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ACCP WHITE PAPER

Impact of remote delivery of clinical pharmacy services on health disparities and access to care

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Abstract

The use of technology to deliver remote clinical pharmacy services can help broaden the patient reach and improve health-related outcomes, especially for individuals residing in rural locations. However, it can also promulgate health disparities and inequities, hindering access to care for vulnerable patient populations such as those with a lower socioeconomic or literacy background. This dichotomy of effect requires a thorough examination to create solutions that eliminate inequities. The 2021 American College of Clinical Pharmacy Public and Professional Relations Committee has developed this white paper to examine the potential impact of remote delivery of clinical pharmacy services on health disparities and access to care and proposes solutions and calls to action for clinical pharmacists to address these areas.

KEYWORDS
clinical pharmacy services, health disparities, telehealth, telemedicine

1 | INTRODUCTION AND PURPOSE

Over the past 2 decades, emphasis has been placed on improving both access to and quality of health care. In particular, the use of technology has been a propellant for change in these areas and an effective advancement in the infrastructure of health care delivery, including clinical pharmacy services. The American College of Clinical Pharmacy (ACCP) has provided a framework for the implementation, delivery, and evaluation of comprehensive medication management via telehealth models which aligns with the standards of practice for clinical pharmacists.[1,2] In recent years, however, the use of remote care delivery has shed light on underlying health care disparities in which barriers to access and quality remain heightened and, in some cases, worsened.[3] Attention toward rectifying these disparities is needed, especially during the coronavirus 2019 (COVID-19) pandemic. One of the foundational principles and goals of Healthy People 2030 is to achieve improved health and well-being for all individuals by eliminating disparities and promoting health equity and literacy.[4] To meet this goal, a thorough examination of current health care disparities, including the impact of remote delivery, is needed.

In this white paper, the 2021 ACCP Public and Professional Relations Committee addresses (1) disparities and gaps in access to health care, in general, and clinical pharmacy services, in particular;

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(2) benefits and barriers to the use of remote services; (3) examples of remote care delivery practice models addressing access and disparities; and (4) potential solutions and calls to action to address access and disparities in the digital era.

2 | DISPARITIES IN HEALTH CARE

Health disparities are differences in health outcomes among population groups as defined by race, ethnicity, sex, sexual orientation, gender identity, age, educational attainment, disability status, socioeconomic status, and geographic location.[5] Health care disparities are differences between population groups in access to and availability of health care facilities and services and variations in quality, patient experience, and effectiveness of care and outcomes.[3,4] Discussions on health and health care disparities often overlap those addressing patients with low health literacy. Almost 9 of 10 adults have low or limited health literacy, defined as difficulty finding, understanding, and/or using health information, and thus lack the necessary skills to effectively manage their conditions.[6-8] Rates of low health literacy are higher among population groups with lower education, lower socioeconomic status, limited English proficiency (LEP), and older age and those receiving socioeconomic assistance or public health coverage.[6-8] Low health literacy is also associated with higher mortality, higher hospital readmission rates, poor management of chronic conditions and general well-being, poor drug adherence, and increased drug errors.[6-8]

