NACDS NATIONAL ASSOCIATION OF CHAIN DRUG STORES

NACDS Recommendations to Inform the Upcoming National Strategy & White House Conference on Hunger, Nutrition, and Health

The National Association of Chain Drug Stores (NACDS) applauds the Biden Administration for your leadership in planning and executing the September Conference on Hunger, Nutrition, and Health. With equity at the core of this initiative, NACDS appreciates the opportunity to provide our feedback and recommendations to reduce hunger, mitigate diet-related diseases, and foster health equity. Our recommendations are informed by our membership.

NACDS represents traditional drug stores, supermarkets and mass merchants with pharmacies. Chains operate nearly 40,000 pharmacies, and NACDS' 80 chain member companies include regional chains, with a minimum of four stores, and national companies. Chains employ nearly 3 million individuals, including 155,000 pharmacists. They fill over 3 billion prescriptions yearly, and help patients use medicines correctly and safely, while offering innovative services that improve patient health and healthcare affordability. NACDS members also include more than 900 supplier partners and over 70 international members representing 21 countries.

NACDS' recommendations are powered by diverse expertise across our collective membership. We leveraged a NACDS Advisory Group focused on exploring health and wellness transformation, comprised of senior level thought leaders from NACDS retail member companies, to vet the draft recommendations that were discussed during two NACDS-hosted listening sessions. The first NACDS-hosted listening session was held on June 23, 2022 to garner feedback from our retail chain pharmacy membership and was attended by 17 individuals representing 9 NACDS retail chain pharmacy organizations. The second session heard from our supplier membership and had participation from 9 individuals across 7 organizations representing food companies, science companies and other health and wellness companies. Together, we developed five recommendations that align with the Conference's pillars.

NACDS' Recommendations Powered by Diverse Expertise Across Our Collective Membership

Recommendation 1: State scope of practice expansion for pharmacists and other healthcare professionals that can move the needle on hunger, nutrition, and health, including for example, point-of-care testing to inform disease prevention and management efforts.

Recommendation 2: Passage of the Equitable Community Access to Pharmacist Services Act (HR 7213) to support Medicare Part B beneficiary access to clinical care delivered by pharmacists.

Recommendation 3: Incentivizing payors to cover health and wellness programs to support better public access to healthcare professionals such as dieticians and pharmacists who can provide preventive and management support for diet-related conditions.

Recommendation 4: Leverage the accessibility and clinical expertise of pharmacists and pharmacies, and other healthcare providers, to participate in existing, national prevention programs for conditions including diabetes (Medicare Diabetes Prevention Program) and cardiovascular disease (Million Hearts Initiative), in addition to future programs.

Recommendation 5: Expand eligibility for the Supplemental Nutrition Assistance Program (SNAP) and the Special Supplemental Nutrition Program for Women, Infants and Children (WIC)

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I. Background - NACDS Membership's Longstanding Commitment to Improving Hunger, Nutrition, and Health

Much of the healthcare industry is aligned toward driving improved quality and health outcomes while reducing costs of care. Some of the most expensive chronic health conditions are also tied to individual behaviors, with opportunities for better prevention and mitigation. Furthermore, health disparities continue to persist and have been emphasized through the pandemic, for minoritized, marginalized, and medically underserved populations. These disparities are compounded by the fact that such communities have higher risks and harms when it comes to health issues and may face barriers to accessing vital healthcare services. And, whether those suffering from chronic conditions get healthier, or get sick in the first place, has a lot to do with their zip code and related vulnerabilities. Our industry is focused on collaboratively driving toward innovative solutions to address these complex challenges.

Across NACDS' membership, chain pharmacy companies and supplier partners are spearheading innovative programs and initiatives to reduce hunger, promote nutrition, advance health, and foster equity. From partnering with local food banks and collaborating with national organizations focused on addressing hunger in America – and exploring evidence-based, person-centered, and cutting-edge approaches to food – to implementing clinical programs that meaningfully address prevention and management of diet-related conditions such as diabetes and cardiovascular disease in communities. NACDS members are leveraging the unique expertise of pharmacists as both medication experts and broader health and wellness leaders in their communities, in tandem with other health professionals, including dieticians and food scientists.

In fact, there is a pharmacy within five miles of 90 percent of Americans. Beyond geography, NACDS members serve as the face of neighborhood healthcare with trust, accessibility, convenience, and equity. A poll of adults conducted March 4-6, 2022, by Morning Consult and commissioned by NACDS found that pharmacies are the most accessible healthcare destinations – they received the highest ratings for ease of access among destinations tested.

Of key importance to your mission:

- **79%** of individuals polled support pharmacists **helping patients prevent chronic disease** such as heart disease and diabetes (45 percent indicate strong support), and
- **79%** also support pharmacists **helping patients to understand their nutritional choices** (43 percent indicate strong support).

Based on NACDS' 2017 Chain Pharmacy Community Engagement Report:

- NACDS chain member companies supported **$630 million** in charitable giving the year prior, plus 1.5 million volunteer hours.
- The report also described activities related to access to affordable medicines and vaccines and preventing diabetes and promoting healthy meals as two of the top-three ranked focus areas.

NACDS Member Snapshots – Hunger

- One NACDS member supports 21 regional food banks across its 10-state area, donating $3 million annually, and more than $46 million over the last 20 years.
- Another NACDS member donates six million pounds of food annually to area food banks, pantries, and shelters.
- In 2017, employees of one NACDS member company volunteered to pack lunch for the Feed my Starving Children, packing 3,000 meals.

NACDS Member Snapshots – Diabetes

- Promoting the advancement of diabetes care, research, and new technology
- Sponsoring diabetes clinics, educating patients, providing patient education resources and materials, with an emphasis on lifestyle, including eating and exercise
- In-store dieticians working in conjunction with area hospitals on joint programs to improve care and navigate nutrition challenges

For more information on NACDS' 2017 Chain Pharmacy Community Engagement Report:

Report Video Website

II. Recommendations - Proposed for Inclusion in the National Strategy on Hunger, Nutrition and Health

Recommendation 1: State scope of practice expansion for pharmacists and other healthcare professionals that can move the needle on hunger, nutrition, and health, including for example, point-of-care testing to inform disease prevention and management efforts.

Key alignment with Pillar 2 to integrate nutrition and health

Specifically, all states should authorize the following scope of practice modernizations, if not yet authorized:

- Pharmacists and their staff to perform all CLIA-waived, point-of-care tests (e.g., A1c, cholesterol)
- Pharmacists to order lab values (e.g., nutrition and vitamin related, disease state markers)
- Pharmacists to initiate relevant drug therapy (e.g., initiate statins in diabetes, ACE inhibitors/ARBs in cardiovascular disease, vitamins for nutritional deficiencies)
- Pharmacists to initiate smoking cessation therapy (Rx and OTC) to support cardiovascular health
- Pharmacists and their staff to administer all recommended vaccinations
- Pharmacists and their staff to administer injectable medications (e.g., vitamin B-12, weight management therapies, high cholesterol medications)

Recommendation 1 - Rationale: Pharmacies are the most accessible healthcare destination, providing key access opportunities for the public to receive various care interventions related to the linkage between nutrition and health. Research continues to demonstrate that patients have more touch points with pharmacies and pharmacists compared to any other healthcare provider. This accessibility offers tremendous opportunity to improve care and foster equity to support nutrition and promote better access to prevention and management for diet-related diseases.

