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Joining Hands: Partnerships Between Physicians and The Community in The Delivery of Preventive Care

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Progressive Ideas for a Strong, Just, and Free America

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Executive summary

Americans are suffering from a "prevention gap." Although a healthier lifestyle and the receipt of clinical preventive services (e.g., screening tests, immunizations) can save thousands of lives and help control health care costs, the average American receives only half of recommended preventive services. A long list of barriers faced by clinicians, patients, and health care systems account for the failure to capitalize on prevention.

Physicians and their practices can do more to close the prevention gap. A variety of tools and techniques for practice redesign can be adopted by the medical community to improve the delivery of preventive care. Examples include the implementation of reminder systems when patients are due for preventive services, and the use of a team approach in which receptionists and nurses share responsibilities with physicians for delivering certain preventive services. However, most doctors' offices lack the resources for dramatic restructuring. Although they want their patients to receive excellent preventive care, most physicians lack the time, skills, and reimbursement to deliver services with the intensity and consistency that patients deserve.

Patients in many communities can obtain such assistance through local programs (e.g., smoking cessation classes), telephone quit lines, and online resources. Studies indicate that such programs are often more effective than physicians, many of whom would welcome the help. The great paradox, however, is that physicians are often unaware of such programs, or fail to refer patients because they lack a simple means of doing so. Creating systems that enable physicians to easily refer patients to such programs and to obtain reports on their progress offers a "win-win" solution. Clinicians acquire the means to offer their patients more intensive preventive care without overburdening their practice. Patients obtain more effective help than the practice could provide alone. Community programs receive more referrals. Payers get more value for the dollar from a more effective prevention package.

Joining hands—the partnership between clinicians and the community to improve preventive care—requires three important elements. First, awareness of community programs must be raised for clinicians. Second, public and private health insurance plans must eliminate financial barriers to use of such services. Third, an infrastructure must be created to enable clinicians to easily refer patients and to exchange information with community programs in the course of routine patient care. Examples exist in which clinicians are already succeeding in such partnerships—with telephone counseling programs, online resources, and local behavior-change classes. Some states and cities have implemented community-wide integration strategies to promote healthy behaviors. But more can be done.

Building on these local success stories, federal policymakers and leaders of health systems can take the next step of fostering such partnerships on a national scale. Specific policies at the federal level could enhance preventive care not only by catalyzing practice redesign (e.g., financial incentives under Medicare or pressing vendors to develop electronic tools to improve preventive services delivery), but also by expanding the infrastructure that practices require to coordinate with community resources (e.g., stabilize funding for quit lines and analogous services, create a website that clinicians could use to identify local resources quickly, and create a nationwide system for local facilitation of partnerships analogous to the Cooperative Extension System Offices model).

The business case for taking such steps is compelling. If a joint approach to prevention is more effective in slowing the upsurge in chronic diseases—a major driver of spiraling health care costs that threaten the U.S. economy—the enormous savings would easily offset the outlays required to build systems for integration. This is the wrong time to be penny-wise and pound-foolish. Leaders must understand the implications of an aging baby-boomer generation and recognize the "perfect storm" on the horizon. The urgency of investing in prevention now to mitigate a crisis could not be greater.

Introduction

Clinical preventive services offer great potential to reduce the burden of disease among Americans and to stem the rise in health care costs. *Clinical preventive services* are tests and other activities (e.g., smoking cessation, immunizations) undertaken by clinicians to prevent the onset of disease and to detect diseases (e.g., cancer) in early stages. *Primary prevention*—helping asymptomatic persons not to develop diseases—holds great promise because a handful of health habits (tobacco use, physical inactivity, unhealthy diet) cause approximately one third of deaths in the United States.[1] *Secondary prevention*—screening for disease in asymptomatic persons—can lower death rates from various diseases; mortality from colorectal and breast cancer can be lowered by 15-20%.[2,3] Primary and secondary prevention have always made sense, but are imperative now when the obesity epidemic, the rising incidence of chronic disease, and resulting health care costs pose major threats to public health and the economy.

Gaps in the Delivery of Clinical Preventive Services

Despite the inherent logic behind prevention, Americans receive only half of recommended clinical preventive services.[4] The prevention gap is worse for certain services—e.g., recent screenings for colon cancer is reported by only 57% of Americans for whom it is recommended[5]—and for underserved populations. The poor and certain minorities, such as African and Hispanic Americans, are even less likely to be up-to-date on preventive services, and many have never received recommended preventive care.

Table 1
Lives Saved by Offering Preventive Services to 90% of eligible Americans

Clinical preventive service	QALYs gained
Identification and counseling of smokers	1,300,000
Aspirin chemoprophylaxis	590,000
Screening for colorectal cancer	310,000
Influenza vaccination of adults	110,000
Screening for breast cancer	91,000
Screening and counseling for problem drinking	71,000
Vision screening among adults	31,000
Screening for cervical cancer	29,000
Screening for Chlamydia infection	19,000
Pneumococcal vaccination of adults	16,000
Cholesterol screening	12,000

Adapted from: Maciosek et al. Priorities Among Effective Clinical Preventive Services: Results of a Systematic Review and Analysis. Am J Prev Med 2006, in press.

The lives lost as a result of the prevention gap are enormous. Table 1 lists recent estimates of the number of quality-adjusted life years (QALYs) that could be saved if preventive services were offered to 90% of eligible individuals. For example, Americans lose 590,000 QALYs each year because too few adults take aspirin daily to prevent heart disease.

The reasons for the prevention gap are complex and can be categorized as clinician, patient, and system barriers. Clinicians fail to deliver, or even mention, recommended preventive services due to simple oversight, lack of time, inadequate reimbursement, skepticism about effectiveness, and doubts about self-efficacy (e.g., in giving nutritional advice). Patient barriers include lack of knowledge about the need for preventive services, limited motivation to take action, and logistical challenges, such as the lack of time, resources, and insurance coverage to obtain help with lifestyle changes or to obtain recommended tests.

