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Community pharmacies and the empowerment of self-care in the United States

Andrew Straw [a], Jenna Mills [b], Rachel Winters [a], Hannah Van de Roovaart [a], Aleda M.H. Chen [a,*]

[a] Cedarville University School of Pharmacy, 251 N. Main St., Cedarville, OH 45314, USA
[b] University of Findlay College of Pharmacy, 1000 N. Main St., Findlay, OH 45840, USA

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ABSTRACT

Background: As part of self-care, patients prevent diseases or conditions, maintain, or enhance their current health status, and address current health challenges. As a key member of the healthcare team, the role of the pharmacist in relation to self-care is important, given the ease of access to pharmacists in a variety of care settings.
Objectives: To describe the structure and function of self-care within community pharmacies throughout the United States (U.S.).
Methods: The literature within the U.S. was reviewed related to self-care definitions and practice, the role and training of the pharmacist, and challenges and opportunities for pharmacists.
Results: Within the U.S., self-care is broader than simply products found in the "over-the-counter" (OTC) section of pharmacies; it includes pharmacists involvement in disease prevention, evaluation and maintenance of current health status, and assistance in managing health challenges. There is growing recognition of the significance of pharmacists in aiding patients in self-care, due to publication of outcomes related to pharmacist-provided self-care support. Accreditation standards require student pharmacists to develop knowledge and competency related to the broadest definition of self-care; resources exist related to curricular content and student evaluation and assessment support. The evolving role of the pharmacist in relation to self-care has presented challenges in terms of recognition and renumeration for services and workload issues. Efforts are currently underway to address these challenges.
Conclusions: Spiraling health care costs, poor health outcomes, and continued health disparities indicate a need to better support U.S. patients on their health care journey, which often begins with self-care. There is a plethora of opportunities for pharmacists to advocate for expanding roles related to self-care, including participation in national efforts to recognize the outcomes of pharmacists in self-care.

1. The structure of self-care practice in the United States

At the beginning of 2023, the United States (U.S.) population numbered over 334 million people.[1] Data from the end of 2021 indicates that health expenditures constituted 18.3% of the gross domestic product (GDP) or $4.3 trillion.[2] National forecasts expect both GDP and health expenditures to grow by 5.1% per year resulting in the increase of health expenditures to 19.6%.[3] The U.S. has historically experienced high health expenditure spending, with the largest health spending as a percentage of GDP since 1982 among all developed countries.[4] The U.S. has a complex mix of private and public insurance options that provide healthcare through a large variety of programs and providers.[2] Without a centralized healthcare system, not all Americans have access to or choose to obtain health insurance coverage; nearly 10% of Americans were uninsured in 2022.[5] Regardless of insurance status, most Americans directly pay towards healthcare costs through out-of-pocket spending, such as premiums, deductibles, and copays. Of the $4.3 trillion in healthcare expenditures in the U.S., out-of-pocket spending accounted for 10% share or $433 billion.[2] Roughly one-third of Americans use tax-advantaged accounts such as a flexible-spending account (FSA) or health-savings account (HSA) to pay for out-of-pocket expenses.[6] The high cost of healthcare and out-of-pocket expenses may orient patients to seek out self-care strategies to help mitigate these costs.[7]

Self-care is broader than simply products found in the "over-the-counter" (OTC) section of U.S. pharmacies. According to the International Self-Care Foundation, self-care includes seven main pillars: knowledge and health literacy; mental well-being, self-awareness, and agency; physical activity; healthy eating; risk avoidance or mitigation; good hygiene; rational and responsible use of products and services.[8] The World Health Organization defines self-care as "the ability of individuals, families and

* Corresponding author.
E-mail addresses: astraw@cedarville.edu (A. Straw), jenna.mills@findlay.edu (J. Mills), rwinters@cedarville.edu (R. Winters), hannahjvanderoovaart@cedarville.edu (H. Van de Roovaart), amchen@cedarville.edu (A.M.H. Chen).