Both patient- and provider-related barriers can significantly contribute to health and health care disparities, which can in turn influence patients' perceptions of care and negatively affect health outcomes, especially in vulnerable groups. Regarding patient-related barriers, racial and ethnic minority groups have higher inpatient mortality rates from severe acute respiratory failure,[9] acute myocardial infarction,[10] and sepsis than non-Hispanic Whites.[11] Sexual minorities neither see nor receive health care services as often as heterosexual patients because of factors such as perceived discrimination, prejudice, poor provider-patient experiences, lack of culturally competent providers, potential harassment in medical settings, and lack of insurance coverage.[12-17] Geographic location further contributes to disparities in access to care. Individuals with limited access to specialty and subspecialty health care services, or who live in rural and remote areas, are at a higher risk of mortality.[18,19] This is attributed to socioeconomic disparities, increased number of uninsured individuals, limited transportation, increased prevalence of chronic disease, poor health-related behaviors such as smoking and decreased physical activity, and inability to afford the cost of health care services.[20,21] Furthermore, studies have shown that one in five adults experience provider-related barriers both before and after reaching their primary care provider.[22,23] These barriers include difficulty scheduling appointments, lack of available physicians, unclear explanations, cost of services or drugs, insufficient coordination after the appointment, lack of early appointments, inadequate time spent by the provider with the patient, and type and cost of insurance coverage. Patients who experience one or more of these barriers are more likely to resort to emergency care.[22-24] Furthermore, language barriers, cultural incompetence, ineffective communication, and lack of patient involvement in the decision-making process are barriers to seeking preventive health care services, screenings, and palliative or hospice care and adhering to therapy.[22,25-28]

Patients with LEP who have difficulty reading, understanding, writing, or speaking English are more likely to have poor outcomes and poor drug adherence.[29] Providing language-concordant care to patients with LEP has been associated with improved disease management, adherence, and outcomes and decreased hospitalizations.[25,26,28-31] In addition, the type of language services provided correlated with health outcomes. For example, people with diabetes who met with language-concordant providers at all of their visits had fewer hospitalizations and emergency department visits.[26] Providing interpreters and educational services and/or changing to language/race-concordant providers increased cancer screening rates for breast cancer, colorectal cancer, and cervical cancer among patients with LEP.[31] However, providing these interventions did not address inequities across all races, which highlights the individualized needs of patient populations.[30,32]

3 | DISPARITIES IN CLINICAL PHARMACY SERVICES

Disparities in health care persist in the provision of pharmacy services. Pharmacists' awareness of their own identities can inform how they perceive and understand their patients. Studies exploring sociodemographic determinants affecting access to pain drugs found that Michigan and New York pharmacies in low-income and non-White neighborhoods were less likely to stock opioid analgesic drugs, potentially contributing to inadequate pain management in minority groups.[33,34] In addition, evidence suggests the pervasiveness of preconceived biases among pharmacists toward marginalized groups such as patients with mental illness, HIV/AIDS, and illegal injectable drug use.[35] These examples highlight the need for pharmacists to evaluate their own explicit and implicit biases. Pharmacists must also recognize inherent stereotypical and prejudicial beliefs that might affect care and contribute to health disparities.[35] Other studies show that racial bias may influence how a pharmacist engages with patients seeking the purchase of nonprescription syringes[36] or that religious bias may affect a pharmacist's attitudes toward individuals seeking emergency contraception.[37]

Less overt or implicit bias can also determine a pharmacist's perceptions and interactions with patients. Evidence of implicit bias has largely been studied in health care professional students. In one study, Hispanic and non-Hispanic Black pharmacy students scored higher on measures of cultural competency than non-Hispanic White pharmacy students.[38] In the same study, results of an implicit association test showed that health care professional students (medicine, nursing, and pharmacy) of all races and ethnic groups had an implicit preference for White individuals over Black individuals and light-skinned

individuals over dark-skinned individuals.[38] Although national pharmacy organizations endorse the integration of cultural competency into pharmacy education, more work is needed in this area.[39-44] When health patterns are standardized to the dominant groups of interest for efficient diagnosis and treatment, stereotypical views that disadvantage marginalized groups may be perpetuated, sustaining health disparities.[35]

Pharmacists' potential lack of awareness of health inequities and their own personal biases and inexperience with marginalized groups may contribute to the pervasiveness of health care disparities seen in pharmacy practice, particularly in racial and ethnic minorities, rural communities, patients with low socioeconomic status, and patients with low health literacy and/or LEP. For example, Black and Hispanic patients nationwide are less likely to receive the influenza vaccination than non-Hispanic Whites.[45] In addition, the lack of multilingual drug information has been documented in pharmacies with large populations of patients with LEP.[46] Female and White pharmacists were less likely than male and Black pharmacists to perceive the benefit of providing prostate cancer education in predominantly Black communities.[47] These are only a few examples of how the prevalence of health care disparities observed in pharmacy practice can contribute to suboptimal care, drug risks, and worse outcomes.

