INTRODUCTION

The American College of Preventive Medicine (ACPM) collaborated with the Centers for Disease Control and Prevention (CDC) in a cooperative 5-year agreement to improve population health through primary care and public health integration. As part of the last 2 years of the cooperative agreement, the CDC’s 6|18 Initiative was identified as a critical project for ACPM to promote among its membership. Information on the CDC’s 6|18 Initiative is available here: www.cdc.gov/sixeighteen/index.html.

This paper reflects work done as part of the cooperative agreement between ACPM and CDC, with the intention of informing the preventive medicine community about the CDC’s 6|18 Initiative, identifying physician barriers to adoption of the initiative, and providing examples from across the country of various 6|18 interventions implemented in the physician practice or healthcare setting. The purpose of this manuscript is to highlight existing physician practices related to the 6|18 Initiative, to increase physician awareness of the 6|18 Initiative, and to identify potential opportunities for ACPM physicians to incorporate elements of this initiative into their practice settings. This manuscript does not represent a policy statement from ACPM.

WHAT IS THE CENTERS FOR DISEASE CONTROL AND PREVENTION’S 6|18 INITIATIVE?

The CDC’s 6|18 Initiative is a collaboration between CDC and partners, such as public health agencies, healthcare providers, and payers, to “accelerate evidence into action” by targeting six common and high-cost health behaviors/conditions with 18 proven interventions. Recent health systems changes in the public and private sector have been implemented to increase access to primary and preventive healthcare services; introduce new payment models, such as value-based reimbursement; and adopt new care models (e.g., patient-centered medical homes). This new environment has created opportunities to broadly implement evidence-based preventive strategies for improving population health. Recognizing these opportunities and the importance of collaborating with key stakeholders to improve uptake of prevention, the CDC created the 6|18 Initiative to identify evidence-based interventions that have both health and cost impacts that can inform payment and delivery of preventive services by the healthcare system.

CONTEXT OF THE CENTERS FOR DISEASE CONTROL AND PREVENTION’S 6|18 INITIATIVE

In the last decade there has been increasing interest in the collaboration between health care and public health.
To frame population health across the healthcare to public health continuum, the CDC developed a conceptual framework with three buckets of prevention (Figure 1).3

Bucket 1 includes traditional clinical prevention delivered to individuals in clinical settings (e.g., colorectal cancer screening). Bucket 2 includes innovative services that extend care from the clinic to the community, delivered to individuals in community settings (e.g., the home delivery of asthma self-management training and home assessment for asthma triggers by a community health worker). Bucket 3 includes community-wide prevention delivered to total populations (e.g., smoke-free ordinances that allow a population to breathe smoke-free air). This framework can be applied to the CDC 6|18 Initiative, as the interventions focus on Buckets 1 and 2.

A systematic review of the literature, expert consultation, and conceptual frameworks guided CDC’s selection of the 18 interventions targeting the six health behaviors or conditions with the following goals: reduce tobacco use, control high blood pressure, improve antibiotic use, control asthma, prevent unintended pregnancy, and prevent type 2 diabetes.4 Evidence related to these conditions and interventions is updated annually so the number may fluctuate over time; currently, there are 16 specific evidence-based interventions associated with the six conditions.

ALIGNMENT WITH EXISTING GUIDELINES

The CDC 6|18 Initiative interventions align with recommendations from national and professional societies and include recommended evidence-based clinical and community preventive services from the U.S. Preventive Services Task Force (USPSTF). For example, the USPSTF recommends that clinicians ask all adults about tobacco use, advise them to stop using tobacco, and provide behavioral interventions and U.S. Food and Drug Administration—approved pharmacotherapy.5 In turn, one of the 6|18 Initiative’s goals, “Reduce Tobacco Use,” builds upon the USPSTF tobacco recommendations by proposing payers expand access to evidence-based tobacco-cessation treatments, including individual, group, and telephone counseling; and all Food and Drug Administration—approved cessation medications, in accordance with the 2008 Public Health Service Clinical Practice Guideline, Treating Tobacco Use and Dependence.

