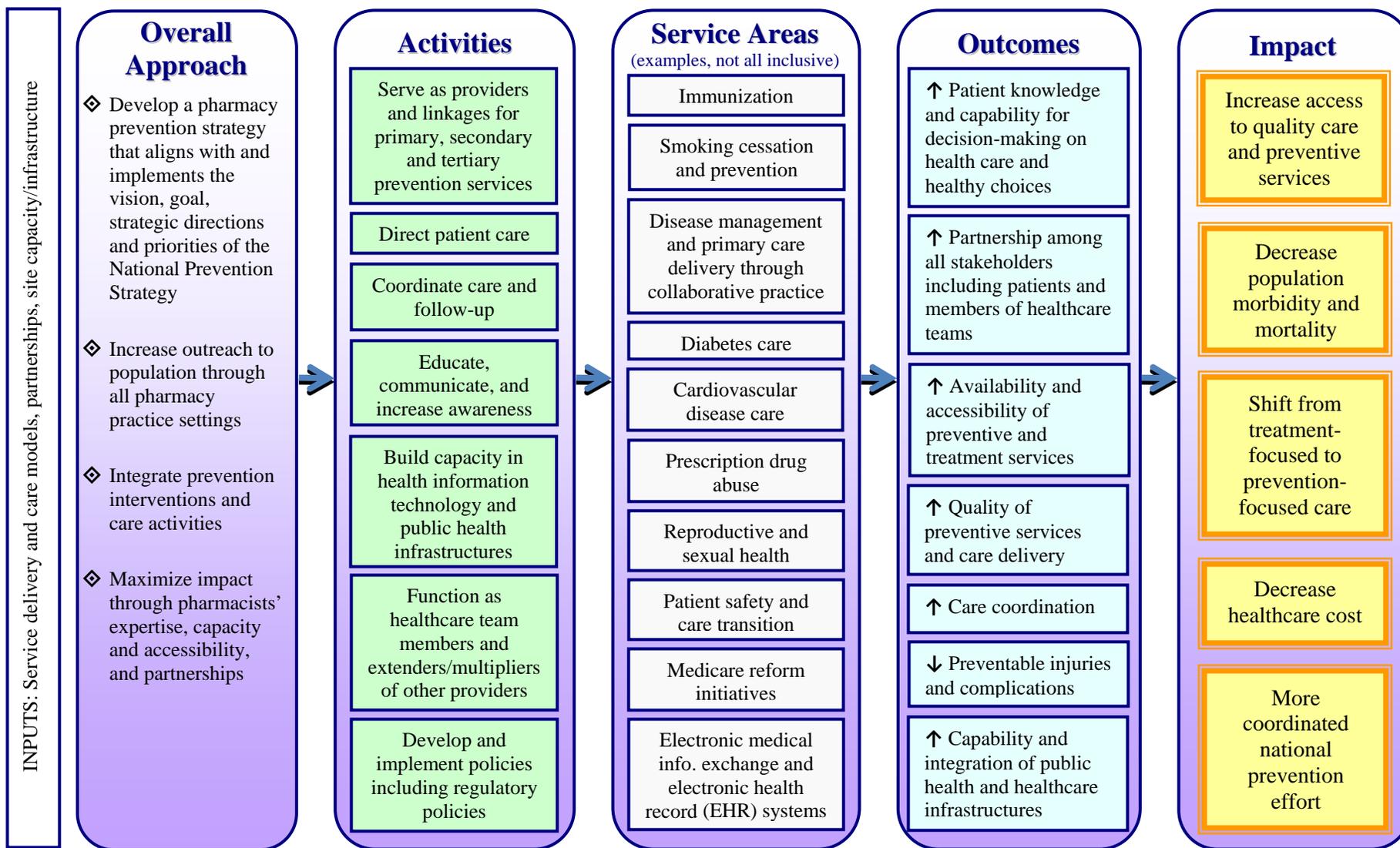




U.S. Public Health Service Pharmacy Prevention Strategy

September 2011

Core Value: Americans can live longer and healthier through prevention



More sustainable healthcare system
Increased number of Americans who are healthy at every stage of life

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Introduction

The National Prevention Strategy is a shift from a focus on sickness and disease to one based on prevention and wellness. The Strategy prioritizes prevention to improve individual and population health and to save lives. The U.S. Surgeon General, Dr. Regina Benjamin, Chair of the National Prevention, Health Promotion, and Public Health Council, announced the National Prevention Strategy on June 16, 2011. The National Prevention Strategy provides an opportunity for us to become a more healthy and fit nation. Its core value is that Americans can live longer and healthier through prevention. The National Prevention Strategy builds on the fact that lifelong health starts at birth and continues throughout all stages of life.¹ In a display of support, U.S. Public Health Service (USPHS) Pharmacists have developed this Pharmacy Prevention Strategy to help implement the vision, goal, strategic directions and priorities of the National Prevention Strategy.

Healthcare delivery (including preventive and supportive care) in the U.S. is challenged by demands of access, safety, quality, and cost. These challenges are amplified by provider workforce shortages and dramatic increases in primary and chronic care visits. Projections suggest worsening of this situation. New or additional paradigms of care must be implemented to reduce these burdens.² A shift from treatment-focused to prevention-focused care allows enhanced overall individual and population health as well as alleviates many of these healthcare burdens. Prevention begins with availability of information and access to the healthcare system. Information can be obtained through communities, colleagues, friends and the growing communication and media channels available to many. However, Americans will need additional access to the healthcare system and healthcare professionals to develop a comprehensive preventive paradigm.

Access to care is an identified barrier across our entire healthcare system. Over 250 million people visit a pharmacy each *week* in the U.S. The accessibility of pharmacists makes them an integral piece for improving our public health infrastructure.

Health reform has stimulated exploration of innovative care models and payment reform to improve access to care, provide quality care, contain costs, and afford safe use of medications and other pertinent, medication-related issues. The federal sector has already implemented and embraced such healthcare delivery models through expanded pharmacist-delivered patient care services as well as physician-pharmacist collaborations. These models, through extensive performance measures, have demonstrated that patient care services delivered by pharmacists can prevent

disease or progression of existing conditions, improve patient outcomes, promote patient involvement, contain costs, and reduce demands of the healthcare system.² These practice models can also provide American people with access and information needed for disease prevention.

The Pharmacy Prevention Strategy is framed around activities that clearly articulate and present evidence-based data that objectively supports USPHS Pharmacists' involvement in the strategic directions and priorities of the National Prevention Strategy and ultimately improve outcomes.

U.S. Public Health Service Pharmacists regularly serve as healthcare providers in primary, secondary, and tertiary disease prevention. USPHS Pharmacists implement prevention services by preventing prescription drug abuse, medical errors, diabetes, and cardiovascular disease. Pharmacists also provide smoking cessation services, reproductive and sexual health education, and pharmacy-based immunization delivery to name a few.

This Pharmacy Prevention Strategy demonstrates how pharmacists are able to: 1) increase access to quality care and preventive services; 2) decrease population morbidity and mortality; 3) shift from treatment-focused to prevention-focused care; 4) decrease or contain overall healthcare costs; and 5) coordinate national prevention efforts.

Although not inclusive of all services provided, this report will provide initial discussion of how USPHS Pharmacists are currently aligned and focused on national prevention efforts. USPHS Pharmacists will endeavor to garner wider partnership for expanded implementation and advancement of individual and population health.

Health System Errors and Patient Safety

The National Prevention Strategy discusses that one of the five major categories of effective strategies for implementation is systems change. Preventable harms and complications that often result from medical errors occur in alarming numbers in the healthcare system and lead to significant consequences beyond the individual patients and their families. The Institute of Medicine (IOM) states that a comprehensive approach ranging from commitment of leadership and systems change to provider and patient education are needed to improve patient safety and ensure healthy healing without complications.³ As experts of pharmaceutical care and gatekeepers to safe medication practice and use, pharmacists play a vital role in a comprehensive approach to systems change in preventing adverse events and complications to ensure patient safety and healthy healing.