The health care system is clumsy in delivering preventive services because of its fragmented infra-structure. Patients referred for a colonoscopy, counseling by nutritionists, or other services outside the practice often "fall through the cracks," discovering that their instructions were misleading or inadequate, that the specialist is out-of-network, or that they lack coverage under their health plan.

A more fundamental system barrier, however, and which contributes to the wider prevention gap among the poor and minorities, is the large number of Americans who are uninsured. But lack of health insurance is not the only explanation. For example, studies find that a large proportion of Medicare beneficiaries have not received clinical preventive services that are covered by the program.[6] Many upper-income Americans are also behind on their preventive care.[7]

Since the prevention gap stems from a variety of clinician, patient, and system barriers, there is no "magic bullet" solution—such as offering coverage for preventive services or installing electronic health records. Nor is it adequate to admonish primary care clinicians to do a better job. Physicians and other health care professionals can make changes to improve their delivery of preventive care, as we detail below, but their hands are tied when the larger problems rests with the health care system or the community infrastructure within which their office or clinic operates. Change must occur in tandem within the practice, in the community, and in policy. True success requires working together.

Solutions to the Problem

In this section, we discuss the steps that practices can take to redesign their procedures to improve delivery of preventive care in the clinical setting. We then discuss the valuable resources that communities offer—outside the clinical practice—to promote healthy behaviors and provide preventive services. Ultimately, however, we conclude that steps in either sector alone will fail to reach their full potential if they occur in silos. Collaboration between the clinical practice and the community is necessary to "move the needle" in preventive care and to improve the efficiency of spending on such services.

Practice redesign

Individual clinicians, practices, and health systems can take important steps to redesign procedures within the clinic to close the gap in the delivery of preventive services. The strategies listed in Table 2 are among those with the strongest evidence of effectiveness.[8,9] They include a commitment to prevention among practice leaders, prompts or electronic reminders to alert clinicians and notices to patients when preventive services are due, audits of medical records, and feedback to clinicians to monitor how well they are delivering preventive care.

Practices benefit from the adoption of organized systems and procedures and a team approach to offering preventive care in which receptionists, medical assistants, and nurses play integral roles in concert with physicians. Practices can adopt "standing orders," in which physicians authorize nurses to perform preventive services (e.g., administering influenza vaccine, referring women for mammography screenings) if the patient meets predetermined criteria.

Table 2
Effective Practice Strategies to Improve Delivery of Clinical Preventive Services

• Culture change among practice leadership and staff
• Reminder systems for clinicians (e.g., prompts, flow sheets)
• Reminders for patients (e.g., letters, emails)
• Standing orders for practice staff
• Feedback and audits
• Organizational change (separate clinics devoted to prevention, use of a planned care visit for prevention, teamwork and collaboration, designation of non-physician staff to do specific prevention activities)
• Patient financial incentives

Practice guidelines instruct clinicians to offer the "5A's" in counseling patients about health behaviors: not only to Ask each patient whether he or she engages in the behavior and to Advise the individual that it is beneficial to change, but also to Agree on next steps, Assist the patient in finding tools and strategies for change, and Arrange follow-up to reinforce behavior change. Consistently offering this high level of assistance is challenging. Such services are available at some practices, delivered by physicians, nurses, or other office staff who have received special training. The counseling occurs at conventional office visits or in more creative venues, such as group visits, telephone sessions, or email. At some practices, knowledgeable staff are available to help patients arrange for help in the community or to direct them to useful websites and online resources.[10,11]

Practices offering such high-intensity services are the exception rather than the rule, however. In all but the exceptional cases, practice staff lack skills in motivational interviewing and behavioral change counseling. Most physicians lack the time to obtain training for themselves. The business climate for primary care in the U.S. is turbulent. Revenues in most primary care practices are barely sufficient to meet rising overhead expenses (e.g., malpractice premiums, salaries for administrative staff to process insurance claims), causing many clinicians to give up their practices.[12] Under these conditions, few primary care clinicians feel that they can afford the time, resources, or distractions from patient care to dramatically reconfigure practice operations. Limited reimbursement for detailed behavioral counseling discourages physicians from diverting either themselves or their nursing and office staff from core clinical duties to offer this service. Although electronic health records are becoming more common—in use at an estimated 15% of primary care practices in 2005[13]—the capital costs of purchasing such systems make them unaffordable for many clinicians and implementation problems are common.[14] Finally, most practices lack ready access to complete or current information about resources in the community or online resources that could fill the void. The best that many patients can hope for is to find a relevant brochure in the lobby.

Community resources

The world outside the doctor's office—the people and programs in the community—can be helpful, and sometimes essential, to accomplish primary and secondary prevention. A physician can advise a patient to become physically active or eat healthier foods, but lifestyle changes do not occur in the clinic but in daily life at home, at school, and at work. The built environment and worksite policies influence whether individuals can become more physically active. Access to supermarkets with healthy food choices, fewer fast food outlets and advertising, and healthier menus and fewer vending machines at schools are among the conditions necessary to promote healthy diets. Table 3 illustrates the diverse sectors within the community, outside of primary care, that can play important roles in promoting clinical preventive services.