Many pharmacies across the country offer a variety of such services today, including screening, vaccinations, and cardiovascular and diabetes programs. However, in many states, scope of practice restrictions on pharmacists and their staff impede broader ability to offer such interventions in more communities. Therefore, to improve access to evidence-based interventions that can meaningfully improve care for conditions related to hunger and nutrition, **we recommend the White House partner with states to explore**

how pharmacy state scope of practice barriers can be removed to support better health for communities nationwide. As demonstrated most recently during the COVID-19 pandemic - when undue scope of practice barriers are removed, pharmacies can implement creative and effective solutions that reach vulnerable and diverse communities to meet pressing and evolving healthcare needs.

Recommendation 2: Passage of the *Equitable Community Access to Pharmacist Services Act* (HR 7213) to support Medicare Part B beneficiary access to clinical care delivered by pharmacists.

Key alignment with Pillars 2 and 3 to integrate nutrition and health and empower all consumers to make and have access to healthy choices

In addition, the federal government should:

- Collaborate with states to support recognition of pharmacists and dieticians by all payor types, including Medicaid and commercial payors to support better public access to healthcare providers that can support improved nutrition and prevention and management of diet-related diseases.
- Enact the Medical Nutrition Therapy Act (S. 1536) and include pharmacists among the professionals who may refer their patients for MNT when this bill advances or when it is re-introduced in the next Congress.

Recommendation 2 - Rationale: Evidence continues to strongly support the ability of pharmacists to make meaningful and significant impacts on access to care, prevention, and management for diet-related diseases, in addition to addressing social determinants of health and inequities. Please see Appendix for specific research examples. However, the Medicare Part B beneficiaries have limited ability to access clinical care provided by pharmacists because of lacking recognition by the Centers for Medicare and Medicaid Services (CMS) of pharmacists as providers of care. The *Equitable Community Access to Pharmacist Services Act* (HR 7213) seeks to address this issue, thereby improving access and opportunities for Medicare beneficiaries to receive certain pharmacist-provided clinical intervention. Similar challenges exist at the state level across Medicaid and commercial payers as well, limiting access to pharmacist-provided care for broader populations. At the same time, dieticians also face similar challenges at the state level.

In addition, MNT is delivered by registered dietitian nutritionists, including those practicing in the retail setting at NACDS members' locations. While a physician's referral currently is required for a beneficiary to utilize MNT services under Medicare Part B, S. 1536 would empower nurse practitioners, physician assistants, clinical nurse specialists and psychologists to refer their patients for MNT. To further improve access and foster equity, NACDS recommends including pharmacists among the professionals who may refer their patients for MNT when this bill advances or when it is re-introduced in the next Congress. Further, while current law only allows Medicare to cover out-patient MNT services for patients suffering from renal disease and diabetes, this legislation would make MNT available for those confronting prediabetes, obesity, high blood pressure, high cholesterol, malnutrition, eating disorders, cancer, gastrointestinal diseases including celiac disease, HIV/AIDS, cardiovascular disease and any other disease or condition causing unintentional weight loss. MNT has been shown to be part of a cost-effective aspect of prevention and treatment for many of these conditions.

Recommendation 3: Incentivizing payors to cover health and wellness programs to support better public access to healthcare professionals such as dieticians and pharmacists who can provide preventive and management support for diet-related conditions, in addition to addressing social determinants of health and mental health considerations.

Key alignment with Pillars 2 and 3 to integrate nutrition and health and empower all consumers to make and have access to healthy choices

- Pursue policy changes to recognize, cover and reimburse health and wellness services delivered by pharmacy providers to screen and connect patients with diet-related conditions with critical nutrition, prevention and management care, mental health services, and screening for and addressing social determinants of health .
- Consider how to implement plan coverage of "food prescriptions" and food voucher programs for patients with or at risk of diet-related conditions.
- Pursue policy changes to require coverage of nutrition education.
- Integrate pharmacists into existing and future federal value-based care models to promote prevention and management of diet-related conditions.[1]
- Leverage advancements in telehealth to support expanded access to care for nutrition and diet-related clinical interventions (e.g., remove undue barriers by promoting coverage parity, mitigate licensure restrictions across state lines, support broadband access, support audio-only options).
- As coverage expansion takes hold, ensure a robust beneficiary communication and education effort to ensure awareness of new initiatives and resources.

Recommendation 3 - Rationale. Providing patients with holistic care that includes nutrition and wellness services can help improve health outcomes – and especially so for those with diet-related diseases such as diabetes, high blood pressure, high cholesterol, heart disease, and chronic kidney disease (CKD). For example, with patients who have CKD, nutrition management is key in helping to slow progression and manage complications of CKD, yet few patients with this condition receive this care.[2] Connecting patients with nutrition care provides needed direction about disease-specific nutritional needs and empowers them with information to manage and improve their health. Unfortunately, coverage barriers and a general lack of awareness of important nutrition and wellness services means that far too few patients receive this care. Further, a stronger emphasis on prevention can help improve health outcomes, promote better quality of life, and save downstream, unnecessary healthcare spending.

Pharmacy providers, who provide care to patients with diet-related diseases and help them prevent and manage their health conditions, are well positioned to identify and provide additional nutrition services, prevention and management care, and/or mental health services to these individuals on their own or in partnership with other providers (such as dieticians for nutrition needs). Importantly, as healthcare

[1] https://www.nacds.org/pdfs/pharmacy/2021/MedicareMedicaidInnovationMission.pdf

[2] Jimenez EY, Kelley K, Schofield M, Brommage D, Steiber A, Abram JK, Kramer H. Medical Nutrition Therapy Access in CKD: A Cross-sectional Survey of Patients and Providers. Kidney Med. 2020 Nov 11;3(1):31-41.e1.

providers look to help patients address diet-related conditions, they must also consider mental health support. For example, people with diabetes are up to 3 times more likely to have depression, and only 25% to 50% of people with diabetes who have depression get diagnosed and treated.[3]

Better coordination with health plans to support and sustain relevant health and wellness programs, provided by all qualified healthcare providers, including pharmacists and dieticians, can improve broader public access to support prevention, management, and education of nutrition and diet-related conditions. Particularly impactfully programs may include nutrition and diet-related disease programs, coaching, and education to manage and prevent, initiatives to identify and address social determinants of health, mental health screening and support, food pharmacy concepts, and food voucher programs.

To that end, **we recommend that the White House pursue policy changes to require that public and private plans cover health wellness services provided by pharmacists and dieticians in support of patients' nutritional and wellness needs.**

Recommendation 4: Leverage the accessibility and clinical expertise of pharmacists and pharmacies, and other healthcare providers, to participate in existing, national prevention programs for conditions including diabetes (Medicare Diabetes Prevention Program) and cardiovascular disease (Million Hearts Initiative), in addition to future programs.

Key alignment with Pillars 2 and 3 to integrate nutrition and health and empower all consumers to make and have access to healthy choices

Specifically, the federal government should:

- Review existing programs and initiatives to explore opportunities to address gaps and barriers for patients, for example, opportunity to better leverage the accessibility and clinical expertise of pharmacists and other providers (e.g., incentivizing additional inclusion of pharmacists and other providers in such programs)
- Within the Medicare Diabetes Prevention Program, look to mitigate barriers to entry for patients related to testing. For example, authorize pharmacists to order necessary blood tests, and where possible, support the use of CLIA-waived point-of-care tests to promote improved access to care. Key tests include fasting plasma glucose test, the oral glucose tolerance test, and pre-diabetes screening A1c test. Currently, Medicare does not cover the hemoglobin A1c test for pre-diabetes screening.[4] Coverage of this test may also reduce barriers to entry and promote better access to this program.
- Across various programs and initiatives, a multitude of nutrition-related resources, continuing education, and other educational programs for healthcare providers have been developed. The government should undertake efforts to compile these resources for better dissemination and awareness among the healthcare community.

