

Policy Implications of First-Dollar Coverage: A Qualitative Examination from the Payer Perspective

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ABSTRACT

Objectives. Immunization against potentially life-threatening illnesses for children and adults has proved to be one of the great public health successes of the 20th century and is extremely cost-effective. The Patient Protection and Affordable Care Act includes a number of provisions to increase coverage and access to immunizations for the consumer, including a provision for health plans to cover all Advisory Committee on Immunization Practices-recommended vaccines at first dollar, or without cost sharing. In this study, we examined payers' perspectives on first-dollar coverage of vaccines and strategies to improve vaccination rates.

Methods. This was a qualitative study, using a literature review and semistructured expert interviews with payers.

Results. Four key themes emerged, including (1) the cost implications of the first-dollar change; (2) the importance of examining barriers to children, adolescents, and adults separately to focus interventions more strategically; (3) the importance of provider knowledge and education in increasing immunization; and (4) the effect of first-dollar coverage on those who decline vaccination for personal reasons.

Conclusions. We determined that, while reducing financial barriers through first-dollar coverage is an important first step to increasing immunization rates, there are structural and cultural barriers that also will require collaborative, strategic work among all vaccine stakeholders.

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Immunization against potentially life-threatening illnesses for children and adults has proved one of the great public health successes of the 20th century.¹ It is also one of the most cost-effective medical interventions, preventing once common childhood diseases and reducing levels of death and disability among adults for several key diseases at a relatively low cost.² Additionally, many immunizations provide the positive externality of “herd immunity” by reducing community exposure to these diseases, thereby increasing the social benefit of the practice. Because vaccines create significant social benefits far beyond individual benefits, federal and state governments encourage and support the use of vaccines as an important public health tool.

Despite the striking success of immunization in the United States, significant disparities exist in access to recommended vaccines for subpopulations, including geographic, demographic, and financial disparities.³⁻⁷ While there are a number of reasons that individuals might not receive recommended immunizations, including personal preference, the fragmented public-private financing of immunizations contributes to missed immunizations.^{8,9} Financing may factor into immunization disparities through at least two mechanisms: first, patients seeking immunizations may be confronted with cost sharing that they are unable or unwilling to pay; and second, clinicians are assuming a larger burden of assessing eligibility for immunization programs or coverage of immunization services by insurance plans, which may result in patients being turned away based, whether correctly or erroneously, on eligibility criteria.

The Patient Protection and Affordable Care Act includes a number of provisions to increase coverage and access to immunizations for the consumer.¹⁰ One key provision, found in Subpart II Section 2713 of the bill, required first-dollar coverage of Advisory Committee on Immunization Practices (ACIP)-recommended vaccines starting in September 2010.¹¹ First-dollar coverage means that copays, coinsurance, or deductibles will not apply for the administration of any ACIP-recommended vaccine. The focus in federal health reform on expanding the use of preventive care appears to address some gaps in the current immunization delivery system. These gaps in financing have been outlined by a series of consensus recommendations by the National Vaccine Advisory Committee (NVAC), an independent advisory committee to the Assistant Secretary for Health of the U.S. Department of Health and Human Services (HHS). In 2008, for example, the NVAC recommended that all public and private insurance plans voluntarily adopt first-dollar coverage for ACIP-recommended vaccines for children

and adolescents.¹² Consumers previously unable to access immunization due to financial barriers may be more likely to be vaccinated through the mandate for first-dollar coverage for immunizations.

For the immunization enterprise to work, it requires the coordinated effort of key stakeholders, including the public health community, payers, employers, physicians, and patients and their families. While there is discussion of financial barriers to immunization in the public health and medical literature, payers, actuaries, and employers do not tend to interact in this domain and little is published in the literature on payer and employer perspectives.¹³ In this study, we examined payers’ perspectives on first-dollar coverage of vaccines and strategies to improve vaccination rates.

METHODS

To understand the role of financial barriers within the broader context of barriers to immunization, we used two sources of data: a literature review and a series of interviews with expert informants. We conducted a literature review using search terms such as “barriers to immunization,” “barriers to vaccination,” “immunization and stigma,” and “vaccination and stigma.” Following the literature review, we conducted five interviews, by telephone, with experts in various areas of vaccine financing, including a chief medical officer of a state department of public health, a representative of a large employer group, two senior actuaries from large public and private health plans, and a medical officer from a large private health plan.