Key Facts

- Preventable medical errors result in additional care expenses, lost income and worker productivity as well as loss of trust in the healthcare system by patients, and loss of morale and increased frustration among healthcare professionals for not being able to provide the best care possible.³
- Medical errors have been estimated to cost between \$14 and \$29 billion per year in hospitals nationwide.³
- Patient injuries caused by drug therapy are among the most common types of adverse events in hospitals.⁴
- More than 770,000 people are injured or die each year in hospitals from adverse drug events. National expenses to treat patients who suffer adverse drug events during hospitalization cost between \$1.56 and \$5.6 billion each year.⁵
- Increased pharmacist participation as a member of the healthcare team as well as availability of clinical pharmacy services improve therapeutic and safety outcomes with reduced medication errors and adverse drug events.⁶⁻⁸

Recommendations: How can pharmacists improve this picture?

- 1) ***Build health information technology (HIT) infrastructure.*** Pharmacists have the scope to standardize and improve the presentation of data and information on pharmaceutical products. By doing so, pharmacists facilitate information accessibility as well as interoperable electronic information exchange. In addition, pharmacists have the capacity to actively collaborate with IT developers and other healthcare professionals in developing and enhancing electronic health record (EHR) systems that meet the Meaningful Use criteria and comply with standards for certification. EHR systems developed without users' input in their design often results in higher resistance for adoption and user dissatisfaction. As one of the user groups, pharmacists can contribute to the building of EHR systems and associated clinical decision support to include features, such as safety monitoring with potential adverse event signal detection and report transmission to the Food and Drug Administration (FDA); medication therapy selection based on patient-specific variables; drug information access; and alerts related to medication therapy as well as enhancement of computerized physician order entry (CPOE). Well-developed and user-friendly EHRs that are interoperable facilitate electronic information exchange and accessibility which reduce potential for medical errors, therapeutic duplications, and assist with improved quality of care.
- 2) ***Enhance public health infrastructure in adverse event reporting.*** Early detection is essential in preventing further damages and future adverse events. In addition to developing safety monitoring systems for early signal detection, pharmacists are well-positioned with direct access to patients in the community to identify adverse events that might otherwise be undetected. Pharmacists can take the lead to improve reporting as well as to encourage reporting by others. Pharmacists also have the capacity to contribute to and enhance nationwide adverse event reporting systems for improved electronic reporting with systems integration, and streamlined data processing and analysis.
- 3) ***Improve patient-centered care and care coordination and transition.*** Availability of clinical pharmacy services facilitates patient-centered care and decreases medical errors, especially those associated with medication use. Pharmacists can play a significant role as members of healthcare teams by

- Discharge services that include pharmacist follow-up to reinforce discharge plan and review medications reduce hospital utilization and readmission within 30 days of discharge.⁹
- Decreasing preventable hospital-acquired conditions by 40% and hospital readmission due to preventable complications during care transition by 20% can save up to \$35 billion across the healthcare system, including up to \$10 billion in Medicare savings in the next three years.¹⁰

providing clinical pharmacy expertise in designing patient-specific treatment regimens and monitoring parameters.⁶⁻⁸ In addition, communication of treatment plans is an essential component in care coordination and transition. Pharmacists have the knowledge and expertise to improve care coordination and transition through medication use evaluation, medication reconciliation, and ensuring patients have clear and appropriate treatment plans that are communicated and clearly understood by patients, other providers and staff of treatment or intake facilities.⁹

- 4) *Promote communication and education.* Patients can serve as their own safety check to prevent medical errors while receiving care.³ Being highly accessible for patients in a multitude of settings within the healthcare system, pharmacists have a wide reach to the population in providing education on medical errors prevention as well as medication use. Pharmacists can help patients understand their own medications – which medications they are taking, their appearance, side effects and the need to notify a healthcare professional on medication discrepancies, duplications and occurrence of adverse drug reactions. Furthermore, it is important for pharmacists to ensure appropriate prescribing practices and safe medication use and administration. This can be done through policy development and implementation, communication and increased collaboration with other healthcare professionals, providing continuing education, in-services programs, and consultation for other healthcare professionals.

*Project Highlight: Partnership for Patients: Better Care, Lower Costs*¹⁰

Partnership for Patients: Better Care, Lower Costs is a public-private partnership launched by the federal government for all healthcare systems and providers to improve healthcare safety, quality and affordability for the American population. The goals of this initiative are to: 1) keep patients from getting injured or sicker as indicated by decreasing preventable hospital-acquired conditions by 40% in 2013 compared to 2010, and; 2) help patients heal without complication as shown by 20% reduction in hospital readmission as a result of preventable complications during care-setting transition. By achieving the first goal, there would be approximately 1.8 million fewer patient injuries and 60,000 lives saved over three years. As a result of achieving the second goal, there would be more than 1.6 million patients that recover from illness without suffering a preventable complication requiring re-hospitalization within 30 days of discharge. The *Partnership for Patients* brings together stakeholders and partners in various sectors to work with the state and federal governments in a shared effort to improve the safety and reliability of hospital care with decreased cost. Those that share the commitment can pledge to join the Partnership. Pharmacists of the U.S. Public Health Service (USPHS) have pledged to demonstrate their commitment to this Departmental initiative. With over 250 USPHS pharmacists pledged as of August, 2011, these pharmacists currently make up approximately 15% of all providers and clinicians across the nation both internal and external to the federal government who have pledged to this commitment. Beyond saving lives and preventing injuries, pharmacists are an integral piece of this initiative and can directly contribute to the goals of this Partnership. This can potentially save up to \$35 billion across the healthcare system, including up to \$10 billion in Medicare savings, over the next three years. Furthermore, there could be \$50 billion cost reduction for Medicare over the next ten years with billions more savings for Medicaid, which would facilitate a more sustainable healthcare system for our nation.

Clinical and Community Patient Care Services

Healthcare delivery (including preventive and supportive care) in the U.S. is challenged by variables that increase demands on access, safety, quality, and cost. These challenges are amplified by provider workforce shortages and dramatic increases in primary and chronic care visits. Currently, it is estimated that over 56 million Americans lack adequate access (not coverage) to primary health care because of shortages of primary care physicians in their communities.¹¹ Furthermore, medications are involved in 80% of all medical treatments and impact every aspect of a patient's life. It is reported that drug-related morbidity and mortality cost the U.S. almost \$200 billion annually.¹² Current healthcare demands provide an opportunity for health leadership to recognize and adopt additional, existing and successful models of pharmacist-delivered patient care to improve healthcare delivery and preventive care.

Key Facts

- Chronic diseases currently affect 45% of the population (133 million Americans), account for 81% of all hospital admissions, 91% of all prescriptions filled, 76% of physician visits, and continue to grow at dramatic rates.¹³
- Medications are the cornerstone of chronic disease therapy, yet our healthcare system can fragment care and implement reactive health care delivery models. Of all Medicare spending, 99% goes to beneficiaries with chronic disease.¹³
- A review of 298 studies exploring pharmacist-provided direct care found favorable therapeutic and safety outcomes. Additionally, results of specific quality care indicators (A1C, LDL, blood pressure, etc.) were found to be significantly in favor of pharmacist-delivered care over comparative services.⁸
- A review of 25 studies involving more than 40 pharmacists and 16,000 patients found that expanded pharmacist services led to a decrease in the number of non-scheduled health services, as well as a decrease in specialty visits and the number and cost of drugs.¹⁴

Recommendations: How can pharmacists improve this picture?