[3] https://www.cdc.gov/diabetes/managing/mental-health.html
[4] https://innovation.cms.gov/innovation-models/medicare-diabetes-prevention-program/faq

- Future federal programs and initiatives could look to develop a standardized nutrition metric that can be measured similar to other vital signs

Recommendation 4 - Rationale: Research continues to support the ability of pharmacists to improve prevention and management of diet-related diseases, especially cardiovascular disease and diabetes, among others. Please see the Appendix for specific research examples. Given this strong evidence base, there is additional opportunity to better deploy pharmacists within existing and future federal programs aimed at improving prevention and care for individuals at risk of or with diet-related conditions. These conditions continue to contribute to high rates of morbidity and mortality, and the entire healthcare continuum should be leveraged to facilitate improved care across the country, especially for underserved populations facing disproportionate challenges to better health. Pharmacies, as the most accessible healthcare settings, can help close some of these access gaps and promote health equity if they are better integrated into such programs and undue barriers are removed to facilitate the role of pharmacists and pharmacies in such programs.

Recommendation 5: Expand eligibility for the Supplemental Nutrition Assistance Program (SNAP) and the Special Supplemental Nutrition Program for Women, Infants and Children (WIC)

Key alignment with Pillar 1 to improve food access and affordability

Specifically, the federal government should:

- Increase the allotment of the WIC and SNAP benefits, which up until last year, had not been increased since 1975.
- Expand WIC and SNAP program benefits to include additional foods as well as a healthy food incentive and/or an imbedded fruit and vegetable allotment, while also considering culturally relevant foods.
- Extend WIC program eligibility to postpartum mothers through the first 2 years following the birth of a child and to children up to age 6 or upon starting school where the child can participate in a school meal program.
- Make permanent the different WIC program allowances and benefit increases that were authorized via waiver during COVID-19, including the provision of nutrition services via telehealth, allowing SNAP beneficiaries to use their benefit for online, electronic grocery purchases and the increased monthly cash value benefit (CVB) for fruits and vegetables.
- Revisit eligibility criteria for SNAP and WIC to remove barriers to entry, including broadening income levels that drive eligibility, eliminating the lifetime ban on convicted felons, and covering more college students, unemployed adults without children and lawfully residing immigrants.
- Simply program eligibility certification requirement by extending the certification requirement to every 2 years.
- Revisit and update the recommended *Dietary Guidelines for Americans* with considerations for the many Americans with diet-related health conditions, and support the development and widespread implementation of a universal food scoring system aligned with the updated dietary guidelines
- Support the public's ability to identify "better for you" foods via on-shelf tags or food labeling
- Provide coverage of lactation services for new mothers under the WIC program.

Recommendation 5 - Rationale: The adage that "food is medicine" is apt. Good nutrition is critical both for disease prevention and management, yet many Americans face challenges accessing foods to meet their specific health and nutrition needs. This problem is compounded among lower income Americans who are at increased risk for chronic conditions like heart disease, diabetes and obesity,[5] and who according to the USDA, tend to eat less nutritious diets.[6] While research shows that the SNAP program helps to reduce poverty for millions, improves food security, and is linked with improved health, there is room for improvement to address current benefit levels that are inadequate for many households, limited SNAP eligibility for vulnerable groups, and general program barriers to SNAP participation.[7] To address this, **we recommend the White House pursue policy changes to modernize the SNAP and WIC programs. These programs should incentivize and support access to more nutritious foods** as this will help to improve health equity, making better nutrition more accessible to lower income individuals who qualify for these programs.

Related to the issue of serving the public's health and nutrition needs, it bears noting that the current *Dietary Guidelines for Americans* makes recommendations for "healthy" Americans but does not address the nutrition needs of many Americans with diet-related health conditions. To better support availability of information that can help the broader population make more nutritious food choices, **we further encourage the White House to direct updates to the existing *Dietary Guidelines for Americans* to address considerations for Americans with diet-related health conditions, as well as pursue development and widespread implementation of a universal food scoring system aligned with the updated dietary guidelines.**

III. Next Steps: NACDS' Ongoing Commitment to Address Hunger, Nutrition, and Health

Pharmacies continue to be at the forefront of accessible, person-centered healthcare delivery. As demonstrated during the COVID-19 pandemic, pharmacies reach vulnerable and diverse populations and play an important role in addressing the most pressing public health problems. We look forward to partnering on the policy ideas outlined. We also have creative ideas on how our industry can partner with government to advance the nation's health more broadly and look forward to future opportunities to collaborate on advancing health and addressing disparities in communities nationwide. We want to be a resource to the White House on this initiative and in your preparation for the Conference.

NACDS looks forward to the upcoming National Strategy on Hunger, Nutrition and Health to be unveiled at the White House's September Conference. Building on the insightful listening sessions held over the last several months, the National Strategy and September Conference will leverage the momentum on these critical issues to turn ideas into actions that support real-world change in communities across the country, especially for those facing disproportionate barriers to overcoming hunger and improving their nutrition and health. NACDS looks forward to supporting the Administration ahead of, during, and after the Conference to execute on the forthcoming National

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[5] https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-health/interventions-resources/poverty

[6] https://www.ers.usda.gov/amber-waves/2008/november/can-low-income-americans-afford-a-healthy-diet/#:~:text=Low%2Dincome%20households%20tend%20to,nutritious%20foods%20than%20other%20households.

[7] Keith-Jennings B, Llobrera J, Dean S. Links of the Supplemental Nutrition Assistance Program With Food Insecurity, Poverty, and Health: Evidence and Potential. Am J Public Health. 2019

Strategy. As a next step, NACDS is hosting a related "NACDS Institute" session at our upcoming Total Store Expo (TSE) to hear from experts and further explore these important topics among our industry.[8]

For any questions or further thoughts, please contact NACDS' Sara Roszak, Senior Vice President, Health and Wellness Strategy and Policy at sroszak@nacds.org or 703-837-4251.