Using a structured interview guide with seven open-ended questions, we asked the experts to discuss the cost implications of first-dollar coverage on a variety of stakeholders (e.g., employers, payers, and consumers), whether they perceive cost sharing to be a significant barrier to immunization, the implications of first-dollar coverage on the variety of types of health plans and cost-sharing methods, and what the response would be by different stakeholders to a government recommendation to move to first-dollar coverage. Subjects were selected from a list of nationally recognized experts who maintain positions of authority in federal, state, or private health plans. These interviews were conducted in the last quarter of 2009 and the first quarter of 2010.

Interviews were taped, transcribed, and coded by two independent researchers, who identified major themes by frequency and relevance. The coding scheme was designed, a priori, based on the environmental scan, although emergent themes were discussed in the group and incorporated. Final themes were reviewed

by experts in the design of vaccines and benefits. In the following sections, we describe our findings and discuss the implications on and recommendations for expanding access to immunizations for children, adolescents, and adults.

RESULTS

Cost sharing, in the form of deductibles, coinsurance, and copayments, has been shown to be a significant barrier to preventive services utilization in general,^{1,2,14} and studies indicate that cost sharing also reduces immunization rates.³⁻⁵ All key informants thought that reducing financial barriers to immunization by extending first-dollar coverage of all ACIP-recommended vaccines was an excellent step in improving vaccination rates, but cautioned that details about implementation and consequences warranted close examination. There was general consensus that reducing financial barriers was not sufficient to dramatically increase immunization rates. One respondent illustrated this dynamic by describing his insurance plan's experience implementing coverage and reimbursement for H1N1 vaccine during the 2009–2010 H1N1 pandemic influenza campaign. This company, one of the largest national health plans, encouraged its employer base to agree to cover the vaccination at first dollar, but H1N1 immunization rates were disappointingly low, indicating that other issues were at play in preventing individuals from being vaccinated.

National trends in adolescent and adult immunizations fall well below *Healthy People 2010* targets, despite efforts by the public health community to educate families and providers about the importance of immunization.¹⁵ While financial barriers may be a driver of these trends, an informant indicated that cost sharing for dose and administration has largely been eliminated among large employers for ACIP-recommended vaccines. Further, informants agreed with literature review findings that medium-sized and small employers have more variety in their insurance benefit design, and are more likely to require cost sharing for preventive services.¹⁶ Thus, the dampening effects of cost sharing seen in large employers are probably amplified in these plans.

Although we sought to better understand the benefit design implications of enacting universal first-dollar coverage, three of the four major themes that emerged from the expert interviews emphasized the need to focus on other activities to increase overall immunization rates. These key themes included (1) the cost implications of the first-dollar change; (2) the importance of examining barriers to children,

adolescents, and adults separately to focus interventions more strategically; (3) the importance of provider knowledge and education in increasing immunization; and (4) the effect of first-dollar coverage on those who decline vaccination for personal reasons.

Theme 1: cost implications of first-dollar coverage

The key informants expressed concern that the federal government recommending a specific benefit design intrudes into an area that they have traditionally controlled. Respondents noted that because first-dollar coverage for immunizations is not a benefit that employers or their employees have directly requested, there would be little competitive advantage to carrying out the recommendation. One informant emphasized, however, that if all insurance companies were subject to the same requirement, as under health reform, the issue of competition would change.

Several informants expressed concern that not having control over cost-sharing decisions for vaccines, as under first dollar, would set a benefit design precedent that could result in payers and employers losing control over health-care costs. One informant roughly estimated that the addition of adult vaccination at first dollar, across plan types, would likely cost 1% of premiums without covering the office visit. This amount represents a significant cost for plans. Some felt that the increased cost would result in fewer covered services and increased cost sharing in other areas, as it is difficult to demonstrate how increased vaccinations would reduce costs in other areas.