Table 3

Community sectors to promote healthy behaviors and use of clinical preventive services

• Employers (e.g., worksite health promotion programs, clinics, and occupational medicine specialists)
• Schools (e.g., initiatives with local school boards and individual schools to promote healthy menus and physical activity programs)
• Faith-based organizations (e.g., outreach via church programs and community lay educators)
• Public health departments (e.g., immunization clinics, public education initiatives)
• Community centers (e.g., senior centers)
• Retailers (e.g., supermarkets, malls, restaurants, bars, theaters, hair salons)
• Sports facilities (e.g., YMCA, private fitness centers, sports centers)
• Park authorities
• Volunteer organizations (e.g., American Heart Association, American Cancer Society, American Lung Association)
• Services sponsored by government agencies or voluntary associations (e.g., quit lines)
• Commercial and public weight loss and diet services (e.g., Weight Watchers)
• Hospital systems and health plans (e.g., smoking cessation classes, screening and immunization services, telephone counseling)
• Specialty colleagues (e.g., screening strategies coordinated with gastroenterologists and imaging centers)
• News media (e.g., local broadcasters and newspapers)
• Advertisers (e.g., ad campaigns to promote health habits or early detection)

People attempting lifestyle changes often need assistance from behavior change specialists. Dieticians, trainers, weight loss educators, and therapists specializing in behavior change are available in many communities and can help individuals generate motivation to progress through the stages of readiness to change—from precontemplation to contemplation, preparation, action, and maintenance.[15] Techniques such as motivational interviewing[16] and cognitive therapy[17] can be effective, but lifestyle change is an inherently slow process that often takes weeks, months, or years to achieve results and maintain them. Counselors with the skills and time for the task offer such help in group classes, worksite health promotion programs, individual sessions at private practices or community agencies, at telephone call centers, school clinics, disease management programs, and online programs.

Patients in need of certain clinical preventive services, such as immunizations and specialized screening tests, may also depend on community resources. Public health departments, worksite health clinics, supermarkets, and pharmacies are environments for obtaining recommended vaccines. Patients in need of certain tests (e.g., colonoscopy, mammography) are referred outside of the primary care practice to specialty physicians (e.g., gastroenterologists) and imaging centers in the community.

Internet resources enable residents of a community to use their computers and handheld devices to obtain information about local services for lifestyle change and preventive services, but this virtual medium transcends geographic boundaries by providing access to worldwide information. Rather than relying on the brochure in the doctor's waiting room, the modern patient with Internet access can obtain the best educational materials available and use interactive websites and software to learn about healthy lifestyles and the clinical preventive services that are recommended.

Services available to patients in select settings in the U.S. provide a glimpse of the more powerful information tools that, over time, will become more routinely available to patients nationwide. For example, some consumers can maintain an online personal health record, a database accessible on websites or home computers, in which patients keep track of their medical history, the tests and immunizations they have received, and their health habits, such as progress in losing weight or smoking cessation. At health systems such as Partners Health Care in Massachusetts, the personal health record interfaces with the electronic health records used by physicians and hospitals.[18] This type of technology offers the potential for patients to record in their personal health record that they have obtained a flu vaccination, for example, and for this information to be transferred instantly to their electronic health record so that everyone on the health care team can work with complete and current information.

Important constraints limit the ease with which the average American can take advantage of such promising technologies. Capital costs for investing in such systems can be substantial, and inconsistencies across multiple vendors pose challenges for interoperability and the facile exchange of data. Expertise and resources are required to customize technology to suit the specific needs of practices and patients. Data privacy concerns apply to systems that store or transfer identifiable patient information. Even the online delivery of patient educational information is challenging, in part because the "digital divide" limits access to computers and the Internet among some members of the population, such as seniors and the poor. Educational materials, whether electronic or otherwise, are often of limited value for persons with low literacy or who speak other languages. Current trends suggest that access to the Internet and familiarity with computers will increase steadily, even among underserved groups, so that those who plan for the future of health care must anticipate a society in which this technology is available across population segments and settings.

The paradox and the case for partnership

The potential for the community to help the clinician and patient in fostering preventive care is profound, but is often unrealized because the two worlds—medical providers and community resources—often operate in silos, each unaware of the other's existence or lacking the infrastructural linkages to work together in service of patients. The paradox is that each needs the other. As noted above, the medical system is failing at preventive care. Physicians want the best that prevention can offer their patients, but can deliver only mediocre service when they rely exclusively on the resources and time available in their practices. Many doctors would welcome help if they knew it existed and could be easily made available to their patients. For their part, community programs that can provide help—from group classes to tobacco quit lines—often complain that they receive few referrals from physicians and would welcome a new model that directed more patients to their programs.

The disconnect between the two worlds exists for three reasons.

- *Lack of knowledge:* Clinicians are often unaware of the services available in the community that can help them deliver preventive services. The resources they keep in their memory or in their Rolodex files are often incomplete or outdated. Busy practice conditions discourage office staff from taking time to look up contact details in the telephone directory, to identify the best Internet sites, or to call agencies and health plans for guidance.

- *Lack of coverage:* Private health insurance plans and government programs (Medicare, Medicaid) often do not cover behavioral counseling and other community services, or they apply prohibitive co-payments that make the service unaffordable to middle- and low-income patients. Services that are offered for free or at low cost to patients, such as state-operated tobacco quit lines or immunization clinics at local health departments, often find their programs in jeopardy because of budget pressures.

- *Lack of infrastructure:* Even when clinicians know about the community resources and when coverage for the service is provided, logistical impediments often derail their use. In the busy world of primary care, clinicians are unlikely to refer patients unless the referral procedure is easy and fast—measured in seconds, not minutes. Hard work is required to build a streamlined system in which the clinician can click only once on a computer or complete a few spaces on a form before moving quickly to the next patient. The infrastructure must also enable the patient to access the service easily —without long waits, miscommunication between agencies, and conflicting instructions—or else the good intentions of healthy living can give way to frustration.

The infrastructure must also include robust communication and information systems so that clinicians and community programs know what the other is doing and can easily share data and progress reports to work together as a team. Clinicians are often reluctant to refer patients to outside programs (e.g., disease management programs operated by health plans) in which counseling or testing occurs in isolation from primary care and is uncoordinated with the patient's other medical priorities. Patients suffer when such communication structures are lacking. For example, a community smoking cessation program may advise a tobacco cessation medication but without direct linkage with the prescribing physician, must leave patients on their own to make the arrangements, a barrier that can result in failure.