4 | REMOTE CLINICAL SERVICES

Telehealth is the delivery of health care services by health care providers, where distance is a critical factor.[48-50] Telehealth uses information and communication technologies to exchange information for the diagnosis, treatment, and prevention of disease; research and evaluation; and continuing education in the interests of advancing the health of individuals and their communities.[1,2] The terms *telemedicine* and *telehealth* are often used interchangeably.[48] Table 1 contains key definitions related to remote clinical services, including telehealth and digital health.

The broad scope of digital health includes categories such as mobile health (mHealth), health information technology, wearable devices, sensors, telehealth and telemedicine, and personalized medicine.[51] Digital health is consumer focused and allows new data sources to connect with health systems.[52] Examples of digital health include mHealth apps, smartwatches, home oxygen monitoring, artificial intelligence with data analytics to interpret raw data, and exercise monitoring.[52,53] Examples of digital health in clinical pharmacy include dose calculators, drug adherence apps with or without sensors in drug storage devices, sensors on inhalers, and Internet-enabled blood glucose monitoring and smart-technology insulin pumps.[54] Levels of evidence to support digital health technologies and devices vary.[53] Use of remote health care delivery has several well-documented benefits for patients, providers, practices, and payers. However, barriers to this mode of health care service can also affect its usefulness. An overview of the benefits and barriers of the remote health care delivery model for each stakeholder is provided in the text that follows and summarized in Table 2.

TABLE 1 Key definitions of remote clinical services

Telemedicine/ telehealth	Delivery of health care services by all health care professionals, where patients and providers are separated by distance[48]
Synchronous	Real-time telephone or live audio-video interaction, typically with smartphone, tablet, or computer[49]
Asynchronous	Store-and-forward technology where messages, images, or data are collected at one point in time and interpreted or responded to later[49]
Remote monitoring	Direct transmission of a patient's clinical measurements to the patient's health care provider from a distance (may or may not be in real time)[49]
Virtual check-in	Brief communication service with practitioners and established patients through several communication technology modalities, including synchronous discussion over a telephone or exchange of information through a video or image[50]
eVisit	Communication between patient and provider through an online patient portal[50]
Digital health	Broad scope that includes categories such as mobile health, health information technology, wearable devices, sensors, telehealth and telemedicine, and personalized medicine[51]
Digital medicine	Evidence-based software and/or hardware products that measure and/or intervene in the service of human health[52]
Digital therapeutics	Digital therapeutic products that deliver evidence-based therapeutic interventions to prevent, manage, or treat a medical disorder or disease[52]

4.1 | Patient benefits and barriers

Remote health care delivery has allowed patients to have improved access to health care, which is especially of benefit for older adults and those living in rural, medically underserved locations. In areas with provider shortages, remote health care delivery can close the health care disparity gap by still allowing patients to obtain optimal medical care and preventive services. For example, in one study, patients in a medically underserved area who received a pharmacist-led blood pressure telemanagement service had greater reductions in blood pressure than the usual care group (71.8% in telemanagement vs 57.1% in usual care; $P = .003$).[55] In addition, a pharmacy specialty service using video telehealth allowed for an average 1.61% hemoglobin A_{1c} reduction ($P < .0001$) and a 26-mmHg systolic blood pressure reduction compared with usual care ($P < .0001$) for older adult patients in a rural area.[56] This telehealth service also provided opportunities for pharmacists to focus on preventive health services, including tobacco cessation, in 42% of its patients.