OBSERVATIONS RELATED TO PROVIDER UTILIZATION OF THE 6|18 INTERVENTIONS

An aim of the CDC’s 6|18 Initiative is to collaborate with healthcare provider networks and organizations to improve delivery of the 6|18 interventions. Currently, there are 31 state Medicaid—public health department partnerships that are implementing elements of the CDC’s 6|18 Initiative. A further CDC 6|18 Initiative aim is to engage physicians, such as preventive medicine physicians, by giving them health and cost evidence to help them consider adoption of these interventions into their practice context. As part of ACPM’s collaborative agreement with the CDC, further insights into identifying potential facilitators and barriers to physician adoption of the 6|18 Initiative interventions were sought. Members of the ACPM Prevention Practice Committee and two CDC authors from the 6|18 Initiative engaged in a series of six telephone-moderated discussions to develop this manuscript. The purpose of these telephone discussions was to hear and consider potential facilitators and barriers to physician adoption of the 6|18 Initiative interventions. During these discussions, the authors explored the following contextual considerations to better understand individual and health system behavior in the context of the 6|18 Initiative:

- the current role of preventive medicine physicians in fostering system-based changes in their practices and in what settings and forms these changes can occur;
- the systems-based changes that might need to take place in order for providers to learn, operationalize, and incorporate new evidence-based interventions into their practices;
- challenges and solutions experienced by physicians regarding the 6|18 Initiative; and
- current practice examples where physicians have applied the 6|18 interventions within their practices.

Based upon the collective experience of the authors, the following three themes were developed as to how physicians may perceive the 6|18 interventions: First,
physicians may lack knowledge/awareness of the interventions themselves, the underlying evidence, or the availability to their patient populations. Second, physicians may experience varying financial incentives for delivery of the interventions. Third, physicians may experience operational challenges to integrating 6|18 interventions into clinical workflows.

The following three sections will provide further discussion and review of the developed themes.

LACK OF KNOWLEDGE/AWARENESS

Preventive medicine physicians may be unfamiliar with some of the 6|18 Initiative interventions or may be unfamiliar with or disagree with an intervention’s supporting evidence. Others may not be prepared to change previous clinical practice. As a result, physician perception of the validity and importance of the 6|18 Initiative’s interventions may affect physician delivery of the 6|18 interventions. Although a number of Medicaid payers across the country have partnered with their corresponding public health agency to adopt elements of the Initiative, physicians may not be aware of these agreements and changes in payer coverage policies. Similarly, in the commercial market, coverage may vary, and a significant barrier may exist to physicians’ understanding of current coverage policies across many payers. In situations in which payers are not offering coverage in alignment with the 6|18 interventions, engaging payers may be required as a critical step prior to physicians promoting the interventions with patients.

VARIATIONS IN FINANCIAL INCENTIVES

Financial incentives and disincentives are being increasingly used as part of pay for performance. Tying 6|18 interventions, and related improvements in performance, to pay-for-performance quality metrics may increase interest in adopting certain interventions.

Financial incentives to individual physician practices (e.g., financial reimbursement or other forms of recognition such as awards) can act as an extrinsic motivator to encourage adoption of these 6|18 interventions, whereas personal satisfaction derived from doing good work or internal desire to achieve a particular objective can act as an intrinsic motivator. Both extrinsic and intrinsic motivators drive physician behavior and can affect physician behavior change. Although financial penalties have been shown to have a stronger effect on physician behavior than rewards, behavioral economics researchers at the University of York and the University of Michigan observed that the use of financial incentives to improve quality in health care may be increased if physician-level reimbursements include elements that are meaningful to the physician. These researchers identified example incentives, such as financial rewards large enough to be meaningful to the physician; the use of penalties in addition to rewards or bonuses; alignment of incentives to professional priorities; and the use of frequent, discrete rewards or disincentives.

OPERATIONAL ASPECTS

Time constraints can impede adoption of new interventions by individual providers. A primary care physician would have to spend an estimated 21.7 hours per day to provide all recommended acute, chronic, and preventive care for a panel of 2,500 patients. An additional focus on the 6|18 interventions may add to this persistent time challenge. Physicians may also not know how to operationally implement some of these interventions; for example, the National Diabetes Prevention Program requires physicians to have both operational awareness of the program and practice-level changes to support patient referrals to the program.

Additionally, practice and administrative demands may represent competing priorities. For several of the interventions, implementation requires extensive coordination within a health system. For example, unbundling the cost of a long-acting reversible contraceptives device from the delivery cost (a 6|18 intervention) requires coordination among payers, hospital systems, pharmacy systems, and providers, and requires both clinical and administrative process changes.