Clinician-Community Partnership in the Delivery of Clinical Preventive Services

The obvious solution to overcome the paradox is for the health care community to join hands with community programs to work together—through a planned, integrated system—to give patients the high-quality preventive care that neither sector can provide on its own. Collaboration provides the power of leveraging—in which the progress achieved together is greater than the sum of the parts—while also improving efficiency, thereby achieving greater progress per dollar spent on prevention. Partnership between the clinician and the community is therefore good for the health of patients, the public, and the economy.

The need for such integration has emerged not only for preventive services but also for other areas of medicine, notably chronic illness care. The widely-adopted Chronic Care Model (CCM) proposes that success in managing chronic disease requires the melding of six elements: organization of care, information systems, delivery system design, decision support, self-management, and community resources.[19,20,21] Such cross-sector collaboration and efforts to bridge clinical practice and the community are recurring themes in leading-edge initiatives to improve quality based on the CCM, such as the "breakthrough collaboratives" popularized by the Institute for Healthcare Improvement and programs funded by the Robert Wood Johnson Foundation (Pursuing Perfection[22], Improving Chronic Illness Care[23], Innovative Care for Chronic Conditions[24] Turning Point[25]). That integration and primary care figure appear together in so many of these initiatives underscores the importance of the marriage in delivering quality service to patients. The winning logic behind clinic-community partnerships and the applicability of the CCM to preventive care has been eloquently articulated by Glasgow[26] and Barr.[27]

In both realms—prevention and chronic illness care—clinicians and patients require coordinated help outside the office, and the same system solutions can serve both needs. Indeed, viewing prevention and chronic illness as separate problems is alien to primary care, where both realms are confronted daily, often in the same patient. The reminder system that prompts the clinician to perform a foot examination in a patient with diabetes can also note that she is overdue on a mammography screening. Investing in system solutions that focus exclusively on chronic illness care without attention to preventive services misses an opportunity to make more efficient use of resources. The minor added investment to adjust system solutions to improve care in both realms is more than offset by the enormous health and economic gains that arise from improved preventive care. The latter accrue not only to healthy patients but to those with chronic illnesses, who experience fewer complications because of enhanced prevention.

Closer collaboration between the clinician and the community offers a "win-win" solution for all parties: clinicians, patients, community programs, and payers. Clinicians, who want the best for their patients, find a viable solution that does not overburden their practice. Patients obtain more effective help than the practice could provide alone. For example, the odds that smokers will quit are up to 60% greater if they receive proactive telephone counseling than if they receive the brief advice that most physicians can offer.[28] Community programs benefit from a larger volume of referrals, which helps justify their funding streams. Payers get more value for their dollars because the delivery of assistance through coordinated systems promises greater efficiency in achieving behavior change.

Case studies

Recent years have witnessed the emergence of several models for improved preventive care in which the common theme is the joined hands of physician-community partnership. A comprehensive examination of the potential pairings listed in Table 3 is beyond the scope of this paper. Here we provide a few examples for purposes of illustration. We do not discuss similar programs offered by insurers, employers, and commercial vendors (e.g., telephone counseling services available to members of health plans[29]), few of which work in concert with clinicians. Physicians are often

informed about such programs in mailings they receive from health plans. Convenient systems for referring patients exist in some settings, especially in integrated health systems and large health maintenance organizations. But even in these settings, physicians receive few progress reports on what happens to the patients they refer. We focus on models that work more collaboratively with clinicians and include "feedback loops" that enable clinicians to cite progress in community programs in their subsequent office visits with patients.

- *Partnerships between primary care practices and tobacco quit lines:* Patients everywhere in the U.S. have access to tobacco quit lines that offer free telephone counseling, which is more effective than physician advice in achieving successful smoking cessation.[28] The programs, often financed by state government, operate call centers where trained counselors provide a series of counseling sessions, scheduled with patients at their convenience, over a period of weeks to months.[30] Most physicians, however, lack easy systems for identifying patients who smoke, referring them to such programs, or obtaining progress reports on their counseling. Indeed, quit lines complain of too few referrals from physicians.

In selected locales, steps have been taken to solve this problem by establishing an infrastructure to facilitate closer collaboration. For example, the Commonwealth of Masschusetts established **QuitWorks**, a program that provides practices a system to identify smokers, talk with patients about tobacco use, enroll patients in telephone counseling, prescribe pharmacotherapy, and receive status reports.[31] Whether this improves outcomes is unclear. To answer this question, investigators at Virginia Commonwealth University are testing **QuitLink**, a system in which participating primary care practices not only routinely screen for tobacco use, but involve office teams to offer brief advice and identify smokers ready to make a quit attempt. Willing smokers are referred to the American Cancer Society's quit line. Under special arrangements, the American Cancer Society communicates back to QuitLink practices, providing progress reports on individual patients, requests for prescription cessation medications, and aggregate benchmarked reports on practice referral rates and outcomes.[32] In 2007 the investigators will report whether patients in practices that participate in this program receive more intensive smoking cessation counseling than do patients in control practices that lack this system.

- *Partnerships between primary care practices and online resources:* Information is crucial to patients interested in healthier lifestyles, who need details on healthy food choices, weight loss strategies, and where to go in the community for more help. Patients also need to know which preventive services they should receive, based on their age and other risk factors, and they need reminders when those services are due. When the indications are complicated (e.g., screening for prostate cancer), patients should carefully consider the potential benefits, harms, and scientific uncertainties before getting the test.[33] Patients can benefit from decision aids[34] to learn about their options, before or after such appointments. Busy physicians, however, often lack the time, and even the knowledge, to help patients find information and resources as well as the easy means to direct patients to them. The scarce access to educational information in practice settings is ironic in an information age in which information is widely available to patients seated at their computers. Yet patients have difficulty locating, among the sea of available online resources, the specific material that is relevant to their situation and that provides quality, evidence-based content.

