMM through remote technologies may be acquired and enriched through formal or informal education and training related to telehealth. Telehealth professionals should be able to use remote technologies (hardware and software), recognize and adapt to the drawbacks of remote technologies, establish a communication network with other health care professionals, and apply recognized standards to the use of chosen telehealth technologies.<sup>48</sup>

### Professionalism and Ethics

Telehealth adds additional complexity to the fiduciary relationship between the clinical pharmacist and the patient. The centerpiece of this relationship is the pharmacist's commitment to represent patients' interests and provide them with the best available care. Lack of an in-person interaction introduces additional requirements for pharmacists to consider. First, telehealth broadens the patient population to include patients of strikingly different backgrounds, beliefs, and circumstances, including patients who are incarcerated or institutionalized. As clinical pharmacy care expands, it is essential to remember that the fiduciary relationship extends to all patients. Second, the use of technology in telehealth requires pharmacists to be aware of unique factors such as cybersecurity and encryption, given that data hacks and leaks are becoming increasingly common. The ability of telehealth to improve patient outcomes may be overshadowed by fears regarding the unauthorized release of protected health information. Working within a system that minimizes the risk of loss of patient confidentiality is a critical component of maintaining a fiducial relationship with the patient.

### Research, Scholarship, and Other Responsibilities

Research and scholarship will be especially crucial to the acceptance and success of telehealth as the field continues to grow. Going forward, pharmacists may be asked to take on additional roles as teachers, mentors, and advocates for telehealth, sharing their experiences with colleagues, trainees, and students. Currently, the Accreditation Council for Pharmacy

Education standards do not address the inclusion of telehealth in the professional degree curriculum.<sup>49</sup> To be prepared for the expansion of telehealth care opportunities, schools of pharmacy and residency programs should begin to include telehealth within required curricula.

### Implementation

Clinical pharmacists should identify opportunities to engage in telehealth activities. Current examples of telehealth programs with clinical pharmacist involvement include cardiology,<sup>50</sup> diabetes,<sup>51</sup> and anticoagulation<sup>52</sup> in the VA and HIV and hepatitis C in the Department of Corrections.<sup>53, 54</sup> Table 3 provides information on settings where clinical pharmacists have successfully implemented and used telehealth care practices.<sup>51-53, 55-60</sup> With the continued expansion of telehealth, development of postgraduate training programs will likely follow.

### Conclusion

At this writing, telehealth guidelines are only beginning to emerge and change the environment of virtual patient care. Through the provision of telehealth, clinical pharmacists can meet the ACCP SOP and provide CMM to patients who would otherwise not receive care because of geographic, financial, or logistical limitations. Patients may require in-person encounters for an initial assessment if the acuity of their disease changes or the telehealth equipment or technology fails. Even with these limitations, however, telehealth technologies provide an opportunity to increase patients' access to health care and improve clinical outcomes. Given that distance practice and technology continue to grow, this white paper provides a framework for clinical pharmacists who wish to deliver CMM by telehealth in their own practice settings in accordance with the ACCP SOP.

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