The use of electronic health records may ease some of the operational barriers; electronic health record use has been successful in improving preventive cancer care, has been linked to improved quality care for two of the 6|18 condition goals (control asthma and improve antibiotic use), and may contribute to higher-quality care related to the associated 6|18 interventions.

CURRENT STRATEGIES BEING USED TO INFLUENCE PHYSICIAN USE OF EVIDENCE-BASED PRACTICES

The authors identified a key strategy used to encourage physicians to implement evidence-based interventions has been to solicit buy-in from physician leaders who are engaged in the improvement process. Educational outreach, peer review, physician input, financial incentives, and penalties have also been cited as strategies that may affect physician decision making. Another mechanism to encourage the adoption of these interventions, particularly in the ACO framework, has been to align them with performance or quality measures, as these
Table 1. Examples of Physician and Health System Activities That Align With the CDC’s 6/18 Initiative Interventions

<table>
<thead>
<tr>
<th>6/18 Intervention</th>
<th>Practice examples of physician uses of 6/18 Intervention</th>
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<tbody>
<tr>
<td>Reduce tobacco use</td>
<td>• Increase access to evidence-based tobacco-cessation treatments, including individual, group, and telephone counseling and FDA-approved cessation medications (in accordance with the 2008 Public Health Service Clinical Practice Guideline and the 2015 U.S. Preventive Services Task Force tobacco cessation recommendation statement).</td>
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<td>• Remove barriers that impede access to covered cessation treatments, such as cost-sharing and prior authorization.</td>
<td>• In 2002, the LSU Health System’s Health Care Services Division and LSU Health Science Center-Shreveport partnered with the LSU Health Science Center-New Orleans School of Public Health to establish the Tobacco Control Initiative (TCI). The TCI’s goal was to reduce tobacco use among the patient population of the 10 LSU health system public hospitals. Because of this effort, physicians screened more for tobacco use, referred more tobacco users to cessation counseling services, and prescribed more medications to assist patients quit.</td>
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<td>• Promote increased use of covered treatment benefits by tobacco users.</td>
<td>• The TCI also provided dedicated tobacco treatment personnel at each site, clinician training, and routine performance appraisal and feedback.17</td>
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<td>Control high blood pressure</td>
<td>• Implement strategies that improve adherence to blood pressure and other common chronic disease prescription medications, including lipid-lowering and smoking-cessation medications. These strategies can include one or more of the following:</td>
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<tr>
<td>• Expand access to:</td>
<td>o Medication fill options with low ($5 or less) or no copayments</td>
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<td>• Dispensing of fixed-dose medication combinations and provide them with low or no copayments</td>
<td>• Group Health Cooperative in Seattle, Washington, developed a patient-centered model of care for controlling hypertension that incorporates three elements: education and training on use of an existing web-based system, home monitoring of blood pressure, and periodic contact from pharmacists to review blood pressure readings and adjust therapy as needed. At the 1-year follow-up mark, those patients receiving all three program elements achieved greater improvements in blood pressure control and took more blood pressure medications than did patients receiving only certain elements of the program and those receiving usual care. The program was expanded to six additional medical centers and integrated into Group Health Cooperative’s medical home program.18</td>
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<tr>
<td>• Extended supply of pills per medication fill (e.g., 90-day fills or greater) among members with adequately managed chronic conditions</td>
<td>• Reliant Medical Group, a multispecialty group practice, in central Massachusetts, created standard operating procedures for accurately measuring blood pressure, and gave digital home blood pressure monitors to 200 of its patients with prediabetes and diabetes. Several times a week, patients measured and uploaded their blood pressure readings into their electronic health record. Nurses regularly reviewed patients’ data and adjusted the amount of blood pressure medicine based on a protocol. Through a combination of accurate measuring, home monitoring, and nurse, clinical pharmacist, and health coach feedback and support, Reliant transformed blood pressure care and control in its patient population. Reliant now has a hypertension control rate of 79% in its adult population and is consistently in the top 90% of blood pressure control rates compared with other healthcare systems across the country.19</td>
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<td>• Innovative adherence-promoting packaging by pharmacies (e.g., calendar plaster packs)</td>
<td>o Provide care coordination within networked primary care teams through:</td>
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<td>• Use and adherence to standardized protocols to manage blood pressure, cholesterol, and support tobacco cessation</td>
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<td>• Operationalization of electronic prescribing (e-prescribing) with the two-way exchange of information between prescriber and pharmacy</td>
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<tr>
<td>• Implementation of medication therapy management programs</td>
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<td>• Implementation of self-measured blood pressure monitoring with clinical support interventions</td>
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<tr>
<td>• Provide patients with known or suspected hypertension validated home blood pressure monitors and reimburse for the clinical support services required for self-measured blood pressure monitoring—also knowing as home blood pressure monitoring.</td>
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<tr>
<td>Improve antibiotic use</td>
<td>• Require antibiotic stewardship programs in all hospitals and skilled nursing facilities, in alignment with CDC’s Core Elements of Hospital Antibiotic Stewardship and the Core Elements of Antibiotic Stewardship for Nursing Homes.</td>
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<tr>
<td>• Reduce inappropriate antibiotic prescribing by giving incentives to providers to encourage them to closely follow CDC’s Core Elements of Outpatient Antibiotic Stewardship</td>
<td>• In South Dakota, clinical and administrative health system leaders created multidisciplinary teams to affect changes throughout health systems and facilities. As a result of this multidisciplinary approach by physicians and other providers, a statewide program to help ensure antibiotics remain effective was created and resulted in actions that led to a 50% decrease of prescriptions for antibiotics that were associated with a higher risk of Clostridioides difficile infections and the creation of clinical guidelines for treatment of pneumonia in a large health system.20</td>
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<td>• In 2015, the Illinois Department of Public Health developed the Precious Drugs and Scary Bugs program to improve the appropriate use of antibiotics, particularly for acute respiratory infections, in primary care, urgent care, and community health</td>
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### Table 1. Examples of Physician and Health System Activities That Align With the CDC’s 6|18 Initiative Interventions (continued)