In response to this problem, investigators are developing websites that practices can employ to link patients with high-quality information. For example, family physicians can refer patients to the *My Healthy Living* website (www.myhealthyliving.net) for assistance in addressing diet, physical activity, smoking, and alcohol use. Unlike other websites, *My Healthy Living* provides direct links to hundreds of high-quality resources available online from reputed national organizations (e.g., American Heart Association, National Institutes of Health) but also, with a few clicks of the mouse, can direct patients to local resources in their community (i.e., walking trails, smoking cessation classes). The same website can also provide direct links to the website of the physician's practice, enabling patients to schedule appointments or request prescriptions.

A more sophisticated use of websites is anticipated by the *My Preventive Care* website (www.mypreventivecare.net), developed by the same investigators. Patients who schedule health maintenance visits ("annual physicals") are encouraged to visit this website beforehand, where they find recommendations on primary and secondary prevention, hyperlinks to learn more about specific preventive services, and an opportunity to examine relevant decision aids. The system creates a personal health record based on their answers to a health risk assessment, as well as offering individualized guidelines and email reminders when preventive services are overdue. Future versions of the website will interface with the electronic health record systems used by clinicians, updating the medical record with patient-generated information about health behaviors and recent tests obtained outside the practice and updating the patient's personal health record with data extracted from the medical record (e.g., date of last mammogram or tetanus immunization). Once this website version is developed, the electronic health record, refreshed by information provided by patients, will generate prompts to remind clinicians that patients need counseling about a health behavior (e.g., smoking) or are overdue for a test or vaccination. The database is a platform for creating registries—a comprehensive listing of all patients in the practice in need of a service—to facilitate systematic interventions such as reminder letters or emails.

An interface between electronic and personal health records to foster preventive practices requires considerable infrastructural work nationwide to overcome technical barriers and interconnect disparate information systems. The Markle Foundation is pursuing this goal in its *Connecting for Health* initiative, a public-private collaborative of more than 100 organizations committed to empowering patients with improved access to their health information.[35] Similar objectives are being pursued by the eHealth Initiative[36], which has launched the Connecting Communities for Better Health program to expand health information exchange capabilities in 18 communities across the U.S.[37] Such platforms will be necessary for information technology to enhance the delivery of preventive care.

- *Partnerships between primary care and a "package" of resources:* In a project being funded by the "*Prescription for Health*" program of the Robert Wood Johnson Foundation,[38] practices in Newport News, Virginia are working with multiple resources outside the practice. The project uses an electronic health record system to easily identify patients who can benefit and enroll them in outside programs without disrupting the flow of routine primary care.[39] Under the system, nurses and medical assistants who obtain vital signs on patients arriving for their appointments also assess smoking status and systematically measure height and weight. After

they enter this information into the electronic health record, the system displays a prompt to inform the physician that the patient smokes, has an elevated body mass index (an indicator of overweight or obesity), or drinks excessively. With a few clicks of mouse, the clinician can open a dialogue box that reminds the clinician to deliver a brief message about the importance of changing the behavior and that enables the clinician to refer patients to programs outside the office that can provide more intensive counseling. The clinician can then close the dialogue box and move on to addressing the chief complaints that prompted the visit.

The developers of this system have invested considerable energy to design a system that imposes minimally on practices and individual clinicians, limiting clinician's time to a few clicks of the mouse, automating much of the referral process, and shifting the work burden from personnel in the practice to staff at the community programs who have the time and support systems for the task. For example, the physician must click only one button to arrange telephone counseling for the patient. The electronic health record has been programmed to email a referral to the telephone counseling center. Counselors at the call center then contact the patients, enroll them in the program, and conduct behavioral counseling sessions over a period of weeks or months. Like the QuitLink program described above, the system includes a feedback loop in which the counseling program provides progress reports to the clinician and aggregate data on referral rates.

In addition to telephone counseling, patients in this program can participate in group classes (e.g., Weight Watchers) to interact in-person with counselors and share the process with others facing the same lifestyle challenges. Patients with busy schedules who prefer the convenience of obtaining information online can enroll in "e-counseling," in which the telephone counseling program discussed above is offered in virtual sessions conducted online at the convenience of the patient (asynchronous communication). A preliminary evaluation of the Newport News program, which offered the above options for free, revealed a dramatic upsurge in referrals for group classes and substantial interest in telephone counseling. In 2007, the investigators will report whether behavioral outcomes (e.g., smoking, body mass index) improved and the extent to which the addition of copayments dampened participation.

- ***Integrated community health promotion:*** Examining community resources from the vantage point of practices, as we do here, is useful in understanding how to expand the outreach of clinicians but is less helpful in viewing the range of resources to fully engage the public in promoting healthy lifestyles. Physicians play an important role in persuading patients about the importance of changing habits and noting its relevance to their medical problems, but their time with patients is limited. The home, work, and school environment is where the real work of lifestyle change occurs. Communities and public health leaders increasingly recognize that a real impact on health behaviors cannot occur by relying solely on the health sector but instead by embracing an integrated community approach that involves all sectors, including medical providers, to work together as a coalition. The Joint Center for Political and Economic Studies has concluded that, "prevention strategies in the health field need to be connected with strategies in sectors such as education, housing, public safety, economic development, and community planning."[40]

For example, local employers, retailers, and civic groups can collaborate on campaigns to encourage the public to talk to their doctor about colorectal cancer screening. All members of the coalition, including the practices, can adopt a common logo and slogan to bring consistency to the message.