[8] https://tse.nacds.org/event/nacds-institute/

Appendix Chart Examples of Evidence: Value of Pharmacist-Provided Care	
Result of Pharmacist Intervention	**Source**
Preventive Care	
This umbrella review included 13 research syntheses, finding that the provision of preventive services at community pharmacies is shown to be effective at **increasing immunization rates, supporting smoking cessation, managing hormonal contraceptive therapies, and identifying patients at high risk for certain diseases.** Community pharmacies offer an ideal venue for the **provision of preventive services** due to their convenient location and extended hours of operation.	San-Juan-Rodriguez A, Newman TV, Hernandez I, et al. Impact of community pharmacist-provided preventive services on clinical, utilization, and economic outcomes: An umbrella review. Preventive Medicine. 2018. https://www.ncbi.nlm.nih.gov/pubmed/30145351
Pharmacist-provided Annual Medicare Wellness Visits are comparable to those provided by physicians and offer an **additional access point for valuable services for Medicare beneficiaries.**	Sewell, Mary Jean. Et. al. Comparison of Pharmacist and Physician Managed Annual Medicare Wellness Services. J Manag Care Spec Pharm. 2016;22(12):1412-16, available at: https://www.jmcp.org/doi/pdf/10.18553/jmcp.2016.22.12.1412
Pharmacists have demonstrated their value in the community setting by providing high-quality and accessible care but are faced with barriers. This article discussed ways to optimize access to care in communities and implementation strategies to further improve population health outcomes while minimizing downstream healthcare costs.	Newman TV, Hernandez I, Keyser D, et al. Optimizing the Role of Community Pharmacists in Managing the Health of Populations: Barriers, Facilitators, and Policy Recommendations. J Manag Care Spec Pharm. 2019. https://www.jmcp.org/doi/10.18553/jmcp.2019.25.9.995
This article emphasizes **the need for collaboration between practices, patients, and payers to improve healthcare outcomes and reduce costs** by moving towards value-based payment models.	Armistead LT, Ferreri SP. Improving Value Through Community Pharmacy Partnerships. Population Health Management. 2018. https://www.liebertpub.com/doi/abs/10.1089/pop.2018.0040?journalCode=pop
Evidence suggests **pharmacists can prescribe to the same standards as other providers of care**, including the ability to better adhere to dosing guidelines when prescribing by protocol.	Poh EW, McArthur A, et al. Effects of pharmacist prescribing on patient outcomes in the hospital setting. JBI Database of Systematic Reviews and Implementation Reports. September 2018. https://journals.lww.com/jbisrir/Abstract/2018/09000/Effects_of_pharmacist_prescribing_on_patient.9.aspx
As hospitals and other care sites continue to close, especially in underserved areas, it is necessary for patients to have alternative locations to receive coordinated, high-quality care including chronic care management, and preventive care. Community pharmacies are well-positioned to serve as care sites to support the rest of the care continuum.	Heath S. How Pharmacists Can Drive Patient Engagement, Value-Based Care. March 2019. https://patientengagementhit.com/news/how-pharmacists-can-drive-_p atient-engagement-value-based-care
Preventive screenings	
This systematic search determined significant heterogeneity for all included outcomes, however, determined that **pharmacies are feasible sites for screening for diabetes and cardiovascular disease risk.**	Willis A, Rivers P, Gray LJ, Davies M, Khunti K. The effectiveness of screening for diabetes and cardiovascular disease risk factors in a community pharmacy setting. PLoS One. April 2014 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3972156/
A literature review showed that community pharmacy conducted and analyzed point-of-care tests had satisfactory analytical quality. This review further supports that **community pharmacies are well positioned to deliver a wide range of point-of-care tests** and will allow for patients to have increased access to various screenings.	Buss V.H., Naunton M. (May 2019). Analytical quality and effectiveness of point of care testing in community pharmacies: A systematic literature review. Res. Soc. Adm. Pharm. 2019;15:483–495. doi: 10.1016/j.sapharm.2018.07.013. https://www.ncbi.nlm.nih.gov/pubmed/30057328
The Centers for Disease Control and Prevention's (CDC's) Community Preventive Services Task Force (CPSTF) recognized the importance of pharmacy-based prevention by issuing a **strong recommendation for a pharmacy-based adherence intervention for cardiovascular disease prevention**, with its guidance based on its comprehensive literature review of 48 cases.	CDC. (2016). Using the Pharmacists' Patient Care Process to Manage High Blood Pressure: A Resource Guide for Pharmacists. Atlanta, GA: Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. https://www.cdc.gov/dhdsp/pubs/docs/pharmacist-resource-guide.pdfhttps://www.cdc.gov/dhdsp/pubs/docs/CPA-Team-Based-Care.pdf

This retrospective analysis studied community pharmacies providing flu and group A streptococcus (GAS) testing. Participating pharmacies reported 661 visits for adult (age 18 and over) patients tested for influenza and for GAS pharyngitis. For the GAS patients, 91 (16.9%) tested positive. For the Influenza patients, 22.9% tested positive and 64 (77.1%) tested negative. **Access to care was improved** as patients presented to the visit outside normal clinic hours for 38% of the pharmacy visits, and **53.7% did not have a primary care provider.**	Klepser D, et al. (2018). Utilization of influenza and streptococcal pharyngitis point-of- care testing in the community pharmacy practice setting. Research in Social Administrative Pharmacy. h ttps://www.ncbi.nlm.nih.gov/pubmed/2 8 479019
Pharmacist-initiated HCV screening in community pharmacy **assists with identifying patients at risk for HCV** infection and provide patients with **linkage to care**.	Isho N, et al. (March 2017). "Pharmacist-initiated hepatitis C virus screening in a community pharmacy to increase awareness and link to care at the medical center."; *Journal of the American Pharmacists Association*. https://www.japha.org/article/S1544-3191(17)30136-X/pdf
Between September 2015 and February 2016, 1298 individuals consented to HCV community-based antibody testing. Two patients withdrew consent after testing. In all, 8% (103/1296) were HCV antibody–positive; of them, 91 (88%) were contacted by an HCV management specialist. During the 21- to 28-day follow-up, 56 individuals (62%; 56/91) were reached by an HCV management specialist, and 29 (52%; 29/56) confirmed that an HCV RNA test was ordered. The authors conclude: **supportive results of point-of-care HCV screening in retail pharmacies for at-risk individuals** in the United States.	Kugelmas M, Pedicone LD, Lio I, Simon S, Pietrandoni G. Hepatitis C Point-of-Care Screening in Retail Pharmacies in the United States. *Gastroenterol Hepatol (N Y)*. 2017;13(2):98–104. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5402690/
Pharmacists provided 606 TB tests administered to 578 patients; 70.9% women, median age 31 years (4–93 years). Employment and school were the main reasons for obtaining a TB test. A total of 578 of 623 (92.8%) patients followed up to have their TSTs read. A total of **18 positive tests (3.1% positivity rate) were identified and appropriate referrals were made**. The authors conclude that pharmacist-performed TB testing had a **valuable public health benefit**. TB testing follow-up rates at community pharmacies in New Mexico were high, most likely due to convenient hours, accessible locations, and no required appointments.	B Jakeman, et al. Evaluation of a pharmacist-performed tuberculosis testing initiative in New Mexico. Journal of the American Pharmacists Association. Volume 55, Issue 3, May–June 2015, Pages 307-312. https://www.sciencedirect.com/science/article/pii/S1544319115300650?via%3Dihub
In Michigan, a pharmacist-provided HIV testing model, which incorporated rapid HIV testing, counseling, and linkage to confirmatory HIV testing demonstrated the acceptability and feasibility of pharmacist-provided rapid HIV testing and increased access to care. Approximately **42% of the participants stated it was their first HIV test, many of whom reported high-risk behaviors in prior 6 months.**	Darin KM, et al. (February 2015). "Pharmacist-provided rapid HIV testing in two community pharmacies;" *Journal of the American Pharmacists Association*. https://www.japha.org/article/S1544-3191(15)30015-7/pdf
A partnership between the Virginia Department of Public Health and community **pharmacies provided HIV tests to more than 3,600 individuals over 2 years.** Approximately half of these patients had never been tested for HIV before, and those who tested positive were linked to appropriate care with the assistance of a pharmacist.	Collin B, et al. The "No Wrong Door" Approach to HIV Testing: Results From a Statewide Retail Pharmacy–Based HIV Testing Program in Virginia, 2014-2016. 2018. Public Health Rep. https://journals.sagepub.com/doi/full/10.1177/0033354918801026
Pharmacies are increasingly providing a wide range of point-of-care tests including COVID-19, flu, strep throat, A1c screening, and more. Importantly, pharmacies throughout the country have also **partnered with local health departments to develop HIV and hepatitis C pharmacy-based screening programs that include linkage to care** if a test is positive.	Hoth A, Shafer C, et al. Iowa TelePrEP: A Public-Health-Partnered Telehealth Model for HIV Pre-Exposure Prophylaxis (PrEP) Delivery in a Rural State. Sexually Transmitted Diseases. May 2019. https://www.ncbi.nlm.nih.gov/pubmed/31157732 Dong BJ, et al. Pharmacists performing hepatitis C antibody point-of-care screening in a community pharmacy: A pilot project. Journal of the American Pharmacists Association. Volume 57, Issue 4, July–August 2017, Pages 510-515. https://www.sciencedirect.com/science/article/pii/S1544319117306660?via%3Dihub