Remote health care delivery also reduces patients' costs and burdens with work, travel, and child care. This elimination of long-distance travel ultimately allows for improved satisfaction with telehealth services. In one study, a pharmacy video telehealth service

TABLE 2 Benefits and barriers to remote health care delivery

Entity	Advantages	Disadvantages
Patient	• Enhances access to health care • Improves patient satisfaction • Decreases disruption in patient's life • Provides overall disease state optimization and control	• Reduces access because of divide across communities • Decreases engagement in patients with low digital literacy
Provider	• Results in fewer patient no-shows • Streamlines workflow process • Decreases visit times • Further incorporates pharmacists into the health care team • Facilitates the sharing of medical information with patients • Improves work-life balance, leading to less burnout	• Results in loss of face-to-face interaction and physical examination • Increases workflow changes to accommodate telehealth services • Prompts need for credentialing across state lines to meet practice regulations for telehealth
Practice	• Involves fewer overhead costs • Provides opportunity for novel business models • Allows services to be centralized for multiple sites • Eases provider shortages • Poses less risk of spreading infectious diseases • Results in fewer transfers to out-of-network providers/specialists	• Results in large costs associated with starting telehealth services • Requires that other health care staff be trained on implementation of policy
Payer	• Results in fewer emergency department visits and hospitalizations for payer reimbursement • Results in overall reductions in health care costs	• Requires strict policies regarding reimbursement for providers • Prompts concerns that providers may overuse telehealth and drive up costs

resulted in better diabetes control than face-to-face care, reduced the time for patients to have initial contact with a provider by one-half (from 106.3 ± 24.5 days to 46 ± 35.3 days; $P \leq .0001$), and saved patients' travel distance and time (miles averted per patient was 99.5 ± 20.3; average travel time in hours averted was 1.6 ± 0.3).[57] Another study reported that 94% to 99% of patients using CVS MinuteClinic's telehealth service were "very satisfied" with the program, with one-third of participants preferring the telehealth visit to a face-to-face visit.[58]

Although remote delivery of care has many advantages for the patient, potential disadvantages must also be considered, given that some patient populations may be more at risk of being excluded from these services. The digital divide may further be widened as remote health care delivery expands, especially when considering health care disparities. A 2015 American Community Survey on computer and Internet use in the United States reported that, among all households, 22% of Americans did not have a desktop or laptop, 25% did not have a handheld computer such as a smartphone, and 23% did not have a broadband Internet subscription.[59] These numbers increase in all fields for households with owners 65 and older, in nonmetropolitan areas, in Black households, in lower-income areas, and in patients with limited English-speaking abilities. Additional populations, such as patients with disabilities or homelessness, are often left out of discussions regarding the digital divide and health inequities. They may face challenges that inhibit access to care if the delivery of these technology-centric health care services is not intentional in design, implementation, resources, and policies. Decreased access to both broadband services and technological devices to engage in remote delivery of care is a well-documented issue in the disability community.[60] When patients also have intellectual, hearing, or communication disabilities, the divide widens and further affects the quality of care and potential health outcomes. Homeless populations may face their own unique set of challenges when engaging in remote delivery of care. Maintenance of charged technological devices and wireless Internet capabilities can potentially marginalize this population from adequate care. Although using telephones and other digital methods of communication might appear to improve access in these populations, those with communication-related disabilities or homelessness may still find it difficult to engage in simple telemedicine visits.

4.2 | Provider benefits and barriers

Rates of health care professional burnout have continued to grow over the past few years. The COVID-19 pandemic has only exacerbated this issue. One survey of over 15 500 physicians in 2018 showed that 19% of the providers surveyed self-described their symptoms as "clinical depression" and 70% reported "colloquial depression."[61] Studies show that clinician burnout has been associated with an increased risk of medical errors.[62-64] Moreover, health care professionals who experience burnout have higher rates of dissatisfaction with their jobs, leading to higher turnover within organizations.

