Provider Attitudes Toward Public-Private Collaboration to Improve Immunization Reminder/Recall: A Mixed-Methods Study

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ABSTRACT

OBJECTIVE: To assess primary care providers' current reminder/recall practices, preferences for collaboration with health departments in reminder/recall efforts, attitudes toward practice-based and population-based reminder/recall, and experiences with a population-based reminder/recall intervention.

METHODS: Providers responsible for making decisions about immunization delivery at all primary care practices that participate in the Colorado Immunization Information System were surveyed. Data collection was preceded by an intervention in which half of 14 counties received a population-based reminder/recall intervention conducted by the health department. Practice staff involved in immunization activities were then selected for semistructured telephone interviews that were based on the location of their practice within specified strata, including whether they were in the intervention counties, urban/rural location, and practice type.

RESULTS: A total of 282 (73.6%) of 383 of providers responded to the survey, and 253 who administered vaccines to children 19 to 35 months were retained; 82 staff members at 36 practices were interviewed. Providers' preferences for who should conduct reminder/recall were almost evenly split, with slightly more indicating that it should be conducted by the health department. Cost and feasibility issues were perceived barriers to conducting practice-based recall, particularly among urban practices. Support for population-based reminder/recall was highest among rural practices. Concern about perceived inaccuracies in immunization registry data was the major barrier to conducting population-based reminder/recall. The population-based intervention did not create an undue burden on practices.

CONCLUSIONS: A collaborative approach to reminder/recall involving both providers and health departments is preferable for many providers and may be a viable solution to the barriers of practice-based reminder/recall.

KEYWORDS: immunizations; public–private collaboration; recall and reminder messages

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WHAT'S NEW

Providers' attitudes toward public–private collaboration to improve immunization reminder/recall were assessed. Many providers, particularly those in rural areas, preferred an approach involving both practices and health departments. A population-based immunization reminder/recall intervention did not create a significant burden on practices.

REMINDER OR RECALL messages (reminder/recall) are an effective method of improving timeliness and completion of recommended immunizations to prevent disease, typically increasing immunization coverage rates by 5% to 20%.[1] All types of reminder/recall methods have been found to be effective among different age groups and within a variety of settings.[2–6] Reminder/recall is sometimes conducted with the help of immunization information systems, or immunization registries, which contain immunization records of all children within a geographic area.[7] Use of such registries improves the effectiveness of reminder/recall and significantly improves immunization delivery.[4,5,8]

Despite ample evidence of the effectiveness of reminder/recall, relatively few private providers initiate and sustain reminder/recall activities. This is unfortunate given that the vast majority of immunization-related activities now take place in the private, rather than the public, sector.[8–10] In one national study, less than 20% of private providers reported using a reminder/recall system.[8] In another study,

only 16% of private pediatricians routinely used reminder/recall messages, compared to 51% of public clinics.[11] There are significant barriers to practice-based reminder/recall, including time constraints,[7,11,12] cost,[7,11] need for additional training and/or staff time,[7] concerns about ease and functionality of the reminder/recall system,[7,13] concerns about confidentiality and Health Insurance Portability and Accountability Act (HIPAA) privacy and security,[7] lack of coordination between the practice's clinical and administrative systems,[7,11] and distrust in the accuracy of immunization registry data.[13]

One solution to overcoming some of the barriers to practice-based reminder/recall may be collaboration between the public and private sectors. A recent Institute of Medicine report emphasized the need for collaborative efforts between primary care and public health in order to improve population health.[14] Such collaboration could include improving the safety, development, and/or delivery of vaccines.[15] Public health departments or other public entities might include patients served by private providers within a larger population-based reminder/recall effort. One study has suggested that providers might view population-based reminder/recall as an acceptable alternative to practice-based reminder/recall, given the significant barriers to practice-based efforts.[13] Private practices could collaborate by providing public health departments with updated demographic and vaccination data for their patients to make population-based reminder/recall more effective. Such collaboration would benefit efforts to improve contact with patients, given the high number of invalid or undeliverable mailing addresses encountered in reminder/recall efforts.[3]

Little is known about providers' attitudes toward public–private collaboration to improve reminder/recall. This study uses a mixed-methods approach in order to build on previous findings that providers view population-based reminder/recall to be generally acceptable.[13] We employ survey data and interview data to assess primary care providers' current reminder/recall practices, preferences for collaboration with public health departments in reminder/recall efforts, attitudes toward practice-based and population-based reminder/recall, and experiences with a population-based reminder/recall intervention.

METHODS

OVERVIEW

This study draws on quantitative and qualitative data gathered via survey and key informant interviews. Data collection was preceded by an intervention in which half of the 14 counties in Colorado received a population-based reminder/recall intervention conducted by the Colorado health department. The Colorado Multiple Institutional Review Board approved this protocol.

INTERVENTION

Seven (3 urban, 4 rural) of the 14 counties in this study received a population-based reminder/recall intervention conducted by the Colorado state public health department in summer 2010.[16] All practices in these counties received a joint letter from the Colorado Department of Public Health and Environment (CDPHE), the Colorado Immunization Information System (CIIS), and the Children's Outcomes Research group notifying them of the intervention. The health department used the CIIS to identify children aged 19 to 35 months within the designated counties who were overdue for immunizations, then mailed a reminder/recall letter to the parents of those children. The letters included the logo of the local county health department. Up to 3 mailings (1 letter, 2 postcards) were sent to parents over a 3-month period; children who became up to date between mailings were removed from the mailing list.

STUDY POPULATION AND DATA COLLECTION

Survey administration was conducted in October and November 2010. A paper-based, self-administered survey and a $10 incentive were mailed to the providers who self-identified as being responsible for making decisions about immunization delivery at all primary care practices in Colorado. Practices were drawn from a 2009 CIIS survey of all primary care practices in the state. Survey questions were developed by the study team on the basis of previous immunization survey instruments and were pilot-tested with pediatric and family medicine providers. These questions asked for information about the practice county; respondents' position within the practice; practice participation in CIIS; practice specialty, type, and size; characteristics of patient population; previous reminder/recall practices to parents of children in need of immunizations; and beliefs about how reminder/recall should be conducted. Practices in counties included in the population-based intervention were also asked questions about their experience with the intervention. Using a modified Dillman methodology, an approach incorporating follow-up with nonresponders, a reminder postcard was mailed to each practice 5 days after the survey was mailed; nonresponders received up to 2 additional surveys.

Following recommendations for effective mixed-methods research,[17–19] quantitative and qualitative data collection were purposively integrated. Interviewees were drawn from the surveyed population. Practice staff were selected for interviews based first on whether their county had been involved in the population-based recall. Those in counties participating in the population-based recall were then stratified by whether they were an urban family medicine practice, an urban pediatric practice, or a rural family medicine practice. Within each strata, practices were then randomly sampled and recruited for interviews. Semistructured interview guides were designed to complement and expand survey data. Telephone interviews were conducted in October and November 2010 with 2 to 3 staff members at each sampled practice who self-identified as being involved in immunization policy or activities. At each practice, interviewees included at least 1 senior managing physician/partner as well as an office manager or