This pilot project established HIV testing in several community pharmacies and retail clinics to offer rapid, point-of-care HIV testing. It demonstrated the **willingness and ability of staff at community pharmacies and retail clinics to provide confidential HIV testing to patients**. Expanding this model to additional sites and evaluating its feasibility and effectiveness may **serve unmet needs in urban and rural settings.**	Weidle, P, Lecher, S, Botts, L, et al. (2014). HIV testing in community pharmacies and retail clinics: A model to expand access to screening for HIV infection. Journal of the American Pharmacist Association, 54(5), 486-492. https://www.ncbi.nlm.nih.gov/pubmed/25216878
To help combat challenges in HIV PrEP and PEP access to care, more and more states are looking to pharmacists to help fill care gaps. For example, states including New Mexico, Iowa, and Washington, have piloted studies that show **pharmacist-run, or pharmacist-involved, PrEP clinics are an effective way to increase uptake of the medication**, which can then lead to decreased HIV transmission.	Ryan K, Lewis J, Sanchez D, et al. The Next Step in PrEP: Evaluating Outcomes of a Pharmacist-Run HIV Pre-Exposure Prophylaxis (PrEP) Clinic. ID Week 2018 Poster Abstract Session. Oct 2018. https://idsa.confex.com/idsa/2018/webprogram/Paper72194.html Tung EL, Thomas A, Implementation of a community pharmacy-based pre-exposure prophylaxis service: a novel model for pre-exposure prophylaxis care. Sex Health. Nov 2018. https://www.ncbi.nlm.nih.gov/pubmed/30401342
Chronic disease management	
This 2010 systematic review of pharmacist interventions concluded that such programs improve therapeutic and safety outcomes, and the results of various meta-analyses conducted for hemoglobin A1c, cholesterol levels, and blood pressure demonstrate the significant benefits of pharmacist care—**favoring pharmacists' direct patient care impact over comparative services**	Chisholm-Burns AM, et al. US Pharmacists' Effect as Team Members on Patient Care: Systematic Review and Meta-Analyses. Medical Care: October 2010 - Volume 48 - Issue 10 - p 923-933 https://journals.lww.com/lww-medicalcare/Fulltext/2010/10000/US_Pharmacists__Effect_as_Team_Members_on_Patient.10.aspx
Notable agencies within the healthcare system, such as the Department of Veterans Affairs, Department of Defense, Public Health Service, CDC, and the U.S. Surgeon General **recognize the value of pharmacists in improving quality and healthcare outcomes through services such as transitions of care and chronic disease management**, for example. By providing these important services in a convenient, easily accessible location, patients in underserved areas can benefit from expanded access to care and improved health outcomes.	A Program Guide for Public Health: Partnering with Pharmacists in the Prevention and Control of Chronic Diseases. CDC. August 2012. https://www.cdc.gov/dhdsp/programs/spha/docs/pharmacist_guide.pdf Giberson S, Yoder S, Lee MP. Improving Patient and Health System Outcomes through Advanced Pharmacy Practice. A Report to the U.S. Surgeon General. Office of the Chief Pharmacist. U.S. Public Health Service. Dec 2011. https://www.accp.com/docs/positions/misc/improving_patient_and_health_system_outcomes.pdf Surgeon General supports USPHS report on pharmacists as providers. APhA. January 2012. https://www.pharmacist.com/CEOBlog/surgeon-general-supports-usphs-report-pharmacists-providers?is_sso_called=1
A study examining pharmacist-led diabetes education, including individual consultations, point of care testing, and care coordination with other providers, led to **significant reductions in HbA1C, cholesterol, and blood pressure levels.**	Guide to Community Preventive Services. (April 2019). Cardiovascular Disease: Tailored Pharmacy-based Interventions to Improve Medication Adherence. https://www.thecommunityguide.org/findings/cardiovascular-disease-tailored-pharmacy-based-interventions-improve-medication-adherence
A review of 22 studies showed that community pharmacist-led interventions **improve patients' adherence** and contribute to **improved blood pressure control, cholesterol management, and chronic obstructive pulmonary disease and asthma control.**	Milosavljevic A, Aspden T, Harrison J. (June 2018). Community pharmacist-led interventions and their impact on patients' medication adherence and other health outcomes: a systematic review. International Journal of Pharmacy Practice. 26(5). https://onlinelibrary.wiley.com/doi/full/10.1111/ijpp.12462
The pharmacy intervention group had **statistically significantly higher improvements in the individual areas of A1c, blood pressure, and statin goal attainment**. In this study, 40% of patients in the pharmacist intervention group achieved all 3 clinical goals after intervention, compared with only 12% of patients in the usual care group.	Prudencio J, Cutler T, Roberts S, Marin S, Wilson M. (May 2018). The Effect of Clinical Pharmacist-Led Comprehensive Medication Management on Chronic Disease State Goal Attainment in a Patient-Centered Medical Home. JMCP. 2018;24(5):423-429. https://www.ncbi.nlm.nih.gov/pubmed/29694290

A study assessing pharmacy-based medication synchronization programs for Medicaid FFS beneficiaries with certain conditions (e.g., hypertension, hyperlipidemia and diabetes) found **improved adherence to cardiovascular medications, cardiovascular clinical outcomes and significantly lower rates of hospitalization and emergency department visits**, compared to a control group.	Krumme A. Glynn, R., Schneeweiss, S. et al. (January 2018). Medication Synchronization Programs Improve Adherence to Cardiovascular Medications and Health Care Use. Health Affairs 37(1)125-133. https://www.ncbi.nlm.nih.gov/pubmed/29309231
The results for 6-month **systolic blood pressure** reading showed **significantly decreased rates** for the pharmacist group versus the control group (-11.8mmHg vs - 6.2mmHg) and slightly smaller, but observable changes of diastolic blood pressure in the intervention group versus the control group (-8.4 vs -6.2mmHg). Percentage of patients achieving **good refill adherence** was larger for the intervention group compared to the control group (59.7% vs 36.1%).	Shireman TI, et al. (March 2016). "Cost-effectiveness of Wisconsin TEAM model for improving adherence and hypertension control in black patients;" *Journal of the American Pharmacists Association*. https://www.ncbi.nlm.nih.gov/pubmed/27184784
A review by the Department of Veterans Affairs of over 60 research studies found that patients receiving chronic care management from a pharmacist had a **higher likelihood of meeting blood pressure, cholesterol and blood glucose goals**, compared to those receiving usual care	Greer N, Bolduc J, Geurkink E et al. (April 2016). Pharmacist-led chronic disease management: a systematic review of effectiveness and harms compared with usual care. Ann Intern Med. Epub ahead of print.
CDC, CMS, and other public health leaders have noted the **robust ability for pharmacists to play an important role in smoking cessation**.	Centers for Disease Control and Prevention, Pharmacists: Help Your Patients Quit Smoking, April 22, 2019. https://www.cdc.gov/tobacco/campaign/tips/partners/health/pharmacist/index.html Department of Health and Human Services, Centers for Medicare & Medicaid Services; CMCS Informational Bulletin, State Flexibility to Facilitate Timely Access to Drug Therapy by Expanding the Scope of Pharmacy Practice using Collaborative Practice Agreements, Standing Orders or Other Predetermined Protocols. https://www.medicaid.gov/federal-policy-guidance/downloads/cib011717.pdf Tobacco Control Network, Access to Tobacco Cessation Medication Through Pharmacists, Feb 8, 2017, *available at* http://www.astho.org/Prevention/Tobacco/Tobacco-Cessation-Via-Pharmacists/
Pharmacy care program for elderly patients led to increases in medication adherence, medication persistence, and clinically meaningful reductions in blood pressure. After 6 months of intervention, **medication adherence increased from baseline of 61.2% to 96.9%** and associated with significant **improvements in systolic blood pressure** (133.2 to 129.9) and **LDL-C levels** (91.7 to 86.8).	Lee JK, et al. (December 2006). "Effect of a Pharmacy Care Program on Medication Adherence And Persistence, Blood Pressure, and Low-Density Lipoprotein Cholesterol: A Randomized Controlled Trial;" Journal of the American Medical Association; Available at https://jamanetwork.com/journals/jama/fullarticle/204402.
This systematic review evaluated the role of community pharmacists in the provision of screening with and without subsequent management of undiagnosed COPD and asthma. The literature review identified that community pharmacists can play an effective role in **screening of people with poorly controlled asthma and undiagnosed COPD along with delivering management interventions.**	Fathima, M et al. (October 2013). The role of community pharmacists in screening and subsequent management of chronic respiratory diseases: a systematic review. Pharmacy Practice, 11(4), 228-245. https://www.ncbi.nlm.nih.gov/pubmed/24367463
Several states authorize pharmacies to play an elevated role in initiation of prescription and over the counter products to support patients in smoking cessation. In fact, Colorado, Idaho, Indiana, and New Mexico **authorize pharmacists to initiate all medications approved by the U.S. Food and Drug Administration for smoking cessation**.	Adams AJ, Hudmon KS. Pharmacist prescriptive authority for smoking cessation medications in the United States. J Am Pharm Assoc (2003). 2018. doi: 10.1016/j.japh.2017.12.015.
Medication adherence and optimization	