The use of telepharmacy services can significantly mitigate clinician burnout, and many clinicians are already using such processes to enhance the remote delivery of health care.[65] Clinicians using telepharmacy services have seen a favorable shift in workflow efficiency, including shortened visit times. Eliminating the barrier of travel for patients can also lead to fewer patient "no-shows." With clinicians able to care for patients more effectively, a more meaningful work environment can be provided, further reducing burnout. For some,

remote delivery of care can significantly reduce the time spent and cost incurred when commuting to work. This, together with the greater flexibility in working schedules, offers a more positive work-life balance to combat clinician burnout.

However, patients' relationships with their health care providers have historically been established in person, and the virtual nature of remote delivery presents a new set of challenges. To elucidate this, people with type 2 diabetes were interviewed at a Veterans Affairs (VA) hospital regarding their opinions on their relationship with their health care provider in a virtual setting.[66] Although advantages were discussed, patients mentioned the difficulty of establishing a relationship with their health care provider in a virtual setting. This was coupled with patients noting communication barriers. This strain can be equally shared from the provider's aspect as providers try to establish rapport and trust with their patients. Given the current evolving state of remote care delivery, clinical pharmacists must be well equipped to establish strong patient relationships in a virtual setting. Areas of potential impact include patient adherence, trust, disclosure, drug education sessions, and health outcomes. Training on best practices to improve relationships between patients and health care providers may be necessary to further promote these interactions and improve patient care. Ensuring that communication is not lost in translation through the use of virtual platforms is paramount.

4.3 | Practice site benefits and barriers

Changes to state and federal laws have led to increased insurance coverage for the remote delivery of health care.[67] With increased reimbursement opportunities for remote clinical services, practice sites have been able to create novel business models that can facilitate team-based care, increase revenue, and improve the quality of care for patients.[68]

As these remote health care services become more common, practice sites may require less physical space and, in turn, have lower associated overhead costs. These services have demonstrated significant cost savings to organizations, which may later be reinvested in the form of more practitioners and expanded access to care.[69-71] Remote patient monitoring is the transfer of a series of patient-generated measurements, such as home blood pressure monitoring, blood glucose monitoring, and daily weight monitoring, to the health care team for optimal drug management. These services have been shown to significantly reduce hospital admissions by about 30%.[70] Furthermore, by reducing the number of patients physically gathering in waiting rooms, the risk of spreading infectious diseases is reduced, which has been a critical benefit during the COVID-19 pandemic.

The health care system has long struggled to provide access to high-quality health care in medically underserved areas. Barriers to traditional care in such areas include insufficient patient volume to warrant a particular service, shortage of providers or specialists, and lengthy travel time for patients.[69] By using remote services, practice sites can centralize clinical pharmacist services to cover multiple sites remotely as well as improve access to care for their patients.[55-57] New services allow a single practice site to broaden the radius of care for patients and reduce the risk that patients will transfer to other health systems or out-of-network providers or specialists.

Despite these benefits, however, many costs are also associated with setting up remote health care delivery services. In a systematic review, the most commonly cited barrier to telehealth was cost.[72] Funds must be allocated to provide the necessary technology, bandwidth, staff education, and privacy features for successful delivery. In addition to cost, practice sites must be prepared for any potential breach in patient data. Because private patient information will be transmitted via virtual platforms, maintaining secure networks is essential.

4.4 | Payer benefits and barriers

More insurers are embracing remote health care delivery to reduce the cost of hospitalizations and emergency department visits. The goal of using remote health care delivery to prevent patients from entering more expensive health care settings has led the Centers for Medicare & Medicaid Services (CMS) and other commercial insurances to adopt more favorable reimbursement policies for these services.[73] As a result, patients with heart failure using the MedSentry remote drug monitoring system experienced an 80% reduction in the risk of all-cause hospitalization and length of stay compared with standard care.[73] In another study, the average cost of a telehealth visit was $40-$50 compared with an in-person emergency department visit of $136-$176, translating to an estimated minimum payer savings of $126 per telehealth visit.[74]