- 1) **Increase access to healthcare.** Pharmacists currently deliver many levels of clinical care and are remarkably underutilized as healthcare providers in the healthcare delivery system given their level of education, training and access to the community. Maximizing the roles and scope of pharmacists to deliver a variety of patient-centered primary care and public health, in collaboration with physicians, is a proven and existing paradigm of care that can be efficiently implemented. Collaborative Practice Agreements between pharmacists and physicians provide patients with greater access (especially for medically underserved and vulnerable populations), higher quality, safer, and more comprehensive health care via the team approach. Pharmacists are uniquely qualified and positioned to provide additional primary care services through these collaborative and synergistic efforts that compliment physician services.
- 2) **Increase quality of health care.** Hundreds of articles, systematic reviews and meta-analyses of positive patient and healthcare system outcomes have been published in peer-reviewed journals that demonstrate that the collaborative practice model is evidence-based. By selecting and monitoring therapeutic and patient care regimens through focused management of disease, pharmacists with larger roles in patient care improve outcomes, shift time for physicians to focus on more critically ill patients, improve patient and provider satisfaction, assure patient safety, enhance cost-effectiveness, and clearly advance and improve healthcare delivery.
- 3) **Contain healthcare costs.** Utilizing pharmacists to co-manage disease as drug therapy experts with other members of the healthcare team will maximize resources, contain or reduce costs and improve care. Significant reductions in drug misadventures could occur by allowing pharmacists greater clinical intervention and more comprehensive medication management authorities. Collaborative practice pharmacy models benefit many consumers including other primary care providers, patients, administrators, and third-party payers in the form of preventive care, quality care, patient safety and cost-containment.

Project Highlight: Indian Health Service Pharmacy Innovation: National Clinical Pharmacy Specialist (NCPS) Program

Indian Health Service (IHS) pharmacy is widely known in the federal sector, private sector and academia for decades of innovative pharmacy practice, which includes privileges to manage disease and chronic care through medications. In many IHS facilities, it is common for patients to have pharmacists providing focused medical and preventive care through clinic visits very similar to that of other healthcare providers. In October 1996, a memorandum from the IHS Director established IHS pharmacists as primary care providers (PCPs) and allowed for privileges to include prescriptive authority.

In response to a growing interest in clinical practice nationwide and meetings with key stakeholders, the National Clinical Pharmacy Specialist (NCPS) Program was established in 1998. The scope of NCPS care includes all criteria and responsibilities covered in the IHS Standards of Practice, as well as focused management of disease states for selected patients in whom medications are the principle method of treatment. Patient care may include a patient interview, chart review, ordering and interpretation of laboratory tests, physical assessment, prescriptive authority, formulation of clinical assessments, and development of therapeutic plans, patient education, and patient follow-up. Treatment and management are performed through a Collaborative Practice Agreement (CPA) that has been approved by the local medical staff. If the pharmacist is a credentialed NCPS, the CPA also has to be approved by the NCPS Committee. With these expanded scopes, pharmacists have been privileged to address primary and secondary disease prevention, prevention of exacerbation of disease and other public health preventive issues such as tobacco cessation, obesity, chronic care, and pain management. After 13 years, the program has certified 223 pharmacists from 18 states (approximately 20% of IHS pharmacists), directly increasing the access to and quality of patient care through collaborative practice, and prevention and disease management. NCPS expanded to include Bureau of Prisons in December 2008.

The NCPS Program also developed a respondent-driven survey to seek input of physicians on the impact of pharmacists delivering primary care services including disease management. Physician-respondent support of this paradigm of healthcare delivery was decisive: 117 Physicians representing 13 states and 33 IHS and Tribal facilities responded. Ninety-six percent of providers who responded reported some benefits whether it was improved disease management outcomes, increased return on investment, allowing the physician to shift their workload to more critical patients, increased patient access to care and more.

Clinical Pharmacy Services Collaborative

In 2008, the Senate Appropriations Committee encouraged the Health Resources and Services Administration (HRSA) to establish a pharmacy collaborative to identify and implement best practices, which may improve patient care by establishing the pharmacist as an integral part of a patient-centered, inter-professional healthcare team." To meet these goals, HRSA formed the Patient Safety and Clinical Pharmacy Services Collaborative (PSPC), a national program that seeks to improve health outcomes and eliminate adverse drug events among high-risk patients. The PSPC model is adapted from the Institute for Healthcare Improvement's Breakthrough Series Collaborative methodology, designed to rapidly spread evidence-based healthcare practices throughout communities nationwide.

Key Facts

- Among the 128 teams participating in Patient Safety and Clinical Pharmacy Services Collaborative (PSPC) 3.0, an estimated 30% of the total patient population would benefit from clinical pharmacy services due to their high-risk characteristics: multiple chronic conditions, multiple providers, and complex drug regimens.

Recommendations: How can pharmacists improve this picture?

- 1) **Improve patient safety.** With leadership provided by USPHS Pharmacists, the PSPC is improving patient safety and fostering community partnerships that will transform the nation's healthcare delivery system. Within each community, healthcare organizations partner to form teams that use an inter-professional approach including physicians, pharmacists, nurses, health educators, and more. The PSPC promotes the role of the pharmacist and medication management for patients with multiple chronic conditions.
- 2) **Deliver integrated care and medication management.** Community-based teams focus on delivering integrated care and medication management through patient-centered health homes, ultimately improving quality of care and safety among high-risk patients. The interventions are drawn from the PSPC "Change Package," a suite of more than 100 evidence-based best practices for redesigning local healthcare delivery systems. These best practices foster inter-professional care teams, instill the patient-centered health home model, and, upon implementation, produce tangible results for the patients served. These change strategies fall into five major areas: Leadership Commitment, Measurable Improvement, Safe Medication Use Systems, Patient Centered Care, and Integrated Care Delivery.
- 3) **Continue to expand collaborative community team care model.** For the PSPC's fourth year — beginning in the fall of 2011, the Centers for Medicare and Medicaid Services' quality improvement organizations will be enrolling additional community teams in all fifty states, which will likely expand the collaborative to 300-500 teams nationwide. With emerging partners and additional teams joining a concerted, focused effort to address healthcare needs across the country, PSPC is delivering critical, comprehensive services to an increasing number of high-risk patients, as well as hardwiring a new model of safer, better care into the nation's healthcare delivery system. The PSPC has demonstrated that pharmacists, as part of an inter-professional approach, have a leading role in improving patient safety through medication management.
- 4) **Track key indicators/outcome measures.** Teams specifically work to reduce the rate of adverse drug events (ADEs) and potential adverse drug events (pADEs). The goal is to drive the rate of such events to zero. Teams also select

health status markers to track from nationally recognized, standardized quality measures.

PSPC Measures

Health Status Marker	Measure	Source
Anticoagulation	INR in range	CHEST guidelines
Asthma	Patients are on controller therapy	NCQA/NQF
Depression / Mental Health	Depression status based on accepted measurement tool	HRSA HDC
Diabetes Mellitus	A1C < 7%; A1C > 9%	NCQA/NQF, PQRI
Dyslipidemia	LDL at goal	NCQA/NQF
HIV / AIDS	Patients on HAART	HAB measure
Hypertension	BP < 140/90 mmHg or DM < 130/80 mmHg	NCQA/NQF, AMA

Project Highlight: Patient Safety and Clinical Pharmacy Services Collaborative

Now in its third year, the PSPC has expanded to 128 community-based teams, representing 43 states, the District of Columbia, and Puerto Rico. The work of the PSPC is supported not only by HRSA, but also by several other federal agencies including the Centers for Medicare and Medicaid Services, the Food and Drug Administration, and Agency for Healthcare Research and Quality as well as a host of national organizations and stakeholders from various disciplines. These nearly 170 national organizations participate on the PSPC's Leadership Coordinating Council, providing resources and support to PSPC teams. 2010 marked the launch of the nonprofit Patient Safety and Clinical Pharmacy Services Alliance, a public-private partnership that aims to expand and accelerate the work of the PSPC as a sustainable model for health care.