A recent analysis completed by Community Health Group showed Comprehensive Medication Reviews reduced medical expenses by $4000 per patient per year.	https://outcomesmtm.com/wp-content/uploads/2022/06/Case_Study_Part2_CHG_Value_Analysis.pdf
This project evaluated the impact of medication adherence on five chronic medication classes. The study involved 283 pharmacists who screened 29,042 patients for poor adherence risk and provided brief interventions to patients with increased risks. The intervention group experienced **statistically significant improvements in adherence across all medication classes**. Further, the intervention demonstrated a significant reduction in per patient annual healthcare spending for patients taking statins ($241) and oral diabetes medications ($341). Based on these findings, the study concluded that such pharmacy adherence programs would **reduce costs for a plan with 10,000 members by $1.4 million each year** and could also be expected to increase the plan's star rating.	Pringle JL, et al., "The Pennsylvania Project: Pharmacist Intervention Improved Medication Adherence and Reduced Health Care Costs," Health Affairs (Aug. 2014), available at https://www.healthaffairs.org/doi/abs/10.1377/hlthaff.2013.1398
Patients receiving the pharmacist **adherence intervention for antihypertensives** increased between baseline and the end of the study **(86.0% vs 96.5%)** whereas the control group did not have a significant change (86.5% vs 85.4%). The odds of adherence to antihypertensive drug therapy in the pharmacist group was three times higher than the control group.	Fikri-Benbrahim N, et al. (December 2013). Impact of a community pharmacists' hypertension-care service on medication adherence."; *The AFenPA study. Research in Social and Administrative Pharmacy*. Available at https://www.ncbi.nlm.nih.gov/pubmed/23391845. Last Accessed June 13, 2018.
Another relevant example includes a program designed to leverage the clinical expertise of pharmacists for Medicare and Medicaid beneficiaries, which led to **improved medication adherence** among patients in the pharmacist intervention group **by 46% compared to the control group**, who received usual care from their doctors and nurses.	Ameer H, Jain SH. How Pharmacists Can Help Ensure That Patients Take Their Medicines. Harvard Business Review. Jan 2019. https://hbr.org/2019/01/how-pharmacists-can-help-ensure-that-patients-take-their-medicines
This retrospective chart review included 728 medication therapy management encounters by pharmacists in a family medicine clinic. Patients were an average of 53.6 years old and took 11.9 medications to treat 5.7 medical conditions. A total of **3057 drug therapy problems were identified** in the **728 encounters**, of which 1303 were resolved the same day as the visit. This resulted in an average of 4.2 drug therapy problems identified and 2.0 resolved per visit per patient. The most common category identified in this study was the need for additional drug therapy (41.6%).	MacDonald D, Chang H, et al. Drug Therapy Problem Identification and Resolution by Clinical Pharmacists in a Family Medicine Residency Clinic. 2018. https://pubs.lib.umn.edu/index.php/innovations/article/view/971
In this retrospective review of 408 comprehensive medication management visits with a pharmacist, and an average of **2.5 drug therapy problems** were found **per patient visit** following hospital discharge. The most common problems were "needs additional therapy" and "dose too low."	Westberg SM, Derr SK, et al. Drug Therapy Problems Identified by Pharmacists Through Comprehensive Medication Management Following Hospital Discharge. Journal of Pharmacy Technology. June 2017. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5998417/
This retrospective chart review included patients seen by a geriatric pharmacist during a one-year period. During this time, a total of **3100 drug therapy problems were identified during 3309 patient–pharmacist** encounters for 452 patients (mean age, 81.4 years).Pharmacists provided **4921 interventions**, often more than 1 intervention per drug therapy problem, for 275 different medications with an estimated **annual financial savings between $268,690 and $270,591.**	Campbell AM, Corbo JM, et al. Pharmacist-Led Drug Therapy Problem Management in an Interprofessional Geriatric Care Continuum: A subset of the PIVOTS Group. American Health and Drug Benefits. December 2018. http://www.ahdbonline.com/issues/2018/december-2018-vol-11-no-9/2678-pharmacist-led-drug-therapy-problem-management-in-an-interprofessional-geriatric-care-continuum-a-subset-of-the-pivots-group
Another pharmacy-led chronic care management program includes a $12 million CMMI grant to the University of Southern California and AltaMed, aimed to optimize patient health, reduce avoidable hospitalizations and	Chen SW, Hochman M, Olayiwola JN, Rubin A. Integration of Pharmacy Teams into Primary Care. The Center for Excellence in Primary Care and the Center for Care Innovations May 2015. https://www.careinnovations.org/wp-