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Table 1
Examples of national self-care initiatives categorized by the seven pillars of self-care.[8]

Agency / Guidance	Knowledge and Health Literacy	Mental Well-Being, Awareness, Agency	Physical Activity	Healthy Eating	Risk Avoidance / Mitigation	Good Hygiene	Rational and Responsible Use
Offices of Disease Prevention and Health Promotion: Healthy People 2030[9]	X	X	X	X	X	X	
Centers for Disease Control and Prevention (CDC)[11] and Office of Women's Health[12]		X	X	X	X	x	
Substance Abuse and Mental Health Services Administration (SAMHSA)[13]		X			X		
National Institutes of Health (NIH)[10]		X	X	X	X	X	

communities to promote their own health, prevent disease, maintain health, and to cope with illness and disability with or without the support of a health worker."[71] Self-care practice within the U.S. follows these pillars and WHO definition[7]; it is more than simply "OTC products" and includes all aspects of health and wellness as noted in the seven pillars. The U.S. does not currently have a national self-care policy or distinct funding for these self-care elements. However, there are several agencies within the U.S. Department of Health and Human Services (HHS) which support and promote self-care initiatives. While Healthy People 2030 is a large national initiative to increase the health of the public,[9] there are multiple other initiatives (see Table 1). Additionally, the National Institutes of Health (NIH) supports research of self-care practices while providing self-care information to the public through wellness toolkits.[10]

In addition to these agencies, some key legislation has improved access to over-the-counter medication. While the Affordable Care Act made provisions for the use of an FSA or HSA to purchase OTCs, a written prescription was required. However, the CARES Act of 2020 expanded this provision to allow patients to use these accounts to purchase OTCs without a prescription.[14] Individual health plans often provide resources for their members that can help to promote self-care practices such as medication therapy and chronic care management programs, wellness programs, and online resources or apps to track their own health-related progress.[7]

2. Community pharmacy and self-care

Community pharmacists have a unique role in the provision of self-care in patients related to all the pillars of self-care. This often involves educating a patient on the seventh pillar of self-care: rationale and responsible use.[8] For example, pharmacists safeguard the use of over-the-counter (OTC) products so patients can maximize benefit and avoid risks.[15] However, the pharmacist has a "key role in providing assistance, advice, and information to address self-care needs," which aligns with the WHO definition of self-care.[71] Community pharmacists are recognized as one of the most accessible healthcare professionals. At least 93% of Americans are living within five miles of a community pharmacy,[16] and patients encounter their local pharmacist nearly twelve times more than their primary care provider.[17] Self-care products, such as OTC medications, are generally patients' first response to minor health issues, with approximately 26 trips to stores annually to purchase products.[18,19] Thus, within the United States, pharmacists are often the first point of contact for patients seeking self-care, whether to prevent or treat disease.

As such, it is crucial for pharmacists to apply their clinical training and recognize when self-care is suitable, or instances when a referral may be warranted. In the U.S., pharmacists use the Pharmacist Patient Care Process (PPCP) as an established standard of patient care.[20] The five steps of the PPCP are outlined in Fig. 1, and accredited pharmacy programs train student pharmacists to utilize these steps as part of self-care patient consultations[21] (discussed later in further detail). The first role pharmacists play in self-care is determining whether a patient is an appropriate candidate for self-care by collecting patient information.[7] Then, they should decide what self-care measures are best suited for the patient (nonpharmacologic strategies across the seven pillars,[8] utilizing OTC products, etc.), and develop a patient-centered plan to ensure the patient has the necessary tools to safely improve their health.[7] Given the importance of knowledge and health literacy as a pillar of self-care, low health literacy can significantly increase the risk of negative self-care outcomes and improper OTC product use resulting in unintentional overdoses or underutilization.[22,23] Estimates vary, but at least one-third of all U.S. adults have basic or below basic health literacy, increasing the risk for adverse self-care outcomes.[24,25] Thus, the role of pharmacists in the self-care provision and education of their patients has become increasingly important in the U.S. as healthcare costs rise and patient needs grow.[7] It is imperative that pharmacists provide clearly communicated patient education to ensure patient understanding of self-care practices, and, subsequently, improve patient outcomes.