Patient-Centered Medical Home and Medication Adherence

The Patient-Centered Medical Home (PCMH) is an innovative model of coordinated patient care. It has been conceptualized and successfully implemented largely in part due to the changed political environment for health reform, the unrelenting escalation in healthcare costs, and the underperformance of the existing highly fragmented system in delivering care that is effectively coordinated, higher in quality, safer, more cost-effective, and more efficient in achieving desired healthcare outcomes. It involves healthcare providers that work in an integrated and collaborative system of care that promotes evidenced-based practices, enhanced coordination of care, greater safety, and more complete and effective use of the specialized knowledge and skills of those professionals working as part of the medical home patient care team.¹⁵

Key Facts

- Self-treatment: pharmacists are best suited to make recommendations for patient's dietary supplements, over-the-counter (OTC) medications and natural/herbal medications, and create a comprehensive medication record.
- Medication Therapy Management (MTM) includes medication reconciliation, optimization and review to influence patient outcomes.
- Pharmacists can serve as clinical information experts and provide an effective deterrent to public health diseases through provision of immunization.

Recommendations: How can pharmacists improve this picture?

- 1) **Optimize medication use outcomes, quality, and safety.** Pharmacists possess substantial education, knowledge, and skills in the clinical application of medications in the care of patients and are among the most readily accessible of all healthcare professionals. This positions them to serve patients and other healthcare providers in optimizing medication use, reducing/preventing medication-related problems, therapeutic substitutions and improving health outcomes by providing medication therapy management and other pharmaceutical care services as well as certain health promotion, wellness education, and disease prevention services.¹⁵
- 2) **Enhance medication adherence.** Pharmacists are uniquely positioned to educate patients on the importance of medication adherence.^{16, 17} They can draw upon their drug expertise and knowledge and create a trusted personal relationship with the patient to improve outcomes. The benefits of pharmacist-led care have been demonstrated in evaluations of the Asheville Project, a community-based, pharmacist-led program to improve self-management of patients living with diabetes.¹⁸ Pharmacists are able to simplify dosing regimens and several complex strategies, including combinations of more thorough patient instructions and counseling, reminders, close follow-up, supervised self-monitoring, rewards for success, family therapy, psychological therapy, crisis intervention and telephone follow-up to improve adherence and treatment outcomes.¹⁹
- 3) **Provide pharmaceutical care strategies.** Pharmacists provide the responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patient's quality of life. Pharmacists utilize verbal discussion to reinforce appropriately designed written material and are able to make patients aware of available medication adherence aids and devices, such as dosing reminders, pill boxes, and refill reminder programs. Pharmacists demonstrate appropriate use of self-monitoring devices such as blood pressure, diabetes, cholesterol and other disease state monitoring devices. Through these methods, pharmacists are able to maximize the use of strategies to effectively enhance compliance, decrease costs, improve quality and patient outcomes.^{20, 21}

Project Highlight: HIV Medication Adherence and Management

The Phoenix Indian Medical Center (PIMC) treated 149 HIV patients with antiretroviral (for at least one month) in fiscal year 2010. The total cost of this treatment was over \$1.25 million. Through alternate resource utilization, the expense was reduced to less than \$135 thousand. During a five year targeted utilization there was a total cost savings of \$3.46 million. This was made possible by utilizing alternate resources for medications, ensuring patient adherence, access to medication and maintaining excellent treatment plans.⁸ The Gallup Indian Medical Center (GIMC) Collaboration started in 2003 to decrease missed-fills and improve adherence to refills. This created a pharmacist-managed HIV adherence clinic focusing on dyslipidemia in HIV and is currently incorporating HIV adherence in patients co-infected with Hepatitis C and receiving treatment for both diseases.²³

Tobacco Free Living

Commercial tobacco abuse is the leading preventable cause of death in the United States. Each year 443,000 people die from tobacco-related diseases and complications. Cigarette smoking is a major risk factor for the four leading causes of death: heart disease, cancer, stroke, and chronic obstructive pulmonary disease. According to the National Health Interview Survey (NHIS) of adults, Native Americans have the highest rates of commercial tobacco use in the United States.

Key Facts

- 20.6% of all adults (aged 18 years and older) in the United States smoke cigarettes.²⁸ Cigarette smoking is more common among men (23.5%) than women (17.9%).²⁸
- Cigarette smoking causes one out of every five deaths in the U.S. each year.²⁴
- More deaths are caused each year by tobacco use than by all deaths from human immunodeficiency virus (HIV), illegal drug use, alcohol use, motor vehicle injuries, suicides, and murders combined.^{24, 25}
- Pharmacists can improve a patient's health status by screening for tobacco use including smoking status, ceremonial use of tobacco, smokeless tobacco and exposure to tobacco smoke at work or home.
- Supporting patients to make the decision to quit is the first step to improving their health.
- Tobacco use and environmental exposure screenings are essential components of patient care and are included in Meaningful Use measures and clinical assessment tools, such as the Diabetes Audit and the Comprehensive Cardiovascular Disease measure.

Recommendations: How can pharmacists improve this picture?

- 1) ***Pharmacists are accessible.*** The U.S. Public Health Service Clinical Practice Guideline, *Treating Tobacco Use and Dependence*, emphasizes that all medical and allied health professionals have the power to make a difference in the lives of patients who use tobacco. Traditionally, pharmacists have carried the unique role of being one of the most accessible healthcare providers and as the profession continues the momentum of implementing evidence-based prevention and treatment practices, the impact on positive patient outcomes is increasing drastically.
- 2) ***Implement the evidence-based integrated 5 A Brief Intervention Model.*** The 5A Brief Intervention Model (Ask, Advise, Assess, Assist, Arrange) for addressing tobacco dependence and exposure is an effective tool for all healthcare systems and community-based venues. The strategies are designed to be brief, requiring 3-10 minutes of clinician time. Overall, persons dependent on tobacco who receive a brief intervention have approximately a 60% greater likelihood of quitting.²⁷ Today, 70% of smokers want to quit, yet only 28% are being offered treatment services by a healthcare professional.²⁷ In a survey conducted in 2003 in northern California, over 60% of patients felt that advice or assistance from a pharmacist would probably or definitely increase their chance of a successful quit attempt.²⁶ Educating clinicians is the most effective way to provide them with information regarding multiple effective treatment options and to ensure that they consistently intervene with tobacco users.
- 3) ***Offer cessation services.*** Cessation services that can be provided by pharmacists include:
 - patient education on quitting tobacco (written or verbal)
 - referral to tobacco counseling services
 - referral to a 'quitline'
 - recommendation of over-the-counter (OTC) or prescription medications as appropriate to assist patients in quitting
- 4) ***Utilize clinical reminders.*** Use of clinical reminders and clinical decision support in Electronic Health Systems (EHRs) to prompt pharmacists can help programs be successful.

Project Highlight: Indian Health Service Tobacco Control Task Force and University of Arizona HealthCare Partnership

The Indian Health Service Tobacco Control Task Force and the University of Arizona HealthCare Partnership have created a multi-disciplinary, evidence-based systems change model for tobacco control that includes a tobacco dependence treatment certification program for all healthcare professionals. The certification and training program follows the recommendations of the USPHS Clinical Practice Guideline (2008) and evaluates the impact that tobacco dependence treatment certification has on systems change by measuring the utilization of tobacco control activities targeted within a program. The evaluation design is based on Bandura's model of self efficacy and future intention applying Ajzen's theory of planned behavior. The evaluation outcomes from 550 Indian Health Service healthcare professionals, including 150 pharmacists, from 2007 to present show marked increases in evidence-based treatment interventions.

