



Giving it Our Best Shot:
An evaluation of the Oregon Department
of Human Services' Response to the
2004-2005 Flu Vaccine Shortage

March 2006

Oregon Department of Human Services
State Public Health

Full report available at www.oregon.gov/DHS/ph/imm
or by calling 971-673-0300

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EXECUTIVE SUMMARY

Introduction

The 2004-2005 influenza vaccine shortage tested the Oregon public health system in an unprecedented manner. In effect, the crisis presented an opportunity for the Department of Human Services (DHS) to exercise its response plans for a public health emergency, such as pandemic influenza. Pandemic influenza, which is regarded as inevitable by many, will be larger in scope and more deadly than the vaccine shortage, and federal officials have called upon state and local public health authorities (LPHA) to plan accordingly. A critical evaluation of the actions of DHS in response to the shortage will aid these planning efforts.

The evaluation sought to answer the principal question, “How well did the Oregon public health system function during the vaccine shortage?” with specific questions regarding:

- *Vaccine Coverage* - Did the public health system get vaccine to high-risk individuals?
- *Leadership and Policy Development* - Did DHS provide effective leadership during the crisis, particularly with regard to policy development?
- *Vaccine Resources Management* - Were vaccine resources managed effectively given the inherent limitations of the season?
- *Communications* - Were the best communication strategies and mechanisms utilized during the season?

These questions were examined within a cost-benefit framework that sought to determine whether the expenditure of DHS resources was balanced by beneficial outcomes of the season. Highlights of those costs and benefits are presented in this Executive Summary.

How Information was Gathered

Feedback on the performance of DHS was sought through five avenues. A cost analysis was conducted of DHS staff time, and three focus groups were held with county immunization coordinators and Immunization Policy Advisory Team (IPAT) members. In-depth interviews were carried out with DHS staff and key stakeholders, including LPHA staff, mass immunizers, and hospital systems and coalition partners. A telephone survey of 700 adult Oregonians was conducted, and 605 health care professionals responded to a mailed, self-administered questionnaire.

Cost Analysis

The flu vaccine shortage was not a public health emergency that involved excess morbidity, mortality or displacement of persons, but it still required significant staff time to mount a response. Thirty-five permanent staff reported working a total of 8,268 hours over a six-month period on flu vaccine shortage activities. These hours are equivalent to one additional workweek per month, with an associated cost of \$327,000. An additional \$44,000 was spent on temporary employees to staff the Oregon Flu Hotline. The response also required the cancellation or delay of many public health projects. These findings highlight the need for state and local health departments to develop surge capacity plans that ensure sufficient personnel for emergencies while also maintaining critical programmatic tasks. Employing measures, such as an Incident Management System (IMS), to use staff time more efficiently, may reduce costs.

Vaccine Coverage

In previous seasons, which were not hampered by shortages, Oregon's vaccination rate for individuals 65 years of age and older ranged from 70%-71%. Oregon nearly reached the same level of coverage, 67% (95% CI = 59% - 74%), for this age group during the vaccine shortage. This finding suggests that Oregon's vaccine allocation strategy was successful in directing supplies to this high-risk group. As with routine influenza seasons, however, many high-risk Oregonians did not seek out flu vaccine because they did not perceive the need for vaccination, and they had concerns about vaccine safety and adverse reactions.

Leadership and Policy Development

As DHS often looks to CDC for expertise and leadership, local and private sector partners look to DHS for similar guidance. The flu vaccine shortage challenged DHS to advocate and implement federal recommendations in a manner appropriate for Oregon. DHS sought a collaborative approach with its partners, seeking guidance and buy-in from the local public health system, as well as advisory and coalition partners, as policy decisions were made about mandatory vaccine prioritization, allocation of scarce resources, and messaging to providers and the public.