The ability for pharmacists to provide comprehensive patient services has expanded in recent years. In many states, pharmacists have "provider

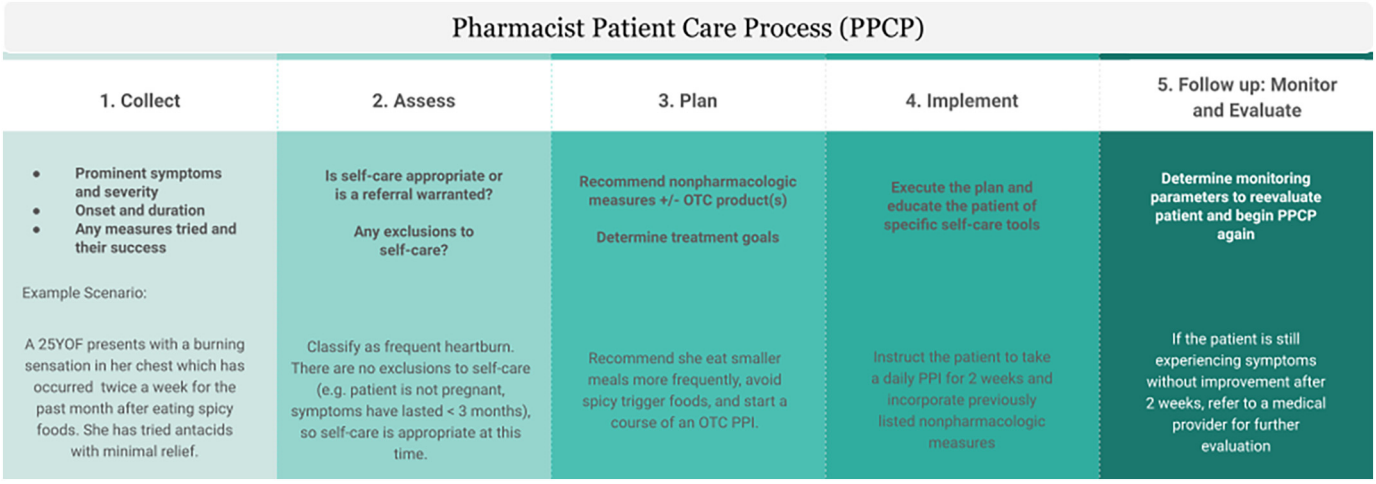

Fig. 1. The role of U.S. pharmacists in self-care within the pharmacist patient care process.[20,26,27]

status," where they can bill for clinical services provided to patients (not just simply for dispensing medications).[16] These expanded roles vary by state but include point-of-care testing for disease state self-management and diagnosis, ability to prescribe hormonal contraceptives and pre/post-exposure prophylaxis for HIV, test-to-treat for infections, and collaborative practice agreements that allow pharmacists to address a broad variety of disease states.[16,28,29] Moreover, the COVID-19 pandemic has prompted additional legislation and opportunity for the community pharmacist, including the ability to provide COVID-19-related testing, treatment, and immunizations. Pharmacists can aid patients in evaluating their risk (Self-Care Pillar 6), monitoring their health outcomes, and identify approaches to manage disease through various elements of the seven pillars of self-care.[8,28] Several pharmacy organizations, such as the American Pharmacists Association (APhA) and American Society of Health-Systems Pharmacists (ASHP), are strongly advocating for additional policies in favor of augmented health care services offered by pharmacists, recognizing the ease of access to and clinical skills of pharmacists within the U.S.[30] These reports do not specifically state "self-care" policies, but address pharmacy-specific services such as point-of-care testing, immunizations, and chronic disease state management which can be considered part of self-care within the U.S.[30] Thus, there is growing recognition of the significance of pharmacists in aiding patients in self-care.

Research efforts have examined the impact of pharmacist services related to self-care. For example, a single community pharmacy in Virginia conducted a study evaluating patient outcomes and satisfaction with pharmacist self-care assistance; reduced medication costs, avoidance of physician visits, and correction of patient selected products all were observed along with high patient satisfaction.[31] Pharmacist educational interventions with parents on how to dose OTC pediatric products improved safe dosing by 58%.[32] Even phone-based support by pharmacists has been found to be beneficial by patients.[33] Outside of OTC drug use, pharmacists continue to demonstrate benefits in providing education and recommendations across the seven pillars of health, including dietary changes, exercise counseling, and wellness leading to significant reductions in hemoglobin A1c, blood pressure, triglycerides, weight loss/body mass index reduction, and waist circumference.[34,35]