More elaborate coalitions are underway in some communities. As part of the Steps to a Healthier U.S. Cooperative Agreement program, the U.S. Department of Health and Human Services has issued more than $50 million in grants to implement an integrated community approach in 44 communities that include large and small cities, tribes, and rural communities. Consistent with the earlier notion about the importance of dealing jointly with both health promotion and chronic diseases, these community solutions are designed to address unhealthy habits (physical inactivity, unhealthy diet, and tobacco use) and chronic illnesses (diabetes, asthma, obesity).[41] Each Steps community has created a community action plan, a community consortium, and an evaluation plan to address these aims.

For example, one Steps grantee (Seattle and King County, Washington) has undertaken a comprehensive approach that involves media, public policies, schools, workplaces, health care, and the community in a 75-member consortium that includes clinicians, hospitals, health plans, universities, community organizations, faith groups, government agencies, and school districts.[42] Current systems and service integration activities are listed in Table 4. Examples of the resulting comprehensive efforts include promoting community and housing policies that support physical activity, discouraging sales of non-nutritious foods at schools, and working with faith communities to train lay educators in health promotion. (http://www.metrokc.gov/health/steps/#steps)

Table 4
Systems and Service Integration Activities in Seattle-King County Steps Project

Current systems integration activities
• Developing a shared vision
• Promoting consistency in client education and self-management support
• Increasing reciprocal awareness of program activities through partner meetings, presentations at coalition meetings, and newsletters
• Improving adherence to uniform clinical guidelines
• Sharing resources across programs, advocating jointly for policy change
• Seeking funds collaboratively
Current service integration activities
• Use of community health workers and nurses for care coordination
• Program cross-referral
• Establishment of a single triage line to direct providers and residents to appropriate services
• Consistent approach to clinical quality improvement.
Source: Personal communication, Daniel Lessler, MD, MHA, May 2006

The Business Case for Integration

The programs discussed here come at some cost. Sizable outlays would be required for health care systems and communities across the country to design and implement the kinds of innovations discussed here. Meetings to convene stakeholders to devise and streamline referral systems, followed by many hours of retooling to solve design flaws that emerge with implementation, are necessary for such systems to succeed. Programmers must invest many hours to design websites and reconfigure electronic health records such as those discussed here. Resources are required to pay for telephone counselors, group classes, and other community resources.

The critical issue, however, is not whether these innovations are costly but whether they offer an attractive return on investment (ROI), improved value (cost per unit of health gain) for the dollar, and thereby make better use of limited health care resources. Payers, in both public programs (e.g., Medicare) and private health plans, are already spending heavily to deliver preventive care under the conventional model (e.g., physicians giving one-on-one advice to patients during office visits), which often lacks intensity to yield the desired results.[43,44] They are also paying heavily for complications from diseases that are occurring because of gaps in the delivery of preventive care. The health care system, and ultimately employers and the government, are experiencing crippling economic consequences from the obesity epidemic and the expensive medications and technologies required to care for the complications of heart disease, diabetes, and other diseases that improved prevention would obviate.

If the partnerships described in this paper would work better to prevent these expensive complications, the benefits to payers, employers, and the government could easily offset the costs of building and maintaining the required infrastructure for the collaboration. Such collaborative models are also likely to offer higher quality service at lower unit cost due to centralization and efficiencies of scale. For example, telephone call centers that are staffed by trained behavioral counselors, that use streamlined systems for handling large volumes of patients, and that employ culturally competent counselors who are sensitive to ethnic issues and speak languages other than English are likely to offer better service than individual physicians in helping patients to change habits and to do so at lower cost per patient than reimbursing physicians for one-on-one advice during office visits.

Table 5

Federal Policy Options for Promoting Practice Redesign and Clinician-Community Partnerships

Practice redesign

• Promote organizational redesign in primary care practices
    * Encourage development of best practice models (e.g., TransforMED)
    * Create incentives for practices to undertake practice redesign

• Expand use of preventive services reminders in electronic health record (EHR) products
    * Generic efforts (already underway) to promote uptake of EHRs: e.g., financial support for practices, initiatives of the U.S. Department of Health and Human Services
    * Work with vendors to increase availability of effective reminder tools for preventive services
        ◊ R&D on the types of prompts that are accepted and useful to clinicians
        ◊ Pressure on vendors/financial incentives to make such prompts standard features on EHR products

Clinician-community partnerships

• Maintain and expand community resources that have supporting evidence of effectiveness
    * Secure stable funding commitments for quit lines, public health department services, etc
    * Create analogous services (e.g., telephone counseling centers) for obesity, physical inactivity, unhealthy diet, alcohol abuse
    * Create a knowledge-network website to enable clinicians to identify local resources with ease and not worry about maintaining current contact details
    * Remove insurance barriers to use of such services: first-dollar coverage for preventive services, elimination of co-payments, exclusion of services of proven effectiveness. provider incentives for referring patients
    * Create a system akin to USDA Cooperative Extension System Offices to act as "change agent consultants" and help local practices and communities establish infrastructure for collaboration (e.g., referral systems, communication)

Invest in research
• Novel models of integrating clinical care and community services • Information technology (IT) innovations to facilitate prevention partnerships • Methods to move delivery of preventive care outside of the clinical setting

Policy options

What tangible steps could federal policy pursue to implement the changes proposed in this paper? Table 5 lists some options for the two broad strategies areas covered in this paper: practice redesign (changes clinicians can make in their practices) and more functional partnerships with community resources.

Practice redesign: The federal government and other stakeholders can catalyze organizational redesign within practices. They can support demonstration projects to identify "best practices"—models of practice redesign that have been demonstrated to be feasible and effective—the goal of the TransforMED initiative of the American Academy of Family Physicians.[45] Payers such as the Centers for Medicare and Medicaid Services and private insurers can create attractive financial in-

centives to help practices offset the substantial capital costs that practice redesign requires. Specific elements of practice redesign can also be targeted. For example, federal initiatives to promote the adoption of electronic health records can use their influence to encourage vendors to incorporate "actionable" prompts for overdue preventive services as standard features on products (see Table 5).