This estimate was echoed by a preliminary calculation by HHS, which estimated a marginal increase of 1.5% to premiums if insurance plans were to provide coverage for all vaccines routinely recommended by ACIP.¹⁷ The informants noted, as corroborated by the literature, that increased cost to the plan, through the loss of copays and other cost sharing, will, in the long run, be passed on to the employee and the public.^{12,13} The pass-through may be seen as higher premiums, higher employee cost sharing, or a different benefit package. Because health reform explicitly prohibits higher employee cost sharing, the pass-through may be seen in reduced benefits in domains outside preventive services or in employers dropping coverage. Because of the penalties employers will face, it is less likely that they will drop coverage solely because of a change in vaccination benefit.

Theme 2: addressing barriers to children, adolescents, and adults separately

An important theme across the interviews was that adults, adolescents, and young children face different

barriers to immunization. While these distinctions are made implicitly in much of the public health and medical literature—for example, articles focusing on human papillomavirus (HPV) vaccination rates in adolescents do not explicitly describe why they do not consider other age cohorts—the implications of benefit changes on immunization rates for different age cohorts vary considerably. Respondents agreed that ensuring access to immunization without financial barriers is important to any age group; however, they emphasized experimenting with targeted strategies to address specific populations and their needs. They described a “culture of vaccination” for children, and for some adolescent immunizations, which generally does not exist for adults. This culture of vaccination has developed over the years and across structures. On the finance side, many insurance companies cover ACIP-recommended vaccines for children at first dollar while forgoing coverage for many adults’ ACIP-recommended vaccines at the same level. On the public health side, state immunization policies requiring immunizations for school or college entry among children and adolescents is a strong incentive for physicians and families to ensure that immunizations are up-to-date.

Key informants identified age-specific barriers, noting that failing to address many of these barriers, even with greater financial support for vaccines, would probably not result in higher immunization rates. First, several noted that a significant barrier to vaccination is convenience, particularly for adult and adolescent populations. While well-child visits ensure that children have regular preventive appointments, informants noted that adult employees are often unwilling to take time to make or attend a doctor’s appointment simply for a vaccination. Additionally, some geographic areas face primary care shortages, which make scheduling a vaccination even more difficult. One informant noted that some employers have developed innovative strategies to increase access and convenience (e.g., on-worksites vaccination clinics), which is an effective tactic to increase adult immunization rates. Another spoke of promising data from recent efforts by retail locations, such as Walmart®, to offer vaccines. Another respondent spoke of efforts in some states to streamline billing and fee processing using swipe cards at certain locations. These cards deduct payment for fees or copays and verify insurance enrollment in a single swipe. In Florida, this effort is seen as an effective strategy to reduce the estimated \$10 in administration fees that it costs plans to pay the \$30 immunization bill.

Although about 90% of adolescents are insured,¹⁷

immunization rates for recommended vaccines remain low. For example, about 42% of adolescents were up-to-date on the meningococcal conjugate vaccine (MCV4), only 37% of adolescent girls had received more than one dose of HPV vaccine, and only 18% had received more than three doses of HPV vaccine.³

In addition to cost, as the key informants noted, there are structural and behavioral barriers to immunization for adolescents. Adolescents are less likely to have a medical home, or a single primary care location that provides coordinated preventive and acute care, and they are also less likely to have regular well-care visits.¹⁸ Thus, they may not have a provider who is aware of their immunization status. In addition, families tend to be less informed about adolescent vaccination platforms, so they may be less able to advocate for these services.¹⁹ Physicians may also be less aware of the importance of adolescent immunizations. Some families may have concerns about the safety of adolescent immunizations. Finally, HPV vaccine is intimately tied to issues of adolescent sexuality, and some parents may be concerned about encouraging sexual behavior by allowing for this type of immunization.²⁰ A strategy to increase adolescent immunization rates is to meet the adolescents where they are—providing immunizations in school health clinics or other locations where they spend time.²¹

Overall, adults are less likely to be immunized than children or adolescents. For example, although about 80% of adults younger than age 65 and 98% of adults older than age 65 are insured,¹⁷ only 36% of adults have received their seasonal flu vaccination, and only 67% of adults older than age 65 have received their pneumococcal vaccination.²² Adult immunizations tend to be based on risk status rather than age,²³ which adds challenges for patients and physicians to determine eligibility. Furthermore, many adults do not believe they are at risk for the given disease, especially for influenza, and do not see the benefit of immunization. Strengthening adult coverage will require a commitment by public and private sector partners to increase demand and strengthen the health-care delivery system’s ability to provide vaccines. Increasing provider technical knowledge, resources on how to maintain an inventory and administer vaccines, and public awareness of the value of vaccines is important. Funding the health-care delivery system’s capacity at the federal, state, and local levels to deliver vaccines, including support for health services and operations research to determine optimal strategies to address subpopulations at risk (e.g., racial/ethnic groups), is fundamental to improving coverage rates.²²