3. Preparing pharmacists to aid in self-care

In the U.S., pharmacists are uniquely positioned to assist patients with safe and effective self-care use,[31] which highlights the need to educate and train student pharmacists in this area. Many standards and guidance documents have been published that provide educational institutions with resources for training (see Table 2). The Accreditation Council for Pharmacy Education (ACPE) sets the accreditation standards for pharmacy degree programs in the United States and includes self-care – OTC medications AND non-pharmacological measures related to health and wellness – as a required didactic topic in the curriculum.[21] For example, a student should be able to provide counseling points on dietary changes to address diabetes or hypertension, recommend an OTC product to address a headache, or elaborate on approaches to increase physical activity. Pharmacists are expected to engage in chronic disease management holistically – not only related to medications. Further, in their role, pharmacists assess patients, evaluate the information, and make recommendations or refer to other healthcare professionals – not simply provide information on medication-related components.

More specifically, as it pertains to self-care, students are expected to enter pharmacy practice settings ready to assess patients, determine the need for referral to other healthcare providers, recommend pharmacological products, and counsel on nonprescription products,

Table 2
Integration of self-care within U.S. pharmacy educational standards and recommendations.

Organization	Self-Care Standard or Recommendation
Accreditation Council for Pharmacy Education (ACPE): Standards 2016[21]	Appendix I. Self-Care Pharmacotherapy, defined as "Therapeutic needs assessment, including the need for triage to other health professionals, drug product recommendation/selection, and counseling of patients on non-prescription drug products, non-pharmacologic treatments and health/wellness strategies."
American Association of Colleges of Pharmacy (AACP): Center for the Advancement of Pharmacy Education (CAPE) Educational Outcomes[21,36,a]	2.1 Patient-Centered Care (Caregiver): Related to the steps of providing patient care and recommendations. 2.3 Health and Wellness (Promoter): "Design prevention, intervention, and educational strategies for individuals and communities to manage chronic disease and improve health and wellness." 3.2 Education (Educator): Related to providing patient education, which includes self-care. 3.5 Cultural Sensitivity (Includer): "Safely and appropriately incorporate patients' cultural beliefs and practices into health and wellness care plans." 3.6 Communication (Communicator): Related to effective communication, which includes self-care. 4.4 Professional (Professional): Related to the delivery of patient-centered care, which includes self-care
AACP: Core Entrustable Professional Activities (EPAs)[38]	Patient Care Provider Domain: Related to the steps of providing patient care and recommendations. Population Health Provider Domain: "Identify patients at risk for prevalent diseases in a population." Information Master Domain: Related to providing information to make patient recommendations.
Joint Commission of Pharmacy Practitioners (JCPP): Pharmacists' Patient Care Process[20,b]	A process utilized when recommending self-care – whether medication-related or non-pharmacologic – to patients: • Collect • Assess • Plan • Implement • Monitor
National Association of Boards of Pharmacy (NABP): North American Pharmacist Licensure Examination (NAPLEX)[40]	2 Identify Drug Characteristics 3 Develop or Manage Treatment Plans
American College of Clinical Pharmacy (ACCP): Pharmacotherapy Didactic Curriculum Toolkit[42]	Self-care considerations related to the tiered conditions should be taught. Tier 1 topics are recommended to be emphasized, which include many health conditions that are treated with self-care and nonprescription medications.
Nonprescription Medicines Academy (NMA): Self-care core curriculum[43]	60 self-care contact hours Specific recommendations related to skills and special issues, implemented as stand-alone content or integrated content

[a] Note: The CAPE domains are included as the first four standards of ACPE "Standards 2016."
[b] Note: The PPCP is included as Standard 10.8 of ACPE "Standards 2016."

