Logistical and fiscal sustainability of a school-based, pharmacist-administered influenza vaccination program

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Abstract

Objective: To assess the fiscal and logistical viability of school-based, pharmacist-administered influenza vaccination programs.

Design: Econometric observational study.

Setting: Nine schools in the Rincon Unified School District, Santa Rosa, CA.

Participants: Safeway Pharmacies; Rincon Unified School District; California Department of Public Health, Immunization Branch; and University of California, San Diego.

Intervention: Assessment of direct workflow observations and administrative data.

Main outcome measures: Unit costs, productivity, and effectiveness of school-based, pharmacist-administered influenza vaccination programs.

Results: The results showed a unit cost of $23.63 (compared with $25.60 for mass vaccination and $39.79 for walk-in shot-only vaccination clinics). The productivity index ($0.88) and efficiency index ($1.12) were better compared with data reported for comparable vaccination programs.

Conclusion: School-based, pharmacist-administered vaccination programs are fiscally and logistically self-sustaining, viable alternatives to medical office-based or community-based mass vaccination clinics, and may offer a practical strategy for vaccinating children and adolescents.

Keywords: School-based clinics, pharmacy, costs, vaccinations, operational science.

J Am Pharm Assoc. 2012;52:e74–e79.
doi: 10.1331/JAPhA.2012.10113

Received August 6, 2010, and in revised form December 23, 2011. Accepted for publication February 3, 2012.

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Disclosure: The authors declare no conflicts of interest or financial interests in any product or service mentioned in this article, including grants, employment, gifts, stock holdings, or honoraria.

Acknowledgements: To Brian Hille, BSPharm, Director, Safeway Pharmacy, and to James McCabe, BSPharm, Northern California Division.

In 2008, the Advisory Committee on Immunization Practices (ACIP) recommended the influenza vaccine for all children aged 6 months to 18 years and their household contacts and out-of-home caregivers.[1,2] A single visit for the 83 million children in this age cohort[2] would generate a 9% increase in the total number of annual ambulatory care visits[3] and would be concentrated in the few months preceding influenza season.[4] Primary care, already reeling under service demand and cost-containment initiatives,[5] raised concerns about meeting the increased demand[6–8] and prompted investigation of alternative locations for vaccinating children.[9–12]

Schools offer a logical venue for mass pediatric influenza vaccinations. During the past few years, more than 30 U.S. school districts have conducted vaccination programs.[9–13] However, all of the programs used donated vaccine and volunteer personnel, raising doubts about sustainability and leading to a call for community collaborators.[14]

With approximately 243,000 pharmacists (or 79.5/100,000 Americans) working in 59,000 establishments throughout urban and rural America,[15] pharmacies represent an obvious partner. Pharmacists are explicitly authorized to vaccinate,[16] have participated in medication management in school clincs,[17] and have boosted influenza vaccination rates during previous influenza seasons substantially.[18–21]

At a Glance

Synopsis: The expansion of patient groups that are recommended to receive influenza vaccinations combined with likely reductions in federal spending in public health will require new strategies and health delivery partnerships that are cost effective, are logistically sound, and provide quality care. The school-based, pharmacist-administered vaccination program described here was fiscally and logistically self-sustaining. The results showed a unit cost of $23.63, a productivity index of $0.88, and an efficiency index of $1.12. The pharmacists effectively followed vaccination safety guidelines and had a lower cost structure than primary care providers.

Analysis: *Negotiating school board policies to provide vaccination services on campus is much easier for public health entities than for commercial, for-profit entities such as pharmacies; however, the potential to reduce absenteeism suggests that such hurdles can be overcome. Pharmacists vaccinating in schools also face legislative challenges. For example, unlike daycare providers, pharmacists cannot access community immunization registries in California. Although pharmacists are able to vaccinate in most states, that authority often has age restrictions. When school health law is combined with general regulations about who can provide what health services and at what point, it becomes clear why pharmacists and pharmacies have not ventured into school-based vaccination services.*

Objective

The logistical and fiscal requirements for a successful and self-sustaining school-based, pharmacist-administered influenza vaccination program are unknown. This study sought to assess the fiscal and logistical viability of school-based, pharmacist-administered influenza vaccination programs.

Methods

The study was conducted in the Rincon Valley Union School District (District) through a partnership between the District, Safeway Pharmacies, California Department of Public Health (CDPH), and University of California, San Diego (UCSD). The District consists of nine schools, ranging from elementary to high school, with approximately 3,000 students and 170 teachers. The racial, ethnic, and economic makeup of the district mirrors that of California as a whole. This includes 24% of students participating in free or reduced-price lunch programs and eligible for the Vaccines for Children (VFC) Program that provides free vaccine from the federal government.

Project implementation

With CDPH providing the most current guidelines and recommendations to ensure all parties were operating within the law, the District and Safeway negotiated roles and responsibilities. The primary concerns of the District were to ensure that all students were offered vaccinations regardless of income and that no on-campus advertising occurred. Safeway, already billing commercial insurance companies for vaccinations, enrolled in VFC to ensure access for under/uninsured children.

Safeway's primary concerns included regulations on informed consent for minors when a parent/guardian was not present and who would be responsible in the event of an adverse reaction. The Safeway pharmacists had undergone the American Pharmacist Association vaccination certification training program and had experience vaccinating children through their in-store vaccination program.[22] CDPH provided the information needed for Safeway to be covered under the National Vaccines Injury Compensation Program.[23] After all parties were satisfied, a memorandum of understanding was approved by the legal departments of the District and Safeway.

Information packets were sent to parents/guardians 3 weeks after the 2010–11 school year began. Each packet contained an explanatory letter, 2008–09 Vaccine Information Statements, and a form for parents/guardians to consent or decline participation. For participating individuals, the packet also contained paperwork allowing for selection of vaccine formulation preference and listing of influenza-specific health history, including whether the child was younger than 9 years and had previously received a two-dose influenza vaccination, and a (pharmacy) number to call should questions arise. To encourage return of consent forms, Safeway attached a coupon for 10% discount on groceries.