| 6|18 Intervention | Practice examples of physician uses of 6|18 Intervention |
|----------------|--------------------------------------------------|
| **Control asthma** | • Use the 2007 NAEPP Guidelines as part of evidence-based clinical practice and medical management guidelines.  
• Promote strategies that improve access and adherence to asthma medications and devices.  
• Expand access to intensive self-management education by licensed professionals or qualified lay health workers for patients whose asthma is not well-controlled with the medical management approach outlined in the 2007 NAEPP Guidelines.  
• Expand access to home visits by licensed professionals or qualified lay health workers to provide both targeted, intensive self-management education and the reduction of home asthma triggers for patients whose asthma is not well controlled through use of both 2007 NAEPP Guidelines’ medical management and asthma self-management education.  
| • Blue Cross Blue Shield of Texas has included the 2007 NAEPP guidelines as an asthma standard of care in the individual practice setting for its physicians.  
Those Blue Cross Blue Shield of Texas–contracted physicians who participate in the Bridges to Excellence Asthma Care Program are eligible for financial incentives. As of December 2016, 216 physicians were recognized under the Blue Cross Blue Shield of Texas Asthma Care Program and received incentive payments.  
• AmeriHealth Caritas implemented a comprehensive asthma management program serving Medicaid recipients in southeastern Pennsylvania that partnered with the local affiliate’s high-volume network medical providers (including physicians). This effort led to distinct provider-specific CHW models in northeast Philadelphia, west Philadelphia, and Chester tailored to the local demographic environments. Physician or other medical providers referred high-risk patients to trained CHWs, who are supervised by a medical director, and participate in practice- and telephone-based care management system to provide face-to-face asthma-related care coordination, home health and environmental surveys, and asthma-related education for members and their families, while addressing the social determinants impacting members’ health. Improvements were observed in asthma controller medication adherence rates, acute asthma hospitalizations, and hospital readmissions. Increases in pharmacy expenditures for asthma medication were more than offset by significant decreases in hospital admission rates.  |

| **Prevent unintended pregnancy** | • Reimburse providers for the full range of contraceptive services (e.g., screening for pregnancy intention; client-centered counseling; and insertion, removal, replacement, or reinsertion of LARCs, such as intrauterine devices and implants or other contraceptive devices, and follow-up) for women of childbearing age.  
• Reimburse providers or provider systems for the actual cost of FDA-approved contraception, including LARC or other contraceptive devices.  
• Reimburse for immediate LARC insertion after delivery of a baby in addition to the labor and delivery bundle.  
• Remove administrative and logistical barriers to contraception (e.g., remove pre-approval requirement or step-therapy restriction and manage high acquisition and stocking costs).  
| • The Delaware Division of Public Health partnered with a nonprofit organization to create an innovative initiative focused on increasing same-day access to birth control, including long-acting reversible contraception. Included in this initiative was a change by the Delaware Medicaid agency to implement a fee-for-service reimbursement for LARC under which providers can receive a bundled rate that allows them to charge for their own costs, which acts as a financial incentive for intra-partum placement.  |