emergency visits by integrating pharmacists into safety-net clinics in Southern California. This collaborative program resulted in **reduced rates of uncontrolled blood sugar** by nearly a quarter (23%), **improvements in elevated LDL** with 14% more patients controlled, **and improvements in blood pressure** with 9% more patients controlled at 6 months in the intervention group (collaborative care model with pharmacists as leads) versus the control group (primary care physicians only). The program resulted in a **33% reduction in readmissions** per patient per year primarily attributed to medications estimated at 6 months. Through this project, pharmacists identified **67,169 medication-related problem in 5,775 patients**. The top actions made by pharmacists to resolve these problems included: 14,981 dose change/drug interval, 5,554 medications added, 4,230 tests ordered, 3,847 medications discontinued, and 2,665 medication substituted. Further, 100% of program physicians either "strongly agreed" or "agreed" that having pharmacists in their clinics improves their patients' care, and that pharmacists are knowledgeable. And, 92% of patients rated the program very highly, rating scores of 9 or 10 out of 10.	content/uploads/2017/10/USC.CEPC_.pharm_webinar_FinalV.pdf Chen SW. Comprehensive Medication Management (CMM) for Hypertension Patients: Driving Value and Sustainability. University of Southern California. http://betheresandiego.org/storage/files/cmm-for-htn-usc-steven-chen-condensed-slide-deck.pdf
Through a brief pharmacist-to-provider intervention, a **significant gap closure in statin therapy was seen in patients with diabetes**. The number of statins prescribed was statistically significant between intervention group (n = 221) versus control group (n = 199) with 46 statins versus 17 statins, respectively (P <0.001).	Pharmacist-to-prescriber intervention to close therapeutic gaps for statin use in patients with diabetes: A randomized controlled trial. Journal of the American Pharmacists Association Volume 57, Issue 3, Supplement, May–June 2017, Pages S236-S242.e1. https://www.sciencedirect.com/science/article/pii/S1544319117301553?via%3Dihub
A clinical pharmacist and pharmacy resident evaluated clinical appropriateness and cost of statin therapy, provided recommendations to physicians, facilitated statin prescribing, and provided patient education. After implementation, 375 (82.6%) patients were on statins (P < .0001), compared to 343 before. **Recommendations were well received** (90.2% accepted) and no significant adverse effects were reported. Pharmacist implementation of a collaborative, patient-centered initiative **increased statin prescribing in diabetic patients**, most of which were black and had hypertension, in an internal medicine resident clinic.	Vincent R, Kim J, Ahmed T, Patel V. Pharmacist Statin Prescribing Initiative in Diabetic Patients at an Internal Medicine Resident Clinic. J Pharm Pract. 2019 Jan 29:897190018824820. https://www.ncbi.nlm.nih.gov/pubmed/30696337
Mental and Behavioral Health	
Community pharmacists have the capacity to **identify patients at risk for misuse of opioid medications**. Of the 164 patients who completed the survey, 14.3% screened positive for prescription opioid misuse risk, 7.3% for illicit drug use, 21.4% for hazardous alcohol use, 25.8% for depression, and 17.1% for post-traumatic stress disorder (PTSD).	Cochran G, Rubinstein J, Bacci JL, Ylioja T, Tarter R. Screening Community Pharmacy Patients for Risk of Prescription Opioid Misuse. J Addict Med. 2015 Sep-Oct;9(5):411-6. https://www.ncbi.nlm.nih.gov/pubmed/26291546
In Rhode Island, a grant from the National Institute on Drug Abuse is being used to allow patients to **receive addiction care at a community pharmacy**. Through this program, patients receive their initial prescription from a physician and, when stable, a pharmacist will take over their care, including conducting toxicology swabs to determine adherence and providing motivational counseling. Participants report **increased convenience and comfort** with receiving addiction care at their local pharmacy.	Freyer F. In Rhode Island, Some Get Addiction Care at the Pharmacy. Boston Globe. March 2019. https://www.bostonglobe.com/metro/2019/03/12/getting-addiction-care-pharmacy/m1mcceVlLRXX1W9X3WdeOP/story.html
In this pharmacist-physician collaborative care model, pharmacists conducted intake assessments and follow-up appointments with patients taking buprenorphine in order to **further expand access to treatment**. This	DiPaula BA, Menachery E. Physician-pharmacist collaborative care model for buprenorphine-maintained opioid-dependent patients. J Am Pharm Assoc (2003). 2015

program demonstrated 100% 6-month retention rates and 73% 12-month retention rates with an **estimated cost savings of $22,000**. Data from this pilot was then used to develop a permanent program utilizing this model.	Mar-Apr;55(2):187-92. https://www.ncbi.nlm.nih.gov/pubmed/25749264
During the study period, 3,726 patients were screened for depression by pharmacists. Of the patients who completed the PHQ-9, approximately 25% met the criteria for consideration of diagnosis and were referred to their physician. Five patients presented with suicidal thoughts and were referred for urgent treatment. Approximately **60% of patients with a positive PHQ-9 had initiated or modified treatment at the time of follow-up**. The author concluded that a screening program for depression can be successfully developed and implemented in the community pharmacy setting. Using the PHQ, **pharmacists were able to quickly identify undiagnosed patients with symptoms of depression**. The majority of patients with a positive screening had initiated or modified treatment at the time of follow-up.	Rosser S, Frede S, Conrad WF, Heaton PC. Development, implementation, and evaluation of a pharmacist-conducted screening program for depression. J Am Pharm Assoc. 2013 Jan-Feb;53(1):22-9. doi: 10.1331/JAPhA.2013.11176. https://www.ncbi.nlm.nih.gov/pubmed/23636152
Twenty-six percent of individuals (n = 107) receiving opioid prescriptions were **identified as at some risk of misuse** and 30% at **risk of an accidental overdose**. Participating pharmacists preferred the value of having an **objective measurement of potential of opioid misuse**, to relying only on professional judgment. They also reported the value of the toolkit elements in enhancing conversations with patients.	Strand MA, Eukel H, Burck S. Moving opioid misuse prevention upstream: A pilot study of community pharmacists screening for opioid misuse risk. Res Social Adm Pharm. 2019 Aug;15(8):1032-1036. https://www.ncbi.nlm.nih.gov/pubmed/30031696
Pharmacists are increasingly being trained in mental health first aid. Research to date has demonstrated effectiveness and positive public perceptions.	Witry MJ, Fadare O, Pudlo A. Pharmacy professionals' preparedness to use Mental Health First Aid (MHFA) behaviors. Pharm Pract (Granada). 2020 Oct-Dec;18(4):2102. doi: 10.18549/PharmPract.2020.4.2102. Epub 2020 Nov 14. PMID: 33294061; PMCID: PMC7699831. Mospan CM, Gilletee C, Mckee J, et al. Community Pharmacists as Partners in Reducing Suicide Risk. The Journal of the American Board of Family Medicine. Nov 2019. DOI: 10.3122/jabfm.2019.06.190021 Dollar KJ, Ruisinger JF, Graham EE, Prohaska ES, Melton BL. Public awareness of Mental Health First Aid and perception of community pharmacists as Mental Health First Aid providers. J Am Pharm Assoc. March 2020. doi: 10.1016/j.japh.2020.01.017.
This study found large and **statistically significant decreases for almost every measure of substance use** in patients who received SBIRT method screening services, including decreases in alcohol use, heavy drinking, and illicit drug use. Greater intervention intensity was also associated with larger decrease in substance use.	Aldridge A, Linford R, Bray J. Substance use outcomes of patients served by a large US implementation of Screening, Brief Intervention and Referral to Treatment (SBIRT). Addiction. 2017 Feb;112 Suppl 2:43-53.https://www.ncbi.nlm.nih.gov/pubmed/28074561
An Australian study examined the impact of community pharmacists performing screenings and risk assessments for depression and found that pharmacists were able to provide screening and risk assessment services and make referrals as needed – which could facilitate **early intervention** and **reduce the overall burden of disease** associated with depression	O'Reilly CL, Wong E, Chen TF. A feasibility study of community pharmacists performing depression screening services. Res Social Adm Pharm. 2015 May-Jun;11(3):364-81.. https://www.ncbi.nlm.nih.gov/pubmed/25438728
Immunizations	
A 2019 study found that a community pharmacy vaccination program demonstrated an **increase of immunization rates for influenza, herpes zoster, and pertussis vaccination rates by 37%, 12%, and 74%, respectively**.	NK Wehbi, JR Wani, DG Klepser, J Murry, AS Khan. Impact of a Technology Platform to Increase Rates of Adult Immunization in Pharmacies. Vaccine. Volume 37, Issue 1, 3 January 2019, Pages 56-60. https://www.ncbi.nlm.nih.gov/pubmed/30471954