Before the COVID-19 pandemic, payers placed significant restrictions on the services covered via remote delivery. For example, Medicare previously only covered services for substance abuse disorder or a co-occurring mental health disorder, acute stroke, and renal dialysis. There have also been limitations in the past regarding what type of provider had the opportunity to bill. However, during the COVID-19 pandemic, Medicare expanded the types of providers and their associated services covered via telehealth (eg, "virtual check-ins").[75] The method of delivery was also expanded under the Coronavirus Aid Relief and Economic Security (CARES) Act to allow for audio-only communications for evaluation and management billing encounters (ie, evaluation and management visits) if covered individuals lacked access to reliable audiovisual technology.[76] Of importance, however, the current list of providers covered under this expansion does not include pharmacists—a continuing area of advocacy for the profession. In addition, some of these provisions are at risk of expiring once the pandemic concludes, likely reintroducing barriers for patients in rural areas.

5 | PRACTICE MODELS ADDRESSING ACCESS AND HEALTH DISPARITIES

There is ample evidence that remote delivery of clinical pharmacy services and remote monitoring are associated with favorable end points for chronic conditions such as diabetes, hypertension, and asthma.[77,78]

A systematic review identified 34 studies that described pharmacy services delivered via telemedicine in the outpatient setting.[77] These services included a wide array of interventions, including postdischarge follow-up, drug counseling, disease state management, remote monitoring, and drug therapy management. Most of the studies used telephones as the main mode of care delivery; other methods of delivery included video consultation, text or electronic messaging, email, and facsimile. Another narrative review also tried to describe additional telemedicine models that specifically used telemonitoring and video; however, the authors of this review identified limited results because of sparsity in data.[78] Nonetheless, most models described in these reviews required the patient to have access to a computer, smart device, telephone, and/or Internet, limiting the widespread application of these interventions and further widening the health disparities gap. Even when devices and Internet are available, limited literacy and challenges with navigating technology may pose barriers to their appropriate and effective use. To overcome these obstacles, innovative strategies are required to ensure equitable care in the digital age.

Using health profession students as extenders of health care services is one approach to consider. At one institution, medical student volunteers helped patients prepare for upcoming telehealth visits through telephone conversations.[79] Students guided patients through multiple technology challenges, including the downloading of smartphone applications and videoconferencing software and the navigation of compatible web browsers. In 1 month, 135 medical students spent 1300 hours to assist 5000 patients. Such a model allows for tailored and individualized instructions that meet the literacy needs of patients. Incorporating a similar model that leverages pharmacy students and technicians could be considered by clinical pharmacists.

It is also important to recognize differences in rural and urban patients' access to clinical pharmacy services. In one study, it was reported that veterans residing in urban environments were more likely to encounter a clinical pharmacist specialist than those in rural areas.[80] Moreover, in this study, almost half received services through telehealth, but few services included the use of videoconferencing. Although traditional telehealth models often describe patients in their homes and clinicians at their health care sites, reformatting telemedicine to include other novel approaches has also successfully been implemented by the Veterans Health Administration.[81] A one-size approach does not fit all practice sites, and the VA Telehealth Hub Program based out of Boise, Idaho, has used different models to meet the varying needs of individual practice sites. In one model, a care team that includes a medical provider, support assistant, psychologist, social worker, and clinical pharmacist is located at one facility, and the patient and nursing staff are located at a second location. In another model, the clinical pharmacist works remotely from the rest of the team and patient. The use of these models since 2014 has allowed six clinical pharmacists to provide clinical pharmacy services to 16 VA clinics in rural areas, reaching over 1200 unique patients for chronic disease state management. Such strategies broaden the reach of clinical pharmacists.[81]

Clinicians can also consider providing care to patients by meeting them in their home and community environments and collaborating with trusted community partners. For example, Black male patrons of barbershops whose barbers encouraged them to meet with clinical pharmacists in the barbershop experienced greater blood pressure reduction than a control group.[82] This is especially important because of the disparity and risk in this subgroup—Non-Hispanic Black men have a higher rate of hypertension-related death than any other racial, ethnic, or sex group. Although this intervention did not include the use of telehealth or technology, it offers a unique approach to interacting with a traditionally difficult-to-reach, low-income patient population. Of importance, it allows clinicians to meet patients in an environment where they feel comfortable and secure—an important element of inclusive care.