Theme 3: providers as advocates of immunization

Several informants noted that some providers may not understand the benefits of all types of vaccines. Unlike pediatricians and primary care providers who administer vaccines as a core competency of their practice, one expert from a health plan noted that providers under contract who had treated adolescents with meningitis were much more vigilant about getting their patients vaccinated with MCV4, just as physicians in the past with polio patients were strong advocates for polio vaccine. The informants noted that the importance of the provider in immunization-related decision-making cannot be emphasized strongly enough. Several of the informants who have worked to increase immunization rates described efforts to educate providers about the importance of immunizations as a key strategy to increasing demand and, ultimately, coverage.

Theme 4: the effect of first dollar on those who decline vaccinations for personal reasons

Many informants also raised the concern that some individuals are not comfortable with vaccinations for personal reasons. These individuals who exempt themselves or their children from receiving vaccines may believe that vaccines lead to autism or that specific vaccines, such as the cervical cancer/HPV vaccine, encourage promiscuity. Informants felt that cost was likely not important in their decision-making. While they suggested that educational campaigns could help these individuals, informants cautioned that new evidence or new campaigns on vaccines would likely not change the minds of exemptors who had already formed a strong opinion.

Limitations

The findings in this study were subject to several limitations. First, while these findings were based on a thorough review of the literature, the focus of the review was cost as a barrier to vaccination, not other potential barriers. However, articles examining cost also tended to cite other barriers, as described in this article. In addition, only five key informants were interviewed, so their responses reflect solely their own understanding of the challenges and opportunities involved in implementing a benefit change such as first-dollar coverage. All five respondents, however, are well-known, well-respected leaders in their fields, and we sought candidates who represented a variety of perspectives on issues of vaccination and benefits policy, from actuaries to chief medical officers to health plan leadership.

CONCLUSIONS

We consistently found in the literature and key informant interviews that cost sharing creates a significant barrier to immunization. However, the consensus among the key informants was that once the burden of cost was removed, immunization rates for new vaccines and for adolescents and adults will only rise with concerted, creative efforts to strengthen the immunization delivery system. First-dollar coverage is a blunt tool to improve vaccination rates, so additional efforts by all stakeholders to reach important subpopulations (e.g., by age group) will be needed. This strategy would best involve all key stakeholders—public and private health plans, employers who purchase health insurance for their employees, providers who deliver health services, public health leadership, vaccine manufacturers, and patients with their families—as they share common goals but very different approaches and constraints.

This study provides the payers' view of the benefits of introducing first-dollar coverage for immunizations. Removing the cost barrier will likely increase vaccination rates, especially among adolescents and adults and for newer, more expensive vaccines. It will incrementally increase children's immunization rates. It will also introduce opportunities for public health, medical practitioners, health plans, and employers to develop creative approaches to getting more people immunized once the cost barrier is removed. Removing the cost barrier will highlight other obstacles to immunization, such as poor information sharing and a lack of structures, especially for adolescents and adults, to systematize immunization. Health reform offers a unique opportunity to address some larger systemic issues in the health system in relation to the provision of preventive services. Examining the effects of first-dollar coverage on immunization rates offers a snapshot on how reducing financial barriers to preventive services may play out more broadly as health reform unfolds.

Further research is needed on these themes to identify, develop, and evaluate approaches to increase immunization rates, including into some of the following areas. Evidence-based strategies to increase immunization, especially among adolescents and adults, are desperately needed. Additionally, research into barriers to immunization and strategies to reach under-immunized subpopulations within these age groups will continue important work on disparities in immunization rates. Identifying new ways to engage providers, payers, and employers in increasing immunization rates may also be promising. As policy solutions are developed to

ensure that all individuals in the U.S. continue to have access to ACIP-recommended vaccines, it is important to recognize that private health insurance plans provide key support for this crucial intervention that affects both individual and public health.