nonpharmacological therapies, and general health measures.[21] Additionally, the American Association of Colleges of Pharmacy (AACP) Center for the Advancement of Pharmacy Education (CAPE) Educational Outcomes include self-care in several elements[36] (noted in Table 2) related to the seven pillars of self-care.[8] Educators need to assess students' level of achievement of the CAPE outcomes, as these are the knowledge, skills, and attitudes (KSAs) that students should demonstrate by graduation.[36] To aid programs, example performance competencies can be found in ACPE's "Guidance for Standards 2016" document,[37] while example learning objectives can be found in the CAPE document.[36] Additional approaches to evaluating the translation of KSAs into practice, including those related to self-care, can be found in the AACP Core Entrustable Professional Activities (EPAs), i.e., essential pharmacist workplace tasks that all pharmacy graduates are expected to perform without direct supervision before entering practice or postgraduate training.[38,39] More details can be found in Table 2. After receiving their PharmD degree, all U.S. pharmacy graduates must pass the North American Pharmacist Licensure Examination (NAPLEX) to ensure minimum competence to practice pharmacy.[40] Since the early 2000's, nonprescription and prescription medications have been treated with equal importance,[41] and self-care is integrated throughout Competency Areas 2 and 3 in the current blueprint.[40]

Other guidance and standards focus on the process for pharmacists to aid patients in self-care. For example, the PPCP represents a comprehensive approach and consistent process to patient care that can be applied to all pharmacy practice settings, including self-care consultations (see Table 2 above).[20,26] As part of providing self-care within the U.S., student pharmacists are taught the basics of patient assessment. Pneumonics, such as QuEST (Quickly accurately assess the patient, Establish self-care candidacy, Suggest self-care strategies, Talk with the patient) and SCHOLAR-MAC (Symptoms, Characteristics, History, Onset, Location, Aggravating Factors, Remitting Factors, Medications, Allergies, Coexisting Conditions), provide frameworks for pharmacists and student pharmacists to provide self-care consultations and elicit patient information needed to determine self-care eligibility and recommendations.[44] These frameworks are commonly used in U.S. pharmacy education as ideal approaches to teach the process of self-care[45,46] and have been found to be effective approaches to improve students' ability to provide self-care counseling and consistently elicit important patient information.[44]

Since the late 1990's, there has been significant expansion of self-care content within curricula[47]; thus, it can be challenging for programs to prioritize essential self-care components, such as patient assessment, wellness, diet, exercise, OTC medications, etc. Guidance on content can be found through general pharmacotherapy toolkits, such as one provided by the American College of Clinical Pharmacy,[42] or more content recommendations, such as the one from the NMA.[43] Approaches to teaching the content focus on both knowledge and skills, as noted previously.[48] U.S. self-care instruction is delivered using various methods and incorporated in pharmacy curricula in various ways.[43,47–49] For example, self-care material may be presented in 1) a required or elective standalone course, 2) integrated in pathophysiology and therapeutics courses, laboratory and skills-based courses, or experiential learning, or 3) offered in a combined approach.[43,48] These are general approaches to teaching self-care and not necessarily based on self-care theories, models, or frameworks. The number of credit hours spent on self-care content varies between 1 and 6 h, with an average of 3 h[43,50]; more recent estimates are not available. Self-care instructional techniques may include didactic lecture or active learning[43,48,50,51]; active learning-based approaches are gaining momentum as successful approaches to teach self-care,[47] such as team-based learning, case studies, patient simulation, role-playing, among others.[43,48,50–60] The Nonprescription Medicines Academy (NMA) describes a standalone course with active-learning instruction in core curriculum topics as ideal and provides examples of instructional methods, course mechanics, and assessments of student competencies in self-care that can be utilized by programs.[43] Additionally, others have published rubrics to provide tools for assessing student pharmacists' competency in self-care counseling.[45,61]

As part of lifelong learning that is embraced within the health professions, licensed pharmacists are encouraged to enhance their self-care expertise through continuing education.[47] Additionally, the NMA Conference supports self-care instructors in the U.S. through its programming, networking, and mentoring opportunities.[43] Self-care competitions in which students can demonstrate their skills also exist within the U.S.; for example, the Ohio Pharmacists Association Annual Conference typically offers a self-care challenge that is supported by the National Alliance of State Pharmacy Associations (NASPA) and the NMA.[62] Efforts within the U.S. will continue to evaluate best practices to develop lifelong competency in effectively guiding self-care use in patients.