| **Prevent type 2 diabetes** | • Expand access to the National DPP, a lifestyle change program for preventing type 2 diabetes.  
| • Health providers at Intermountain Health began a DPP in 2013 in partnership with their clinical nutritional services unit. Physician leaders developed a diabetes prevention strategic plan, integrated screening alerts into their electronic medical records system, created a prediabetes registry and a prediabetes course. Intermountain Health is pursuing CDC recognition as a DPP provider via their Weigh to Health program and also obtained a virtual CDC-accredited provider as an option for their patients.  |
measures may drive payer activities. For example, the use of financial incentive metrics as part of a state’s healthcare transformation has effectively resulted in decreased avoidable emergency department visits.

CURRENT PREVENTIVE MEDICINE PHYSICIAN ACTIVITIES IN ACCELERATING UTILIZATION OF THE 6|18 INITIATIVE

The 6|18 Initiative, with its focus on highlighting high-burden health conditions with evidence-based interventions to improve health and reduce costs aligns with the ACPM mission. ACPM is currently in the second year of a 5-year partnership with the CDC’s Division of Diabetes Translation to support the 6|18 goal of preventing type 2 diabetes via the Increasing Physician Screening, Testing, and Referral to the National Diabetes Prevention Program. ACPM also addresses blood pressure control through an educational collaboration with the CDC’s Division of Heart Disease and Stroke Prevention’s WISEWOMAN program, and ACPM-created tobacco-cessation educational modules. Preventive medicine—trained physicians play an important role in promoting population health initiatives by practicing across multiple sectors of health care, including clinical care delivery, healthcare systems leadership, serving in the military and Veterans Health Administration, working for public and private insurers, performing research, and working in public health agencies. These diverse roles offer many cross-sector opportunities to help promote utilization of 6|18 interventions within the systems in which they practice. An example of preventive medicine physician implementation of 6|18 interventions within a practice setting is the Oregon Health Authority’s Coordinated Care Organization materials, which include guides for physicians to identify tobacco users during intake assessments at office visits and assessments to guide office workflows toward maximizing tobacco referrals. Table 1 includes a list of current 6|18 interventions identified by CDC coauthors and highlights specific clinical strategies that physicians, as part of varying practice settings across the country, have used to implement some of them.

CONCLUSIONS

The CDC 6|18 Initiative highlights common and costly health behaviors or conditions with proven interventions that integrate primary care and public health, extending outside of the clinic and traditional clinical preventive services. ACPM collaborated with the CDC in this paper to increase awareness of the 6|18 Initiative, describe potential barriers to adoption, and illustrate successful examples of where 6|18 interventions are being applied. The broad scope of preventive medicine physician practice, from provider to policy maker to payer, make this specialty uniquely positioned to support and lead adoption of 6|18 Initiative targets and implementation of interventions across clinics, health systems, and communities. ACPM physicians represent a critical audience of providers who, based upon their training and background, naturally focus on prevention, and have become critical partners in delivering these evidence-based preventive services as part of covered health plan benefits. Future research may want to consider how financial incentives are to be used as part of a payment structure, those that incentivize evidence-based interventions, such as the CDC 6|18 Initiative, may be more likely to result in improved health outcomes and lower costs, than those without a supporting evidence or cost base.

Additional information about CDC’s 6|18 Initiative, and ACPM’s involvement are provided in the following links: www.acpm.org/page/cdcprojects and www.acpm.org/page/618course.

ABOUT ACPM

The American College of Preventive Medicine (ACPM) is the national medical specialty society of physicians dedicated to disease prevention, health promotion, and systems-based healthcare improvement. Established in 1954, ACPM is the leading U.S.-based physician organization focused on practice, research, publication, and teaching of evidence-based preventive medicine. ACPM’s members are leaders in a variety of health settings, including state and local health departments, federal agencies, hospitals, health plans, community and migrant health centers, industrial sites, occupational health centers, academic centers, private practice, and the military. ACPM provides a dynamic forum for the exchange of knowledge and offers high-quality educational programs for continuing medical education and maintenance of certification, information and resources for ongoing professional development, and networking opportunities. For more information, please visit us at www.acpm.org/.

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