6 | POTENTIAL SOLUTIONS AND CALLS FOR ACTION

Addressing health disparities in remote care delivery requires a multifaceted approach to target the current gaps in care, and the perspectives of patients, providers, practice sites, and payers must be considered. Although the COVID-19 global pandemic may have increased the attention on current health disparities and inequities in communities, it is important to recognize the potential of remote care delivery in reaching vulnerable populations. Reducing health care disparities demands the use of several steps to ensure longevity and impact, including coordinated efforts both within and outside health care systems and procured support from public and private sectors.

6.1 | Access to technology

Ensuring access to technology and providing adequate support for using electronic resources are critical. The Accessible, Affordable Internet for All Act, a proposed bill to improve Internet access and affordability, highlights the national need to reduce the digital divide.[83] Investing in the expansion of high-speed broadband infrastructure could drastically improve the ability of those marginalized by the current system to connect with health professionals. Funding opportunities to support concerted telemedicine efforts could certainly help in this area. For example, the COVID-19 Telehealth Program provided $200 million in funding through the CARES Act to help connect patients at home or in mobile locations with health care services.[84] Funding of telecommunication services and devices fell within this scope. However, only two rounds of applications have been available, bringing into question the sustainability of the crucial funding that will be needed beyond the pandemic. Therefore, the 2021 ACCP Public and Professional Relations Committee calls on clinical pharmacists and pharmacy organizations to continue advocating for funding toward this cause at the local, state, and national levels.

6.2 | Use of technology

Although evidence supports the remote delivery of clinical services, the technology used for delivering these services is only effective when clinicians and patients have the knowledge, comfort, and satisfaction to use it. Qualitative research that characterized staff and health care providers' satisfaction and comfort with self-described

"telehealth" training reported a need for extensive training and adequate technology infrastructure before implementation.[85] In addition, medical staff perceive that patients receive a higher-quality care experience when trained on the technology.[86] Leveraging pharmacy extenders, such as students or technicians, to instruct on downloading applications and prepare patients before scheduled visits can also enhance existing services. To address barriers that present in real time, it may also be prudent to have dedicated medical staff trained as "telehealth specialists," per se, when delivering remote clinical services to vulnerable populations.

6.3 | Reimbursement of services

From a payer perspective, clinical pharmacy services have benefits that can lower overall health care expenses. Many examples show the impact of clinical pharmacist services on improving clinical outcomes specifically in underserved populations.[87-91] Considering both the clinical benefit and the cost-effectiveness of clinical pharmacy services, it is necessary to continue to advocate for reimbursement of remote pharmacist-delivered services.[92]

Legislation to extend the current provisions made related to remote clinical services that have been created during the COVID-19 pandemic is a logical starting point. In August 2020, CMS began allowing pharmacists to provide diabetes self-management training remotely.[93] This recent change continues to improve access to evidence-based education and clinical pharmacy services for those living with diabetes. There is also promising legislation aiming to maintain remote clinical services as a covered service beyond the pandemic, specifically HR 7663: Protecting Access to Post-COVID-19 Telehealth Act of 2020. This act proposes that all "telehealth" services remain coverable until 90 days after the end of the public health emergency; however, the Department of Health and Human Services (HHS) secretary can modify/extend these dates.[94] The 2021 ACCP Public and Professional Relations Committee believes this legislation provides the precedent for increased advocacy efforts for pharmacists providing these services to endorse continued coverage of remote clinical services and include pharmacists as eligible practitioners.