Health care professionals gave the State good overall ratings for its response and most stakeholders reported that the State provided strong leadership in the decision-making process, which was responsive to local needs. However, when we peeked behind the curtain to the mechanics of collaborative decision-making and delineation between the state and county public health roles, some stakeholders did note inefficiency in the process, including a need to streamline functions and communication to maximize limited state and local staff resources.

Vaccine Resources Management

Managing limited vaccine resources in an equitable manner was the primary objective of the 2004-05 influenza season. To meet this objective, it was imperative for the public health system to understand the vaccine supply and demand, and lead the effort in acquiring and distributing Oregon's share of the limited supply as rapidly as possible. DHS grappled with balancing rapid data collection and incomplete data reporting to produce a statewide picture of vaccine distribution in order to allocate new shipments of vaccine equitably. The data were imperfect and stakeholders were frustrated with the incomplete information from providers, distributors, and manufacturers; however, they generally viewed vaccine allocation by DHS to be fair and objective.

The real success story was DHS's ability to purchase the entire supply earmarked for Oregon, and rapidly redistribute it locally. The availability of the Immunization Program's vaccine depot was determined to be essential for in-state receipt of large vaccine shipments and quick turn-around in vaccine orders. Orders were funneled through local health departments, then shipments and bills were sent directly to providers. This got the vaccine in the hands of providers and in the arms of clients much faster.

Communications

During the vaccine shortage, DHS needed to relay key information in a timely fashion to the public and its partners throughout the state. The evaluation examined the effectiveness and efficiency of these communications by focusing on three topics: source and clarity of DHS messages, communication approaches and mechanisms.

DHS performed well in providing the public and its partners with messages that were received and understood during the shortage. The mechanisms used in some instances, however, were cumbersome and of questionable efficacy. Communications with health care providers consisted of a patchwork of efforts, including mail, fax, email, web postings, and newsletters. The Oregon Flu Hotline, while busy responding to calls, was resource intensive and little known or used by the public and providers outside the Portland metro area. Attention needs to be directed at developing efficient communication strategies and mechanisms. In particular, a communication plan is needed to ensure that health care providers are reached in a timely fashion during emergencies.

Recommendations

This Executive Summary has highlighted key beneficial outcomes that balance, if not outweigh, the monetary costs of mounting a response to the shortage. These outcomes include adequate flu vaccine coverage, the provision of strong leadership, fair and objective allocation of available vaccine, and emergency messages that were received and understood by the public and health care providers. Future planning efforts should consider the following recommendations:

Leadership

- **Continue to use a collaborative decision-making process for developing and implementing statewide policies.** The collaborative process resulted in decisions that were supported by stakeholders. Findings point to readily implemented changes that can improve the efficiency of the process while maintaining the model of collaboration.
- **Implement and exercise an Incidence Management System (IMS) and surge capacity plans to ensure the efficient use of staff and to clarify roles, responsibilities and lines of communication with internal and external players.** During the shortage, DHS utilized an IMS structure, which was limited to management level tasks, however, non-management staff from diverse programs responded to the event as well. Education and training at multiple system levels will streamline our response.

Vaccine Management

- **Maintain the DHS vaccine depot.** This allows DHS a proactive role in acquiring, distributing, and brokering vaccine in an emergency.
- **Examine different approaches for assessing and/or tracking vaccine supply in Oregon.** Understanding vaccine supply is crucial for making decisions about vaccine allocation and brokering in the event of a shortage. State and national possibilities may include a targeted provider survey, an electronic provider inventory management system, or relying on the release of manufacturer supply data.

Communications

- **Develop and routinely test a comprehensive plan for communicating with health care providers.** To uniformly implement emergency recommendations, it is imperative that providers can be reached in a timely, efficient manner.
- **Mount a public health campaign to promote the benefits and safety of vaccines.** Despite all the efforts to target vaccine to priority populations, many high-risk individuals remained unconvinced of the safety and efficacy of annual influenza vaccination.
- **Find alternatives to a DHS-run hotline.** Locally run and advertised hotlines and websites may be able to respond more appropriately to concerns of community members.