A 2018 study that modeled the clinical and economic impacts of using pharmacies to administer influenza vaccinations estimated that including pharmacies in addition to other locations for vaccination (e.g. clinics, physician offices, urgent care centers) could **prevent up to 16.5 million symptomatic influenza cases and 145,278 deaths** at an estimated **cost savings of $4.1 to $11.5 billion.**	Bartsch SM et al. Epidemiologic and economic impact of pharmacies as vaccination locations during an influenza epidemic. Vaccine. November 2018. https://www.ncbi.nlm.nih.gov/pubmed/30340884
Pharmacy-based immunization services increased the likelihood of immunization for influenza and pneumococcal diseases, resulting in millions of additional immunizations in the United States. Five years after national implementation, it is estimated that **6.2 million additional influenza immunizations and 3.5 million additional pneumococcal immunizations** are attributable to pharmacy-delivered immunization services each year	Patel AR, Breck AB, Law MR. The impact of pharmacy-based immunization services on the likelihood of immunization in the United States. Journal of the American Pharmacists Association. August 2018. https://www.ncbi.nlm.nih.gov/pubmed/30076098
In a CDC-funded, adult immunization initiative, more than 300 pharmacies across four states explored and developed approaches aimed at incentivizing community pharmacies and other stakeholders to improve rates for influenza, pneumococcal, pertussis, and herpes zoster vaccine. This effort resulted in 304,405 immunizations administered and **significant improvements in routinely recommended adult vaccination rates** with the most consistent increases across all sites seen for influenza (20-45%) and pertussis (13-74%) vaccines.	NACDS. (2018). CDC Project – Immunization Rates and VBM.
Policy changes permitting pharmacist immunization resulted in influenza **immunization administration rates rising** from 32.2% in 2003 to 40.3% in 2013.	Drozd EM, Miller L, Johnsrud M. Impact of Pharmacist Immunization Authority on Seasonal Influenza Immunization Rates Across States. Clinical Therapeutics. 2017 Aug;39(8):1563-1580.e17. https://www.ncbi.nlm.nih.gov/pubmed/28781217
A 2016 review of 36 different studies found that **pharmacist involvement** in the immunization process, whether as educators, facilitators, or administrators, always resulted in an **increase in immunization coverage**.	Isenor JE, Edwards NT, Alia TA, Slayter KL, MacDougall DM, McNeil SA, Bowles SK. Impact of pharmacists as immunizers on vaccination rates: A systematic review and meta-analysis. Vaccine. 2016 Nov 11;34(47):5708-5723.https://www.ncbi.nlm.nih.gov/pubmed/27765379
A large proportion of adults being vaccinated receive their vaccines during evening, weekend, and holiday hours at the pharmacy, when traditional vaccine providers are likely unavailable. Of the nearly 6.3 million vaccinations administered during the study period, 30.5% were given during off-clinic hours. Younger, working- aged, healthy adults, in particular, received a variety of immunizations during off-clinic hours. With the low rates of adult and adolescent vaccination in the United States, **community pharmacies are creating new opportunities for vaccination** that expand access and convenience.	Goad JA, Taitel MS, Fensterheim LE, Cannon AE. Vaccinations administered during off-clinic hours at a national community pharmacy: implications for increasing patient access and convenience. Annals of Family Medicine. 2013 Sep-Oct;11(5):429-36. https://www.ncbi.nlm.nih.gov/pubmed/24019274
Social Determinants of Health & Health Disparities	
Leveraging community pharmacists to complete a SDOH screening resulted in an average $1500 decrease in medical spending.	https://www.pqaalliance.org/sdoh-resource-guide
This example of pharmacists' ability to improve chronic care reached rural, underserved patients, and included a collaboration between A&B Pharmacy and Emporia Medical Associates, yielding significant patient outcomes. Through this program, pharmacists provided chronic care management (CCM) services for Emporia Medical Associates' Medicare patients. Pharmacists supported patients by providing medication reconciliation/ synchronization services, educating on how to self-monitor blood glucose and blood pressure, and answering questions about chronic	A Team-based Care Approach to Reach Rural, Underserved Virginia Patients. WWCDPC. 2018. https://chronicdisease.host/WWCDPC/admin/dompdf/SuccessStories.php?id=712 Health Quality Innovators. A Partnership in Chronic Care Management. http://qin.hqi.solutions/wp-content/uploads/2018/05/CCM-poster-with-3-video-QR-link.pdf

disease management during monthly CCM appointments. Pharmacists also worked collaboratively with the physician to develop an appropriate care plan. The program resulted in an 8% increase in **medication reconciliation**, an 11% increase in use of **tobacco cessation services**, and a 6% increase in the **number of patients receiving chronic care management** through the provision of pharmacist-led services. All participating patients also reported **improvements in health outcomes** related to healthy eating and exercise.	
This study describes the result of a pharmacist-driven, type 2 diabetes targeted, collaborative practice within an urban, underserved federally qualified health center. Pharmacists, within a primary care team, managed patients with chronic illnesses utilizing a collaborative practice agreement. Pharmacists had a **significant impact on improving the health outcomes of patients with Type 2 diabetes**, with significant improvements in patient attainment of A1c <9%, ACE inhibitor/angiotensin receptor blocker and statin use, and tobacco cessation at follow-up.	Ray S, Lokken J, Whyte C, Baumann A, Oldani M. The impact of a pharmacist-driven, collaborative practice on diabetes management in an Urban underserved population: a mixed method assessment. Journal of Interprofessional Care. 2020 Jan-Feb;34(1):27-35. https://www.ncbi.nlm.nih.gov/pubmed/31381470
Pharmacist-provided MTM can improve chronic disease intermediate outcomes for medically underserved patients in FQHCs. This pilot study displayed **improvement in diabetes and hypertension clinical markers** associated with pharmacist provision of MTM. A1c goal achievement occurred in 52.84% of patients and hypertension control was reported in 65.21%. Pharmacists identified and resolved more than **1400 medication-related problems** and addressed multiple adverse drug event issues.	Rodis JL, et al. (2017). Improving Chronic Disease Outcomes Through Medication Therapy Management in Federally Qualified Health Centers. Journal of Primary Care & Community Health. https://www.ncbi.nlm.nih.gov/pubmed/28381095
Socioeconomic challenges might influence education about interventions and lifestyle decisions, access to support activities, access to nutrition/health and wellness services, and access to screenings and services which would emphasize the need for well-positioned care. Community pharmacists are located where many patients facing socioeconomic challenges live and work, offering accessible preventive care opportunities.	Tucker M, Barclay L. What's the Effect of Diabetes Prevention Services? Medscape. July 2019. https://www.medscape.org/viewarticle/915077
Among black male barbershop patrons with uncontrolled hypertension, health promotion by barbers resulted in larger blood-pressure reduction when coupled with medication management in barbershops by specialty-trained pharmacists. The **mean reductions in systolic and diastolic blood pressure were 21.6 and 14.9 mmHg greater, respectively, in participants assigned to the pharmacist-led intervention** than in those assigned to the active control. In the intervention group, the rate of cohort retention was 95%, there were few adverse events, and self-rated health and patient engagement increased.	Victor RG, et al. A Cluster-Randomized Trial of Blood-Pressure Reduction in Black Barbershops. The New England Journal of Medicine. April 2018. h ttps://www.nejm.org/doi/full/10.1056/N E JMoa1717250