6.4 | Implementation support

Current practice sites may require a redesign of their workflows to support telehealth initiatives, either with patients or with providers at a remote location. All patients should be afforded access to a clinical pharmacist, and the use of telehealth allows a single clinical pharmacist working remotely to provide care to a larger network of patients who may be in geographically distant locations.

Health systems and/or pharmacy departments planning to initiate or expand remote delivery of clinical services may benefit from implementation tool kits that include best practices on available platforms, training programs/continuing education, and workflow guidance. Several of these exist, both from the government and the private sectors. The HHS Office of Telehealth has published provider resources with guidance on designing workflow, evaluating software vendors, and establishing billing (https://telehealth.hhs.gov/providers/).[95] Many accountable care organizations provide a tool kit at the request of contracted health systems, underscoring the cost-saving benefits from many of these services.[96] Larger health systems have the opportunity to publish their "best practices" after implementing a remote clinical service program. For example, the Mayo Clinic has described its implementation processes, which has also opened the door for a new vein of implementation science research.[97]

Clearly, evidence describing remote pharmacy services and care delivery to vulnerable populations, such as those residing in rural areas, is growing. However, few articles combine both of these aspects, which should be a priority to determine the effect, establish best practices, and overcome barriers. Therefore, clinical pharmacists and practice sites should be encouraged to disseminate case reports and descriptions of innovative remote services that address health care disparities to both pharmacy and multidisciplinary journals and organizations.

6.5 | Revisiting the pharmacist-patient relationship

The impact of providers in the delivery of care cannot be overstated. Whereas failure to meet a patient's needs may result in patient alienation from the health care system, the establishment of a trusting provider-patient relationship can positively affect care. This includes the appropriate use of interpretive services for spoken communication and translation services for written communication. Discussion of the role of providers in eliminating disparities is certainly not novel, and many of the actions proposed previously, such as increasing workplace diversity, teaching cultural competency, being mindful of differing health literacy levels, and focusing on effective communication, remain pertinent to improving care delivered remotely.[98] In so doing, clinical pharmacists must be able to connect with individuals who look different from them and help foster a culture of inclusivity and belonging. Thoughtful reflection on addressing both explicit and implicit biases and a commitment to professional development within this area are needed.

6.6 | Training future professionals

The growing need for training, resources, and expansion of remote clinical service delivery compels clinician-educators and academic institutions to train health care professionals on providing care using audiovisual technology. A growing body of literature is showcasing curricula associated with remote clinical service delivery, including the development of entrustable professional activities and competency-based assessments using video visits in medical schools.[99] These activities are largely etiquette and process based to assess whether learners can effectively complete tasks such as keeping movements within view of the camera, slowing speech to account for Internet latency, and collecting information from multiple individuals within the same visit. Nursing schools took a similar approach when developing competencies to evaluate their trainees, tying them back to a

framework dubbed "the four P's of telehealth": planning, preparing, providing, and performance evaluation.[100,101] The 2021 ACCP Public and Professional Relations Committee encourages schools and colleges of pharmacy to take a similar approach when developing curricula on delivering telehealth services, including simulation of such encounters. These activities should also be expanded to simultaneously address health care disparities by allowing learners to create innovative solutions that promote access and inclusion.

7 | CONCLUSION

Great strides have been made in the provision of clinical pharmacy services over the years, and the use of technology systems to improve care delivery has been an instrumental advancement. However, the use of technology has also shed light on the growing gap in caring for vulnerable populations, especially those with limited access to services. Clinical pharmacists, the care team, health care organizations, and government agencies must be thoughtful in their approach to remote care delivery to prevent perpetuating health and health care disparities and widening inequities and gaps in care. Increasing access to technology, ensuring its appropriate use, securing reimbursement for services, using sound implementation strategies, investing in the relationship between clinicians and patients, and supporting the training of future health care professionals in these areas are initial steps to overcoming barriers to the use of remote services, improving access to care, and eliminating disparities.

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CONFLICT OF INTEREST

The authors declare no conflicts of interest to disclose.

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