Clinician-community partnerships: A model in which practices refer patients to community resources requires, as an immediate policy priority, stable funding commitments for these services, such as government support for tobacco quit lines and support for the establishment of analogous services (i.e. telephone counseling) for behaviors other than smoking that convey comparable public health urgency (e.g., obesity). An extensive literature documents that out-of-pocket expenditures diminish use of preventive services. Medicare and Medicaid should remove financial barriers that prohibit patients and providers from using community-based preventive services. Priorities include ensuring first-dollar coverage (zero co-payments) for effective services, financial incentives for providers to refer to these community programs, and the elimination of policies that bar access, such as Medicare coverage for obesity that excludes telephone counseling.

Ultimately, however, the model proposed here requires an investment to facilitate the creation of local infrastructure to link clinicians with community resources. A first step would be for the federal government to create a website that clinicians could use to quickly identify local resources for their patients. The referrals that community programs would receive via the website would create an incentive to maintain the currency of their postings—e.g., contact information, program descriptions, fees—and would spare the need for clinicians to keep these details on file in their office.

Knowledge of community resources is not enough, however. A third-party actor within the community is often vital to arrange meetings between clinicians and representatives of local programs, to help develop procedures and systems for referrals and exchange of information, and other tasks that are essential to launch and maintain an efficient collaboration. To provide the infrastructure and funding for this third-party entity on a national scale, health care might borrow the highly successful model of the Cooperative Extension System Offices, which has been maintained since 1994 by the U.S. Department of Agriculture.[46] Under this program, each state has an office at its land-grant university and a network of local or regional offices, staffed by one or more experts who provide assistance to the local community to improve farming. In FY 2006 alone, Congress allocated $1.2 billion for the USDA Cooperative State Research, Education, and Extension Service[47], but no such program exists in health care. The creation of a similar network would give communities the tools to leverage resources that already coexist "down the street" from each other but operate in silos for lack of an infrastructure for cooperation. The leveraging would improve delivery of not only preventive services but also of chronic illness care, thereby improving health and helping to control health care costs.

Making it Happen

Both the construction and financing of such integrated systems cannot be delegated to practices or the service providers within the silos. Individual clinicians and practice groups can adopt innovations within their offices to improve the quality of preventive care, such as reminder systems and the other practice redesign tools listed in Table 2; they can dedicate nurses and other staff to expand preventive care; and they can reach out to community partners to expand service to patients. But only a small proportion of highly motivated physicians in the U.S. are likely to take such steps, and an even smaller proportion will have the resources and infrastructure to sustain these efforts over time.

A new era of innovation on a scale that can achieve meaningful improvement in the health of Americans will require leadership on a larger scale, at the level of health systems and communities, to make real change happen. Clear instructions to design and establish the kind of infrastructure envisioned in Table 5 and the allocation of sufficient resources to finance the effort must be made by the major payers (e.g., Medicare and private health pans) and/or by the influential stakeholders they serve (e.g., legislators representing the public and corporate America). A sea change in priorities at this level of leadership requires an articulation of the compelling business case and the recognition that the savings to be achieved by such bold steps will offset the inherent costs. It will come from thoughtful leaders who understand the ominous implications of the aging baby boomer generation, the rise in chronic diseases, resultant escalation in health care costs, and the damage these forces will inflict on the U.S. economy and federal budget. Thoughtful leaders who see the connection between these dynamics and trends such as the obesity epidemic will recognize the "perfect storm" on the horizon and the vital importance of investing now in prevention to mitigate this crisis.

Acknowledgments

Endnotes

[1] Mokdad AH, Marks JS, Stroup DF, Gerberding JL. Actual causes of death in the United States, 2000. Jama 2004; 291:1238-45

[2] Pignone M, Rich M, Teutsch SM, Berg AO, Lohr KN. *Screening for Colorectal Cancer in Adults at Average Risk: Summary of the Evidence for the U.S. Preventive Services Task Force*. Originally in *Annals of Internal Medicine* 2002;137:132-41.

[3] Humphrey LL, Helfand M, Chan BKS, Woolf SH. *Breast Cancer Screening: Summary of the Evidence*. Originally in Ann Intern Med 2002;137:344-6.

[4] McGlynn EA, Asch SM, Adams J, et al. The quality of health care delivered to adults in the United States. N Engl J Med. 2003 Jun 26;348(26):2635-45.

[5] Centers for Disease Control and Prevention (CDC). Increased use of colorectal cancer tests--United States, 2002 and 2004 MMWR Morb Mortal Wkly Rep. 2006 Mar 24;55(11):308-11.

[6] Medicare: Most Beneficiaries Receive Some but Not All Recommended Preventive Services, GAO-03-958 (Washington, D.C.: September 2003).

[7] Ross JS, Bradley EH, Busch SH. Use of health care services by lower-income and higher-income uninsured adults. JAMA. 2006 May 3;295(17):2027-36.

[8] Stone EG et al. Ann Intern Med 2002

[9] Southern California Evidence-Based Practice Center. *Interventions that Increase Utilization of Medicare-Funded Preventive Services for Persons Age 65 and Older*. Baltimore: Health Care Financing Administration, 1999.

[10] Woolf SH, Glasgow RE, Krist A, Bartz C, Flocke SA, Holtrop JS, Rothemich SF, Wald ER. Putting it together: finding success in behavior change through integration of services. Ann Fam Med 2005;3 Suppl 2:S20-7.

[11] Solberg LI, Hroscikoski MC, Sperl-Hillen JM, Harper PG, Crabtree BF. Transforming medical care: case study of an exemplary, small medical group. Ann Fam Med 2006;4:109-16.