Preventing Prescription Drug Abuse

The National Prevention Strategy and the White House Office of National Drug Control Policy Prescription Drug Abuse Prevention Plan describe prescription drug abuse as the nation's fastest growing drug problem. The impact of prescription drug abuse is felt by individuals and communities across the country, exacting a significant toll on our health, social, economic, and criminal justice systems. Preventing prescription drug abuse and other substance abuse increases people's chances of living long, healthy, and productive lives. Because pharmacists play a critical role in the medication use process, their ability to positively impact the prescription drug abuse epidemic and its associated morbidity and mortality is immense.

Key Facts

- Over 7 million Americans reported non-medical use of prescription drugs in 2009.²⁹
- In recent years, the number of people who, for the first time, took prescription drugs non-medically was similar to the number of first-time marijuana users.²⁹
- Six of the top 10 abused substances among high school seniors are prescription drugs.³⁰
- Between 1998-2008, there was a four-fold increase in addiction treatment admissions for individuals abusing prescription opioids.³¹
- The number of emergency department visits linked to non-medical use of pharmaceuticals doubled between 2004 and 2009 with 1.2 million ED visits in 2009.³²
- In 2007, there were over 27,000 unintentional drug overdose deaths in the U.S., primarily driven by prescription opioid painkillers.³³
- It is estimated that prescription drug abuse costs the U.S. over \$55 billion in 2007.³⁴

Recommendations: How can pharmacists improve this picture?

- 1) **Educate patients and caregivers about the safe use of prescription drugs.** In 2010, 3.99 billion prescriptions were dispensed in the U.S. This represents millions of interactions between pharmacists and patients; each an opportunity for pharmacists to improve patients' understanding of the benefits and risks of medications, especially controlled prescription drugs. Key points to cover when these drugs are dispensed include: using them only as directed; not sharing them with others; not combining them with alcohol or other drugs not prescribed; storing them in a secure place; and instructions on proper disposal.
- 2) **Reduce inappropriate access to and use of prescription drugs.** A comprehensive approach to address prescription drug abuse, driven primarily by abuse of prescription pain relievers (opioids), should focus on reducing abuse of these drugs while ensuring legitimate access for pain management. Pharmacists play a pivotal role in reducing prescription drug abuse by ensuring that clinicians are prescribing medications only for a legitimate medical purpose. Pharmacists' interventions with clinicians who are prescribing controlled prescription drugs for illicit purposes are essential to the protection of public health and public safety.
- 3) **Identify prescription drug abuse and other substance use disorders early.** Due to the critical role pharmacists play in the medication use process and the expansive access pharmacists have to the population, they are an essential component of the nation's public health workforce. Currently, pharmacists are well suited to implement Screening, Brief Intervention, and Referral to Treatment (SBIRT) services in many practice settings. SBIRT in primary care and trauma centers has been shown to reduce drug use and excessive alcohol use. By identifying medications misuse and abuse early and intervening, pharmacists can greatly reduce the health, social, and economic consequences of prescription drug abuse.
- 4) **Participate in community medication take back programs.** According to the National Survey on Drug Use and Health, over 70% of people who reported non-medical use of pain relievers in 2009 say they got them from a friend or relative.²⁹ Easy access to prescription drugs from America's medicine cabinets is contributing to the misuse of these drugs. Local medication take back programs are an intervention that helps to remove medications from the

community. Several nationwide medication take back days have been held over the last year, and pharmacists in communities across the country have been active participants at these events. These programs are an opportunity for pharmacists to serve their communities and demonstrate their important role in protecting and promoting public health.

- 5) *Build capacity for pharmacists to sustain these services and positively impact prescription drug abuse.* Develop mechanisms to provide reimbursement for pharmacists providing cognitive and clinical services such as SBIRT, medication take back, and in-depth counseling on safe use of controlled prescription drugs. With this, the 'reach' of the public health system exponentially expands.

Project Highlight: Implementation of Prescription Drug Monitoring Programs in Indian Health Service

Consistent with the goals of improving the early identification of misuse or abuse of prescription drugs, Indian Health Service (IHS) pharmacists have been actively involved in working with state prescription drug monitoring programs (PDMPs) to share IHS controlled prescription drug utilization information. PDMPs are state run databases that contain utilization information on all controlled substances dispensed within the state. Through this work, IHS has begun to submit controlled substance utilization data on patients treated at IHS facilities to PDMPs in several states. This enables both IHS and non-IHS clinicians to check a patient's record for all controlled substances they may have received, in and out of the IHS network, thereby improving patient care by identifying dangerous drug-drug interactions, therapeutic duplications, and misuse or abuse of prescription drugs. With this tool, IHS pharmacists will be able to take a more active clinical role in their patient's medication use as well as potentially implement SBIRT programs to screen patients for substance abuse, provide a brief intervention, or refer them to treatment if appropriate. As this initiative moves forward, IHS plans to incorporate all IHS facilities so that 100% of the prescriptions written and dispensed by IHS clinicians will be reported to state PDMPs, and to have all IHS clinicians accessing the state PDMPs to improve patient care and public health.

Obesity Prevention

The obesity epidemic continues to grow in the United States. The National Prevention Strategy recognizes that obesity has more than doubled over the last 30 years.¹ Randomized-controlled trials have revealed that multi-disciplinary approaches that address dietary modification and increased physical activity are effective, at least in the short-term, in reducing the prevalence of obesity, the incidence of type 2 diabetes, and the levels of risk factors for cardiovascular disease.³⁵ One of the Healthy People 2010 goals is to reduce the prevalence of obesity to 15%; however, at least 12 states currently have obesity rates that exceed 30%.³⁶ Pharmacists and other healthcare providers have a responsibility to promote, live, and teach healthy lifestyle behaviors aimed at combating obesity.

Key Facts

- The prevalence of obesity in the U.S. more than doubled (from 15% to 34%) among adults and more than tripled (from 5% to 17%) among children and adolescents from 1980 to 2008.³⁷
- 70% of American Indian and Alaska Native adults are overweight or obese.³⁷
- Obesity is a contributing cause to many health problems including heart disease, stroke, diabetes, and some cancers.³⁸
- Recent estimates indicate that \$147 billion is spent annually in medical costs associated with obesity.³⁸
- An obese teenager has a 70% greater risk of becoming an obese adult.³⁷

Recommendations: How can pharmacists improve this picture?

- 1) **Educate the public and advocate.** Pharmacists can promote healthy habits by participating in community health fairs, radio shows, newspapers articles, and one-on-one goal setting discussions with patients. Pharmacists can promote programs such as First Lady Michelle Obama's "Let's Move!" program in healthcare and community settings.
- 2) **Increase access to physical activity programs.** Pharmacists should become familiar with what is offered in the community they serve. Having connections with multi-disciplinary community resources is vital in the battle against obesity. Partnerships with fitness trainers, physical therapists, and dietitians can help increase access for patients and strengthen obesity prevention programs. Pharmacists can also serve as a point of entry for patients into obesity prevention programs.
- 3) **Build capacity for pharmacists to set goals toward physical activity.** Pharmacists should take opportunities to learn about motivational interviewing, problem solving, and SMART goal setting techniques in order to motivate patients to set and achieve healthy weight loss goals. These skills can be utilized in a variety of pharmacy-based clinics. The Indian Health Service (IHS) Healthy Weight for Life program is the "umbrella" initiative for guiding all IHS activities that promote healthy weight in Native communities.³⁹
- 4) **Get involved in local communities.** As the trusted healthcare professionals in the communities, pharmacists can take the lead in healthy lifestyles with involvement in physical activities in local communities. For example, Whiteriver IHS pharmacists take patients to the gym to demonstrate exercises and also sponsor nature walks. A Shiprock pharmacist is involved in a "Just Move It" program for patients. Yakama pharmacists create cultural events such as weekly "Dance Away Diabetes" powwows and huckleberry picking events. These community programs promote self-management and recognize the importance of individual and support networks within communities. Obesity prevention programs that include individual, cultural and group activities can be highly effective.