4. Challenges and opportunities with self-care in the U.S

Several challenges must be addressed to move the U.S. forward in the improvement of self-care practice, education, and research. In 2020, the BeMedWise program proposed a roadmap to move self-care forward with six key areas which must be overcome to make self-care a national priority that includes adequately and consistently defining self-care; ensuring self-care is viewed as an essential health element nationwide as well as by health providers and patients; enhancing research efforts, particularly in relation to underserved environments; and the continued advancement of recognizing pharmacists as health care providers.[63]

Some of these challenges and opportunities are directly tied to the evolving identity of the pharmacist in the community. Pharmacist identities have been labeled as apothecary, dispenser, merchandiser, expert advisor, and health care provider.[64] The latter two identities place an emphasis on providing self-care support and resources to patients. With these evolving identities, it is important that pharmacists are equipped to adequately communicate their contribution to take on more patient-care focused responsibilities.[64] Simply put, there has been an expansion in pharmacist clinical responsibilities in the community setting without national adjustments to the definition of the profession. This has created numerous challenges regarding the allocation of time to perform these new duties, adequate financing and billing of these services, as well as staffing. Compounded with the perception of poor working conditions due to workload, long hours, and little to no breaks,[65] community pharmacists have run into many challenges when providing self-care for their patients. While many states are considering or legislating changes in work conditions,[66] this issue is fueled when a pharmacist steps away from their dispensing role to provide self-care services to their patients. To truly optimize a community pharmacist's role in delivering and promoting self-care for their patients, there must be a reallocation of resources and time as well as delegation of dispensing-related tasks. Harnett and colleagues provide further support when they examined the role of pharmacists in the safe and effective use of dietary supplements, an aspect of self-care. They identified the importance of workplace resources for pharmacists to fill this needed role.[72]

One opportunity to address this is by financially supporting pharmacist services through other means – not just dispensing fees. Billable approaches include medication therapy management services or provider status, giving pharmacists the ability to bill for their services, allowing them to prioritize providing self-care consultations to patients. The continued growth of Medication Therapy Management (MTM) services (created by the Medicare Modernization Act of 2003) on a national level gives practicing pharmacists an opportunity to dive deeper into the seven pillars of self-care with each patient. As part of MTM, pharmacists can comprehensively review medications, provide patient education and health coaching, evaluate and address health risks, and address self-care as related to the medications.[67] MTM is somewhat limited in scope and application to self-care, but it is a starting point that is nationally available. Currently, there is no national legislation allowing pharmacists to bill for clinical services; provider status or other approaches that allow pharmacists to bill for clinical services are state- or payor-specific.[68] While there is emerging data indicating the benefit of pharmacist-provided self-care services particularly in underserved communities, as noted previously,[31–35] continued research efforts can further

elucidate this issue and enhance advocacy efforts. Additionally, pharmacists can continue to clearly communicate our role as medication experts to other health professions as well as the public.[64]

Another approach to addressing pharmacist workload is through delegation of dispensing-related tasks – enhancing the pharmacy teams' ability to provide patient care, education, and support related to self-care. Whether through training or advanced certifications, pharmacy technicians can support dispensing services and other activities within the community pharmacy setting, allowing pharmacists to deploy their expertise in other aspects.[69]

Spiraling health care costs, poor health outcomes, and continued health disparities indicate a need to better support U.S. patients on their health care journey, which often begins with self-care. Further, with no national self-care plan, there are a plethora of opportunities for pharmacists to advocate for expanding roles related to self-care. Moving forward, it will be important to involve pharmacists in identifying workable solutions,[70] given their predominant role in providing self-care recommendations, consistent contact with patients, and close proximity to most patients within the U.S. Pharmacy schools and professional organizations will need to continue to implement rigorous education related to self-care to ensure that current and future pharmacists are prepared for this role and have a solid evidence-base.[72,74] Following the models outlined for providing self-care recommendations, such as QuEST and the PPCP[20,26,44–46] or the similar framework outlined by Popattia and La Caze,[73] will ensure that pharmacists provide consistent, safe, effective, and evidence-based patient care. In addition to addressing the changing role of the pharmacist, it will be important for pharmacy to participate in national efforts to recognize the importance of and enhance the provision of self-care. Pharmacists will need to document the outcomes of professional engagement in a variety of self-care, as noted by Harnett and colleagues.[72] Furthering these research efforts to assess the impact of pharmacist-provided self-care interventions and education are important as the profession gains recognition for their ability to positively impact health outcomes.

Declaration of Competing Interest

None.

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