[12] Fox M. *Primary Care About to Collapse, Physicians Warn*. Reuters, January 31, 2006.

[13] Terry K. Exclusive survey: doctors and EHRs. Medical Economics, January 21, 2005, accessed June 4, 2006 at http://www.memag.com/memag/article/articleDetail.jsp?id=143144&pageID=1&sk=&date=

[14] Terry K. IT implementation: why EHRs falter. Medical Economics, April 7, 2006, accessed June 4, 2006 at http://www.memag.com/memag/article/articleDetail.jsp?id=316528&pageID=1

[15] Prochaska JO, Velicer WF. The transtheoretical model of health behavior change. Am J Health Promot 1997;12:38-48.

[16] Rollnick S. Miller WR What is motivational interviewing? Behav Cognitive Psychother 1995;23:325-334.

[17] Shaw K, O'Rourke P, Del Mar C, Kenardy J. Psychological interventions for overweight or obesity. Cochrane Database Syst Rev 2005:18(2):CD003818.

[18] Wald JS, Middleton B, Bloom A, et al. A patient-controlled journal for an electronic medical record: issues and challenges. Medinfo 2004;11(Pt 2):1166-70.

[19] Wagner EH, Austin BT, Davis C, Hindmarsh M, Schaefer J, Bonomi A., Improving chronic illness care: translating evidence into action. *Health Aff (Millwood)* 2001;20:64-78.

[20] Bodenheimer T, Wagner EH, Grumbach K. Improving primary care for patients with chronic illness. *JAMA* 2002; 288:1775-9.

[21] Bodenheimer T, Wagner EH, Grumbach K. Improving primary care for patients with chronic illness: the chronic care model, Part 2. JAMA 2002; 288:1909-14.

[22] Institute for Healthcare Improvement. Pursuing Perfection: Raising the Bar for Health Care Performance. Accessed 12/31/04 at http://www.ihi.org/IHI/Programs/PursuingPerfection

[23] About ICIC. Acessed 12/31/04 at http://www.improvingchroniccare.org/about/index1.html

[24] Epping-Jordan JE, Pruitt SD, Bengoa R, Wagner EH. Improving the quality of health care for chronic conditions. Qual Saf Health Care 2004;13:299-305.

[25] Turning Point Performance Management National Excellence Collaborative. From Silos to Systems: Using Performance Management to Improve the Public's Health. Seattle: University of Washington, 2003. More details about the Turning Point program are available at http://turningpointprogram.org.

[26] Glasgow RE, Orleans CT, Wagner EH. Does the chronic care model serve also as a template for improving prevention? Milbank Q 2001;79:579-612, iv-v.

[27] Barr VJ, Robinson S, Marin-Link B, et al. The expanded Chronic Care Model: an integration of concepts and strategies from population health promotion and the Chronic Care Model. Hosp Q 2003;7:73-82.

[28] Lancaster T, Stead LF. Individual behavioural counselling for smoking cessation. In: Cochrane Collaboration,ed. Cochrane Library. Issue 3. Oxford: Update Software, 2000

[29] National Institute of Health Care Management. Health Plans Emerging As Pragmatic Partners in Fight Against Obesity.

[30] Centers for Disease Control and Prevention. *Telephone Quitlines: A Resource for Development, Implementation, and Evaluation*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, Final Edition, September 2004.

[31] http://www.quitworks.org/welcome/index.php

[32] http://www.clinicaltrials.gov/ct/show/NCT00112268

[33] Sheridan SL, Harris RP, Woolf SH, for the Shared Decision-Making Workgroup of the U.S. Preventive Servcies Task Force.

Shared decision making about screening and chemoprevention: a suggested approach from the U.S. Preventive Services Task Force. Am J Prev Med 2004;26:56-66.

[34] Barratt A, Trevena L, Davey HM, McCaffery K. Use of decision aids to support informed choices about screening. BMJ 2004;329:507-10.

[35] The Markle Foundation. The Connecting for Health Common Framework: Overview and Principles. http://www.connecting-forhealth.org/commonframework/docs/Overview.pdf

[36] http://www.ehealthinitiative.org/about/

[37] http://ccbh.ehealthinitiative.org/communities/funded.mspx

[38] http://www.prescriptionforhealth.org/

[39] http://www.clinicaltrials.gov/ct/show/NCT00292968?order=1

[40] Joint Center for Political and Economic Studies. *Building Stronger Communities for Better Health*. Washington, DC: Joint Center for Political and Economic Studies, 200x.

[41] Steps to a Healthier US: Cooperative Agreement Program. Funding Communities to Prevent Obesity, Diabetes, and Asthma: FY 2004. Atlanta, GA: Centers for Disease Control and Prevention, U.S. Department of Health and Human Services, 2004, http://www.healthierus.gov/steps/grantees/2004/StepsCoopAgrmn.pdf

[42] Krieger JW, Bourcier E, Lara M, et al. Integrating asthma prevention and control: the roles of the coalition. Health Promot Pract 2006;7(2 Suppl):127S-138S.

[43] U.S. Preventive Services Task Force. *Behavioral Counseling in Primary Care to Promote a Healthy Diet: Recommendations and Rationale*. AHRQ Pub. No. 03-514A, January 2003, http://www.ahrq.gov/clinic/3rduspstf/diet/dietrr.pdf

[44] U.S. Preventive Services Task Force. *Behavioral Counseling in Primary Care to Promote Physical Activity: Recommendations and Rationale*. AHRQ Pub. No. 03-513A, August 2002, http://www.ahrq.gov/clinic/3rduspstf/physactivity/physactrr.pdf

[45] http://www.aafp.org/online/en/home/practicemgt/transformed.html

[46] http://www.csrees.usda.gov/Extension/index.html

[47] FY 2007 President's Budget Proposal. Advancing Knowledge for the Food and Agricultural System: Overview. http://www.csrees.

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