Project Highlight: Just Move It

The Northern Navajo Medical Center (NNMC) “Just Move It” program has pharmacists actively involved on the multi-disciplinary obesity prevention team. In 1993, only 400 people were participating in “Just Move It” activities. By 2010, the NNMC “Just Move It” had over 37,000 participants actively involved in obesity prevention activities.

Reproductive and Sexual Health

The National Prevention Strategy discusses that sexual health affects individuals and society across a broad spectrum of activities: through health, but also through factors at multiple levels, such as gender relations, reproduction, and economics. The Centers for Disease Prevention and Control (CDC) states that access to quality health services and support for safe practices can improve physical and emotional well-being and reduce teen and unintended pregnancies, HIV/AIDS, viral hepatitis, and other sexually transmitted infections (STIs).⁴⁶ Within health reform and advancement of our profession in the field of public health and direct patient care services, opportunities exist to expand and explore the potential benefits of using a broad prevention approach in sexual health. In the United States, over 250 million people visit a pharmacy every week. Therein lays an untapped public health resource to advance a preventive approach to sexual and reproductive health.

Key Facts

- Approximately 80% of HIV diagnoses in the U.S. are among people who become infected through sexual exposure.⁴⁰
- Individuals who are infected with STIs are at least two to five times more likely than uninfected individuals to acquire HIV infection if they are exposed to the virus through sexual contact.⁴¹
- The HIV-positive unaware group contributes disproportionately to new infections relative to their percentage of the HIV-positive population in the U.S.⁴⁰
- Of the approximately 1,000,000 people living with HIV in the U.S., about 750,000 are aware and 250,000 are unaware of their sero-positive status.⁴⁰
- HIV prevention efforts can be advanced by screening in settings where patients present with less-advanced stages of HIV infection and by initiating treatment with Highly Active Antiretroviral Therapy (HAART) earlier in the course of

Recommendations: How can pharmacists improve this picture?

- 1) ***Increase access to care through effective preventive, screening, treatment, and support services that promote sexual health.*** Pharmacists have the scope to include some preventive health and public health measures. Due to the expansive access to the population through pharmacists, healthcare settings and community pharmacies, the reach of the nation's public health infrastructure should include pharmacists. Currently, pharmacists in some settings may have the capacity to do either universal screening for HIV and STIs or risk-based screening as a 'back-door' triage for missed opportunities. Persons that engage in sexual activity and screen positive for one STI may not be screened for HIV and vice versa. Given rapid testing technologies, it is also feasible in certain settings to have pharmacists screen STI-positive clients for HIV when picking up medications that treat positive STI diagnosis.
- 2) ***Enhance early detection of HIV, STIs and hepatitis, and improve linkages to care.*** Pharmacists can also play a significant role in identifying, educating, and improving overall care for sexual healthcare patients. With early screening and detection, pharmacists can bring greater impact in health education, early initiation of treatment, adherence to treatment, reduction in adverse events and reduction in costs to the healthcare system with regards to sexual health. As seen with the substantial cost of individual HIV care, early diagnosis, treatment and treatment adherence can effectively improve overall economic outcomes and burden for HIV/STI patients. Pharmacists can also link patients with appropriate resources for treatment, care and further assessment of sexual health. By doing so, pharmacists can enhance coordination and integration of public health screening strategies.
- 3) ***Promote communication/awareness/education.*** With expansive access to the population, pharmacists can provide health education and promote communication and awareness. Increased awareness will decrease adverse individual and public health outcomes including HIV/STDs transmission, viral hepatitis, unintended pregnancies, drug abuse, and overall sexual health. Pharmacists also have the capacity to promote and disseminate national screening recommendations for HIV and other STIs. As part of health education, pharmacists can discuss preventive methods of abstinence and other prophylactic measures. For example, condom effectiveness is determined by a number of factors, yet most studies focus on

infection.⁴²

- Health services can also help promote knowledge about, and compliance with, recommended screening and vaccination for specific STIs.⁴³⁻⁴⁵
- It is estimated that more than \$125 billion in medical costs alone have been averted through HIV prevention efforts.⁴⁷

consistency of condom use without regard to condom use errors. With proper education from health professionals, many unwarranted outcomes may be avoided. Pharmacists can be appropriately trained, given their experience in community education and communication, to engage in prevention education and health sexual behavior.

- 4) *Build capacity for pharmacists to sustain these services and positively impact sexual and reproductive health issues.* Services that would increase access to health care can be combined to increase eligibility for reimbursement for these services. With this, the 'reach' of the public health system exponentially expands. Policies and integrative (or collaborative) approaches that would aid in creating infrastructure for comprehensive reproductive healthcare services should be established to include pharmacists.

Project Highlight: Indian Health Service Expanded Sexual Health Initiative

Consistent with the recommendations above, the Indian Health Service (IHS) recently commenced an expanded 'sexual health' initiative with interested pharmacists, intended to increase healthcare access through effective preventive screenings and linkages to care. Pharmacists will work closely with providers, laboratories, and other clinical staff to coordinate rapid testing screens using new rapid testing technologies to increase access to these services. This may operationalize as screening high-risk patients once diagnosed with another STI or as another potential access point for the community to receive universal HIV screening. Given the CDC recommendations for universal HIV screening and subsequent screening for high-risk groups such as STIs, this screening project may apply in just about every facility in the IHS. In addition, early screening translates to early treatment and early access to care. In addition, two funded HIV highly active antiretroviral treatment (HAART) adherence programs have commenced to optimize medication use both as a treatment and preventive measure. Adherence to HAART is directly related to virologic success and undetectable viral loads have demonstrated successful utilization as a preventive measure for transmission of the HIV virus. Preliminary outcomes will be measured as proportion of patients screened for HIV that have a co-existing STI. This health IT measure has been created within the IHS Clinical Reporting System (CRS) database and can be collected and analyzed by individual sites and nationwide. Currently, this is one of the only health systems to collect this type of data logic and involve multidisciplinary clinicians in its approach.

Diabetes Prevention

Diabetes mellitus is a persistent medical problem in our country. It is especially prevalent and devastating for the Native American population, where resources and healthcare access are often limited. Diabetes plays a significant role in patient morbidity and mortality, and standard medical treatments often result in insufficient disease control. Pharmacists are uniquely positioned within the community and healthcare centers to improve access to patient care, enhance coordination of care, and improve outcomes associated with diabetes.

Key Facts

- 25.8 million people have diabetes in the U.S. (8.3% of the population); the population percentage can be as high as 33.5% for some Native American populations.⁴⁸
- 79 million people have pre-diabetes.⁴⁸
- Diabetes is the 7th leading cause of death in the U.S.¹
- The overall risk of death and cost of medical expenses for patients with diabetes are twice that of people without the disease.⁴⁸
- Risk of heart disease and stroke is two to four times higher among people with diabetes.⁴⁸
- The total cost of diabetes is \$174 billion in 2007 with \$116 billion for direct medical costs and \$58 billion for indirect costs.⁴⁸

Recommendations: How can pharmacists improve this picture?

