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# A Blueprint for Improving the Promotion and Delivery of Adult Vaccination in the United States

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## Summary

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Vaccine-preventable disease (VPD) continues to take a heavy toll on adults despite the widespread availability of effective vaccines. The health and productivity costs of influenza alone have been estimated to be as high as \$87 billion per year.<sup>3</sup> However, in contrast with childhood vaccination rates, adult vaccination rates remain low. For example, data from 2009 show that only 10 percent of recommended adults had received a shingles vaccination. Even in the case of influenza vaccination, which is widely promoted, attracts substantial media interest, and is often provided at worksites, coverage rates among high-risk adults do not exceed 70 percent.

Numerous stakeholder organizations have issued reports describing barriers to adult vaccination and recommending changes to address them. Barriers include lack of public knowledge of the risks of VPDs,<sup>7</sup> skepticism about vaccine safety and effectiveness,<sup>7, 16, 17</sup> lack of administrative systems for identifying appropriate patients in medical records and generating reminders for them to be vaccinated,<sup>13</sup> perceived inadequacy of reimbursement for vaccination,<sup>11</sup> and lack of vaccination-related performance measures and incentives.<sup>15</sup>

Recent changes in the policy and practice environment surrounding adult vaccination create a unique window of opportunity to take concrete action to improve the delivery of vaccinations to adults. Recent health care reform legislation promotes preventive care generally and improves financial access to adult vaccination specifically. Moreover, growing availability of vaccinations outside of office-based settings, including workplaces, pharmacies, and retail medical clinics, makes obtaining vaccinations easier.

To help leverage these changes, we conducted a project aimed at (1) identifying *specifically* where efforts to improve the delivery of adult vaccination have stalled and (2) recommending—with the input of key stakeholders—targeted strategies to address these bottlenecks that are supported by available evidence and build on existing infrastructure. To achieve this objective, we conducted a comprehensive review of the published literature on adult vaccination, a stakeholder workshop in January 2011, follow-up interviews with meeting participants and additional experts, and a short telephone survey of adults 18 and older (n = 1,278) to learn about the relationship between influenza vaccination and beliefs about the safety of influenza vaccine.

## Findings

**The policy and practice environment surrounding adult vaccination is changing rapidly.** Recent health care reform legislation includes a number of specific provisions aimed at improving financial access to and delivery of vaccinations to adults and others.<sup>63, 117, 118</sup> Health care

reform provisions aimed at improving the provision of preventive care could also have a dramatic effect on the delivery of adult vaccinations. New efforts to release timely, national coverage data could provide benchmarks for measuring progress toward federal objectives. In addition, increasing the use of electronic health records (EHRs) has the potential to increase the efficiency of vaccination support services.

**Office-based settings remain a logical focus of efforts to increase adult vaccination.**

Although vaccination is becoming available in a variety of settings and the use of complementary sites has grown quickly in the past several years, office-based providers remain the primary source of vaccination. Recent national survey data show that over twice as many influenza vaccinations were administered in physician offices and medical clinics than were administered in any other setting. Additionally, adult vaccinations other than influenza are not yet widely available outside of office-based settings. Despite the existence of a growing number of pharmacists who are permitted to vaccinate, we found the information technology infrastructure required to transfer relevant clinical data and vaccination status information across care settings to be in its infancy.

Physicians are also a highly influential source of advice about vaccinations, and achieving substantial increases in adult vaccination will require persuading large numbers of individuals disinclined to be vaccinated.<sup>133</sup> National survey data suggest that by March 2009, 44 percent of the 160 million U.S. adults who were specifically recommended for influenza vaccination were not vaccinated and did not intend to be.<sup>78</sup> In this group, almost half (20 percent of all recommended adults) indicated being willing to be vaccinated with a strong recommendation from a health care provider. In contrast, little is currently known about the ability of complementary vaccinators to persuade hesitant individuals to be vaccinated.

**Office-based health care providers are not meeting their potential in administering and promoting adult vaccination.** A substantial proportion of physicians who treat adults appear not to vaccinate at all. Self-reported data from physician surveys conducted between 2007 and 2010 suggested that only 27 percent stock all recommended adult vaccinations other than influenza.<sup>87–91</sup> Adult vaccination is also infrequently discussed at health care encounters. Despite data suggesting that the public places a high degree of trust in health care providers to deliver information about vaccination, we found that relatively few adults—even those specifically recommended for vaccination—receive advice about vaccinations from their health care providers. Moreover, we identified few ongoing efforts to evaluate and improve provider communication regarding the safety and benefits of vaccination with adult patients.

**Adult practices lack a strong business case to offer vaccination.** Office-based administration of vaccines entails substantial fixed costs to providers, as they need to install and operate appropriate storage and cooling facilities, as well as to maintain the administrative infrastructure for ordering vaccine and managing inventory. This investment can only be recouped if demand is sufficiently strong and predictable, as it is in pediatric practices, in which vaccination is a routine part of regular preventive visits, supported by school requirements. In adult practices, however, providers need to identify vaccination gaps, educate patients about vaccination needs, and deliver the vaccination. As payment rates are low and indirect incentives, such as performance measures, are lacking, providers commonly devote their limited time to other health concerns. At the same time, there are no incentives for providers who do not vaccinate to refer patients to community vaccinators.

## Recommendations

Efforts to promote vaccination can contribute to, as well as gain from, efforts to strengthen primary care. To realize this opportunity, vaccination stakeholders need to engage in a collaborative fashion to promote adult vaccination and the integration of advice about vaccination—regardless of where it is administered—into routine office-based practice. Our investigation informed by stakeholder input suggested five sets of specific actions that vaccination stakeholders and substantive experts should undertake to facilitate practice change around adult vaccination.

**Recommendation 1. Strengthen evidence surrounding practice gaps and strategies for promoting vaccination.** In particular, we identified as research priorities (1) the collection and dissemination of national data describing patterns of office-based vaccination of adults to pinpoint gaps in practice and target improvement efforts and (2) the assessment of the costs and benefits of promoting vaccination of adults in office-based settings and complementary settings, such as schools, health departments, and retail stores.

**Recommendation 2. Improve guidance to providers about vaccinating adults.** To improve provider understanding of how to effectively promote and administer vaccines, we recommend the development of structured vaccination counseling protocols, provision of clear guidance for vaccination of adults with missing or incomplete vaccination histories, and the development of protocols for periodically evaluating adults' vaccination status based on age.

**Recommendation 3. Assist providers in making informed decisions about whether to administer vaccinations on site.** Vaccination is a complex and costly activity drawing on a variety of practice resources. Thus, we recommend the development of a decision tool to help office-based providers make informed choices about the viability of vaccinating on site.

**Recommendation 4. Formalize procedures for referring patients to complementary vaccinators.** Referrals should include information regarding the recommended vaccination, locations and hours for community vaccinators offering the recommended vaccination, contact information for the referring provider, provider preferences regarding return of documentation to the referring provider, and handling of patient self-referrals for universally recommended vaccinations—specifically flu.

**Recommendation 5. Document vaccination support efforts to facilitate performance-based payment.** Without a mechanism for crediting office-based providers for vaccinations administered outside of office-based settings, nonvaccinating providers have little incentive to promote vaccination. There are several avenues through which documentation of vaccination support could be developed:

- Apply for procedure codes specific to vaccination counseling.
- Develop a checklist to assess the effectiveness of office-based providers in ensuring that their adult patients are vaccinated as recommended.
- Add questions about the frequency and quality of vaccination-related advice and referrals to national surveys to gauge the effectiveness of providers in promoting vaccination to patients.