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REFERENCES

1. Freed GL, Bordley WC, DeFries GH. Childhood immunization programs: an analysis of policy issues. *Milbank Q* 1993;71:65-96.
2. Institutes of Medicine, Committee on the Evaluation of Vaccine Purchase Financing in the United States. *Financing vaccines in the 21st century: assuring access and availability*. Washington: National Academies Press; 2003.
3. Stokley S, Dorell C, Yankey D. National, state, and local area vaccination coverage among adolescents aged 13–17 years—United States, 2008. *MMWR Morb Mortal Wkly Rep* 2009;58(36):997-1001.
4. Institutes of Medicine, Committee on Immunization Finance Policies and Practices. *Calling the shots: immunization finance policies and practices*. Washington: National Academies Press; 2000.
5. Paschal AM, Maryman J, Oler-Manske J. How can immunization coverage in urban counties be improved? A pilot study of a Kansas county. *Am J Infect Control* 2009;37:423-5.
6. Luman ET, Chu SY. When and why children fall behind with vaccinations, missed visits and missed opportunities at milestone ages. *Am J Prev Med* 2009;36:105-11.
7. Lee GM, Santoli JM, Hannan C, Messonnier ML, Sabin JE, Rusinak D, et al. Gaps in vaccine financing for underinsured children in the United States. *JAMA* 2007;298:638-43.
8. Lehmann C, Benson PA. Vaccine adherence in adolescents. *Clin Pediatr (Phila)* 2009;48:801-11.
9. Lee GM, Lieu TA. Vaccine financing in the United States: an emerging crisis. *Arch Pediatr Adolesc Med* 2009;163:485-7.
10. Patient Protection and Affordable Care Act of 2010. Public Law 111-148. 111th Congress.
11. Public Law 111-148. 111th Congress §2713.
12. Lindley MC, Shen AK, Orenstein WA, Rodewald LE, Birkhead GS. Financing the delivery of vaccines to children and adolescents: National Vaccine Advisory Committee recommendations. *Pediatrics* 2009;124(Suppl):S558-62.
13. Rosenberg AB. Vaccination in the United States: payer perspective on the working group and its recommendations. *Pediatrics* 2009;124(Suppl):S565-6.
14. Solanki G, Schaffner HH. Cost-sharing and the utilization of clinical preventive services. *Am J Prev Med* 1999;17:127-33.
15. Department of Health and Human Services (US). *Healthy people 2010: understanding and improving health and objectives for improving health*. Vol. 1 and 2. Washington: U.S. Government Printing Office; 2000.
16. Bondi MA, Harris JR, Atkins D, French ME, Umland B. Employer coverage of clinical preventive services in the United States. *Am J Health Promot* 2006;20:214-22.
17. DeNavas-Walt C, Proctor BD, Smith JC. *Income, poverty, and health insurance coverage in the United States: 2008*. Current Population Reports. Vol P60-236. Washington: U.S. Government Printing Office; 2009.
18. Rand CM, Shone LP, Albertin C, Auinger P, Klein JD, Szilagyi PG. National health care visit patterns of adolescents: implications for delivery of new adolescent vaccines. *Arch Pediatr Adolesc Med* 2007;161:252-9.
19. McCauley MM, Fishbein DB, Santoli JM. Introduction: strengthening the delivery of new vaccines for adolescents. *Pediatrics* 2008;121 Suppl 1:S1-4.
20. Davis MM. Majority of U.S. parents not in favor of state HPV vaccine mandates. *Ann Arbor (MI): University of Michigan, Mott Children's Hospital National Poll on Children's Health*; 2007.
21. Department of Health and Human Services (US). *Adolescent vaccination: recommendations from the National Vaccine Advisory Committee—Adolescent Working Group 2008* [cited 2010 Sep 22]. Available from: URL: <http://www.hhs.gov/nvpo/nvac/documents/AdolescentVaccinationRecommend.pdf>
22. Trust for America's Health, Robert Wood Johnson Foundation, Infectious Diseases Society of America. *Adult immunization: shots to save lives* [cited 2010 Sep 22]. Available from: URL: <http://healthyamericans.org/assets/files/TEAH2010AdultImmzBrief13.pdf>
23. Reynolds CE, Snow V, Qaseem A, Verbonitz L. Improving immunization rates: initial results from a team-based, systems change approach. *Am J Med Qual* 2008;23:176-83.