- 1) ***Increase access to care.*** Pharmacists play a significant role in identifying, educating, and improving overall care for high-risk patients. In their traditional roles, pharmacists are invaluable to help patients understand the benefits and risks of their medications. These medications often have potentially serious complications that can be easily avoided with an appropriate understanding of side effects and disease state recognition. The one-on-one education also establishes the pharmacist as a medication and disease expert who is easily accessible when complications or questions arise. Ease of access is often a barrier for patients when trying to communicate with their primary care providers. The accessibility of pharmacists makes them an integral care liaison for improving overall patient care, especially for patients with diabetes.
- 2) ***Enhance coordination and integration of clinical health strategies.*** Pharmacists play significantly greater roles in the management of diabetes, as shown by care models within the Indian Health Service/Tribal systems. Pharmacists function as physician extenders for several target and often problematic areas in diabetes management. Pharmacy-based medication management clinics addressing diabetes, hypertension, and dyslipidemia, among others, are growing in number and have demonstrated positive clinical and economic outcomes. Achieving target glycemic, blood pressure, and lipid goals for these patients are areas where pharmacists' impact can be measured.
- 3) ***Improve overall economic outcomes for diabetic patients.*** Outcomes from pharmacist-based diabetes care management programs have shown a clinically and economically significant impact on an overburdened healthcare system. Clinical improvements have resulted in 28-55% of patients achieving their A1C goal, 31% reaching their LDL goal, and 20-28% achieving their BP goal. Total healthcare cost savings have been estimated at \$918-\$2,750 annually per patient.^{49, 50}

Project Highlight: Intensive Diabetes Management Service

As part of the IPC 3 (Improving Patient Care) initiative, pharmacists are being utilized to enhance the coordination of complementary health strategies to reach goals in difficult to manage diabetic patients. The Intensive Diabetes Management Service (IDMS) is a pharmacy-based program utilized within the Cherokee Nation. The primary function of the IDMS is to provide clinical services to patients with uncontrolled diabetes for the purpose of attaining proper glycemic, blood pressure, and lipid control based on accepted clinical practice. This program utilizes a physician supervised Collaborative Practice Agreement (CPA) where patients with uncontrolled diabetes, i.e. A1C > 9%, may be referred by their Primary Care Manager (PCM). Once a patient is referred to the IDMS, the pharmacist clinician provides thorough counseling on all diabetes, hypertension, and/or dyslipidemia medications. The pharmacist also counsels on dietary and exercise aspects as well as manage medications as clinically determined necessary. The primary advantage of the IDMS versus traditional medical management is the ability to provide close follow-up with short interval appointments allowing faster titration of medications to effective doses. Pharmacists are readily accessible to patients providing constant feedback and direction, especially with aggressive therapy and self-titration education/decisions. Preliminary outcomes are promising, with 88% of enrolled patients demonstrating improvement in outcome measures and 30% of referred patients attaining therapy goals within four months of enrollment. After four months of enrollment, IDMS patients have demonstrated an average decrease in their fasting blood sugar of 60mg/dL, which should equate to a > 2% decrease in their A1C.

Cardiovascular Disease Prevention

The National Prevention Strategy encourages the use of Clinical and Community Preventive Services in an effort to prevent death and disability from preventable diseases and by detecting health problems early. Specifically, the National Prevention Strategy focuses on improving cardiovascular health utilizing “highest-value services that are both evidence-based and cost-effective [including] Aspirin, Blood pressure control, Cholesterol reduction, and Smoking cessation.”⁴ The National Health and Nutrition Examination Survey (2005-2008) identified that a majority of Americans with high cholesterol or blood pressure do not have it controlled. The Indian Health Service (2011) states that “people with diabetes are at increased risk for cardiovascular disease, the number one killer of American Indian and Alaska Native adults.”

Key Facts

- One out of six American Indian and Alaska Native (AI/AN) adults (16.3%) has diagnosed diabetes. This is more than double the prevalence rate for the general U. S. population.⁵¹
- Pharmacists provide pharmacotherapy management in dyslipidemia, hypertension, tobacco cessation, and blood sugar control.
- Several pharmacists throughout the Indian Health Service have pharmacy based clinics through the National Clinical Pharmacy Specialists (NCPS) program.
- Case management involves considering the full picture of an individual’s well-being including their chronic diseases, medications, lifestyle and family.

Recommendations: How can pharmacists improve this picture?

- 1) ***Increase access to care through the use of pharmacists as case managers.*** These pharmacists provide physical assessment, lab monitoring, coordination of care, diabetes education, and Therapeutic Lifestyle Changes (TLC) coaching. Pharmacist case managers also provide pharmacotherapy management (through Collaborative Practice Agreements with a physician) in hypertension, dyslipidemia, tobacco cessation and glycemic control. They encourage behavior modification with techniques such as self-management and motivational interviews.
- 2) ***Enhance early detection of cardiovascular risk factors.*** Pharmacists regularly monitor, assess and help manage the known risk factors for cardiovascular disease including hypertension, dyslipidemia, tobacco use, diabetes, physical inactivity and obesity. These regular monitoring and assessments allow effective prevention efforts and early detection.
- 3) ***Promote communication/awareness/education.*** As educators, pharmacists routinely provide information that encourages goal setting and self-management of modifiable cardiovascular disease risk factors to enhance prevention. This can be done in all settings where pharmacists practice.
- 4) ***Build capacity for pharmacists to sustain these services and positively impact cardiovascular disease prevention.*** Services that would increase access to health care can be combined to increase eligibility for reimbursement for these services. With this, the ‘reach’ of the public health system exponentially expands. Policies and integrative (or collaborative) approaches that would aid in creating infrastructure for comprehensive cardiovascular disease prevention and care services should be established to include pharmacists.

Project Highlight: Healthy Heart Project

The “Healthy Heart Project” (HHP), established in 2004 through the Special Diabetes Programs for Indians grants, addresses cardiovascular risk factors in American Indians and Alaska Natives through a team-based case management model. Four of the 30 grantees utilize pharmacists as the case manager. With this initiative, USPHS Pharmacists have positively impacted cardiovascular disease prevention in our American Indian and Alaska Native population through coaching, education and goal setting as well as pharmacist initiated medication adjustments.

Parameter	Yakama HHP	Standard Care
Dental Care	72%	42%
Blood Pressure < 130/80 mm Hg	48%	31%
LDL < 100 mg/dL	76%	45%

Parameter	Whiteriver HHP	Standard Care
Triglycerides < 150 mg/dL	58%	30%
LDL < 100 mg/dL	80%	58%
Blood Pressure < 130/80 mm Hg	66%	60%
A1c > 9.5%	26%	30%

Pharmacy-Based Immunization Delivery

The National Prevention Strategy encourages the use of evidence-based clinical and community preventive services in an effort to prevent death and disability from preventable diseases and by detecting health problems early. Specifically, the National Prevention Strategy discusses preventive services including screening tests, counseling, immunizations, or medications to prevent diseases.¹ Pharmacists have been recognized nationwide as immunization providers and have already made a substantial impact within this public health measure.

Key Facts

- As of April 2010, all 50 states allow pharmacists to administer vaccines, pursuant to each State Board of Pharmacy's regulations.⁵²
- Pharmacists have the expanded access to vaccinate individuals who are unlikely to receive vaccinations elsewhere, thus affecting the overall number of patients who are immunized.⁵³
- A study showed that individuals who live in states where pharmacists can administer vaccinations have higher influenza vaccination rates than individuals who reside in states where pharmacists could not provide this service.⁵⁴

Recommendations: How can pharmacists improve this picture?

- 1) **Educate the public and advocate.** Pharmacists help patients keep their immunizations up-to-date. Pharmacists can discuss immunization schedules and patient-specific recommendations with their patients. Pharmacist-patient counseling and pharmacy handouts or reminder stickers can open dialogue between patients and their healthcare professionals. In this way, every pharmacist can promote public health opportunities and improve overall patient care.
- 2) **Increase access to immunizations.** Pharmacists can administer immunizations in community pharmacies, immunization clinics, outreach programs, or other facilities. In addition, pharmacists can also facilitate other healthcare professionals to offer immunizations. Pharmacists are among the most accessible healthcare professional as they are often available 24 hours a day, seven days a week, on a walk-in basis within the patient's own community.
- 3) **Build capacity for pharmacists to provide immunization services and positively impact immunization rates.** Support is needed through the development and implementation of policies and integrative (or collaborative) approaches to create infrastructure for comprehensive immunization services that include pharmacists. Increasing eligibility for pharmacist reimbursement will promote this pharmacy-based immunization practice and remove barriers for provision of immunization services.
- 4) **Participate in flu readiness and response activities.** Pharmacists play significant roles in emergency response activities for provision of clinical services as well as with the logistics of drug and vaccine distribution. Should the need arise, a cadre of trained immunizing pharmacists are capable of leading and providing mass vaccination or drug distribution efforts and will permit a more efficient and effective response to mitigate a public health emergency.

Project Highlight: U.S. Public Health Service Pharmacist-Provided Immunization

The USPHS Pharmacist Professional Advisory Committee (PharmPAC) has pursued the pharmacy-based immunization training of USPHS pharmacists since 2006. Of the approximately 1100 pharmacists in the USPHS Commissioned Corps, approximately half have completed the American Pharmacists Association Pharmacy-based Immunization Training Certificate Program or an equivalent training program. USPHS Pharmacists are also trained as faculty instructors to teach the APhA Pharmacy-Based Immunization Training courses and offer these courses at their facilities and national or regional conferences at a reduced cost. These pharmacists serve as mentors to other pharmacists that start immunization practices and clinics in their own facilities. USPHS pharmacists have trained over 300 pharmacist colleagues through sponsored training programs offered through the PharmPAC, the Indian Health Service, the Federal Bureau of Prisons, and the Food and Drug Administration.

- In 2006-2007, 20 Commissioned Corps Pharmacists were activated through the Office of Force Readiness and Deployment (OFRD) to provide influenza immunizations at the Federal Occupational Health (FOH) clinics. These pharmacists provided 1184 immunizations, comprising approximately 45% of the influenza immunizations that the FOH offered to federal employees for the 2006-2007 influenza season at three federal worksites.⁵⁵
- In 2007-2008, 62 Commissioned Corps Pharmacists participated in the FOH flu clinics at nine different locations throughout Maryland, DC, Vermont and Connecticut, and immunized approximately 1400 patients.⁵⁵
- In 2008-2009, 61 Commissioned Corps Pharmacists participated in the FOH flu clinics in five states and immunized approximately 1800 patients.⁵⁵
- Commissioned Corps Pharmacists have also provided immunizations during emergency response activities and continue to be ready to provide mass immunizations should the need arise during public health emergencies.

Implementing the National Prevention Strategy through Medicare Payment Reform

Medicare has a special role to play in implementing the National Prevention Strategy. As the source of health insurance for more than 45 million Americans, Medicare has a deep responsibility to move the nation away from a healthcare system focused on sickness and disease to one focused on wellness and prevention. And as the country's largest payer for care, Medicare has a powerful ability to be a catalyst for change.⁵⁶

The Centers for Medicare and Medicaid Services (CMS) pharmacists, USPHS officers and civil servants alike have embraced the National Prevention Strategy and are actively working through various CMS programs to implement its fundamental elements.

Messages for Pharmacists:

- “Talk to beneficiaries about their health and make referrals for preventive benefits”⁵⁶
- 5.5 million people with traditional Medicare used one or more of the ACA preventive benefits since January 2011⁵⁶

Initiative Goals:

- Reduce preventable injuries that happen in hospitals by 40 percent, thus preventing 1.8 million injuries and saving 60,000 lives⁵⁶
- Improve care transitions, reduce hospital readmissions by 20 percent, thus saving more than 1.6 million patients from complications⁵⁶

MTM Outcomes

- Pharmacists providing 96.3% of MTMPs services in 2011⁵⁸
- Provide disease state management, coordinated case management and/or action plans for up to 7 million beneficiaries⁵⁹

Medicare's Share the News, Share the Health Campaign

USPHS Pharmacists throughout CMS are leading hundreds of outreach sessions on prevention to providers, beneficiaries and various stakeholders nationwide. They are emphasizing the new prevention benefits provided in the Affordable Care Act (ACA) which have eliminated Part B co-insurance and deductibles for the majority of preventive screenings and services.⁵⁷

Partnership for Patients Initiative

CMS is bringing together hospitals, physicians, nurses, pharmacists, employers, unions, patient advocates, health plans, and others to improve the safety of health care in America and prevent patient harm before it happens.

USPHS Pharmacists are working to educate the profession on these initiatives since pharmacy plays a critical role in patient safety, medication use and coordination of care across the healthcare spectrum.

Medicare Part D Medication Therapy Management (MTM)

CMS pharmacists continue to enhance Medicare Part D MTM by implementing provisions from the Affordable Care Act that strengthen the pharmacists' ability to prevent disease and illness in the Medicare population.

We continue to see year-after-year improvements in Medication Therapy Management Programs (MTMPs) including an annual, face-to-face comprehensive medical review by a qualified provider.⁵⁸

Conclusion

Preventing disease or progression of chronic disease directly alleviates the disproportionate amount of chronic care needs and demands on the health system.² Approximately 125 million Americans (45% of the population) had one or more chronic conditions in 2000 and 61 million (21% of the population) had multiple chronic conditions. It is estimated that the population of people with chronic conditions will increase steadily, so that by 2020, 164 million people (almost 50% of the population) will have a chronic condition and 81 million (24%) of them will have two or more conditions.^{60, 61} The number of people with chronic conditions is projected to increase steadily for the next 30 years. While current healthcare financing and delivery systems are designed primarily to treat acute conditions, 78% of health spending in the U.S. is devoted to people with chronic conditions.⁶²

Prevention can reduce the significant economic burden of disease in addition to improving the length and quality of people's lives. Treatment, lost productivity, and healthcare costs are significant burdens to the economy, families, and society. Prevention policies and programs reduce healthcare costs, improve productivity and enhance health of the population. Through incorporating ecological approaches to behavior change and establishing partnerships of all stakeholders with identified roles, the National Prevention Strategy will guide our nation in using effective and comprehensive approaches for improving health and well-being.¹

The pharmacy profession can bring significant contribution to the implementation of National Prevention through increasing access to prevention and care services, serving as multipliers/extenders of other healthcare professionals, increasing quality of prevention services and care delivery, enhancing national public health and health IT infrastructures, and partnership with other healthcare providers to name a few. Pharmacists are the most accessible healthcare professionals in the U.S. and have always been one of the most trusted professions.⁶³

The U.S. Public Health Service Pharmacy Prevention Strategy aligns with and implements the vision, goal, strategic directions and priorities of the National Prevention Strategy. It is framed around activities that clearly articulate and present evidence-based practices and data.

This Pharmacy Prevention Strategy demonstrates USPHS Pharmacists' support for and involvement in the strategic directions and priorities of the National Prevention Strategy.

Some of the key outcome indicators that the pharmacy profession can contribute to as outlined in this Pharmacy Prevention Strategy include: 1) increased patient knowledge and capability for decision-making on health care and healthy choices; 2) increased partnerships among all stakeholders including patients and other healthcare professionals; 3) increased availability and accessibility of preventive and treatment services; 4) increased quality of preventive services and care delivery; 5) increased care coordination; 6) decreased preventable injuries and medical errors; and 7) enhanced capability and integration of public health and healthcare infrastructures.

U.S. Public Health Service Pharmacists are fully committed to supporting and implementing the National Prevention Strategy and the U.S. Public Health Service Pharmacy Prevention Strategy as we collaborate with stakeholders and partners to shift from treatment-focused to prevention-focused care for a more sustainable healthcare system and healthier nation.

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