



**Rutgers** Center for  
State Health Policy

*The Institute for Health, Health Care Policy, and Aging Research*

# **Examination of Universal Vaccine Purchasing States and New Jersey**

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# Examination of Universal Vaccine Purchasing States and New Jersey

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## Executive Summary

### *Introduction*

Due to recent concerns over the availability of vaccines and various organizational and financial issues that may impact immunization coverage, the Rutgers Center for State Health Policy (CSHP) was commissioned by the New Jersey Department of Health and Senior Services (NJDHSS) to examine existing state Universal Vaccine Purchasing Systems (UVPS) and the viability of this type of system for New Jersey. This project provides:

- Information on the issues and challenges that the eight UVPS states face;
- Responses from key stakeholders in New Jersey in terms of their potential support and concerns regarding changes to the current vaccine purchasing program;
- A comparison of New Jersey to the UVPS states in terms of their existing immunization rates and health care coverage.

### *Methods*

To evaluate the existing UVPS states and the potential for New Jersey to develop a UVPS, Rutgers Center for State Health Policy:

- Reviewed peer-reviewed and other journals, articles, and materials about UVPS;
- Interviewed state officials from Alaska, Idaho, Maine, Massachusetts, New Hampshire, New Mexico, Rhode Island, and Washington regarding their UVPS program's structure, implementation issues, and costs;
- Interviewed officials at the Centers for Disease Control and Prevention (CDC)-Vaccine Preventable Disease Program and New Jersey state officials and stakeholders representing providers, insurance companies/HMOs, and pharmaceutical companies;
- Compiled statistics for immunization coverage in the eight UVPS states and in New Jersey;

- Provided potential cost impact estimates for New Jersey based on the UVPS states' cost experiences.

## **Results**

According to statistics compiled by the CDC, New Jersey's current immunization rates are comparable to the eight UVPS states. In comparison to the eight states that have UVPSs:

- New Jersey's rate of 5.3% of children at or below 200% of the Federal Poverty Level without health insurance is comparable or higher than five of the eight UVPS states.
- New Jersey has a lower rate of Medicaid-enrolled children (17%), yet is in the middle in terms of uninsured children (11%).
- New Jersey's age-appropriate childhood immunization rates (2000 to 2004) rank in the middle of these eight states over the five-year span and are comparable to national averages for both the 4:3:1:3 (four or more doses of DTP, three or more doses of poliovirus vaccine, one or more doses of any MMR, and three or more doses of Hib) and 4:3:1:3:3 (the 4:3:1:3 and three or more doses of Hep B).
- New Jersey's vaccination rates for white and black non-Hispanics are comparable to or higher than the national rates and the eight UVPS states.
- In 2004, New Jersey's estimated vaccination rates are comparable with the UVPS states for children 19 to 35 months of age whose provider participated in the Vaccines for Children (VFC) program.
- For children 19 to 35 months, the age-appropriate childhood immunization rate for New Jersey for the 4:3:1:3 series among private providers is comparable to the eight UVPS states.

These findings are expected since New Jersey as well as other states have enacted state laws mandating immunization coverage by insurance companies. New Jersey's law is one of the few state laws that approaches a comprehensive statute, which, according to the 2003 report by the Center for Health Services Research and Policy, includes covering all children, setting coverage at the ACIP standard, and prohibiting deductibles (Rosenbaum, et al., 2003).

## **State Overview**

While some of the UVPS states' officials attributed these successful coverage rates to their UVPS programs, others were not sure that their rates would be dramatically less without these programs.



Officials believe the VFC program and Section 317 grants have improved the vaccination coverage for low-income children. Providers enjoy the benefits of unexpired vaccine supplies, easier storage systems, and having financially risk-free vaccines enhances their ability to offer vaccinations. Across these states, we see the following commonalities:

- Most states with a UVPS limit their program to children.
- Most have three funding sources: the VFC program, the federal Section 317 grant, and state funding.
- A few receive funds from private insurance companies to cover the proportion of children that would normally be reimbursed by insurance companies/HMOs.
- Most purchase their vaccines from the CDC through the VFC program.
- While free to the providers, the states bore the risk of increasing vaccine costs and number of recommended vaccines.
- To contain the cost of their UVPS program some states have had to limit the choice of vaccine manufacturers.
- The distribution systems often presented administrative challenges.

While the eight UVPS states have supported these programs for many years, most state officials were concerned about continued support for their programs. Current state support is threatened by increasing prices for vaccines, continuing expansion of the number of recommended vaccines as new ones are developed, and decreases in the Section 317 grant funding.

### *New Jersey*

Based on the average costs of the UPVS states and the number of children in New Jersey's birth cohort (approximately 117,000), we estimated that New Jersey would need to spend approximately \$78.2 million annually for a UVPS program. This estimation does not include any additional costs that New Jersey would potentially incur compared to other UVPS states due to the larger number of physicians located in New Jersey, differences in personnel costs, and differences in wastage rates.

Stakeholders from New Jersey identified several benefits to creating a UVPS program as well as several concerns. Concerns included whether increased government involvement would alleviate or exacerbate vaccine shortages and that adding an intermediary step in the vaccine purchase and distribution system would slow down the process. Additionally, representatives from four manufacturing companies opposed the development of a UVPS.

Representatives from two large HMOs saw both the benefits and challenges in having a UVPS. The benefits include having a more centralized system where an entity, not necessarily the State, would

perform the function of purchasing, distributing, and obtaining reimbursement for the cost of vaccines. The challenge for insurance companies would be the lack of competition for vaccine prices.

Providers mentioned several different benefits that this system would offer them including easier storage of vaccines, and “equal footing” in terms of costs (which is not the case when small and solo practitioners have to pay more for vaccines than large group-practice providers). They also mentioned the benefits of not having to expend their own capital to purchase vaccines without knowing whether they will obtain reimbursement for this purchase by the insurance companies. One drawback mentioned was the lack of profit from administering vaccines.

Providers also believed that creating such a system in New Jersey would not be difficult because the state already has an established VFC program. An additional suggested advantage is that it would better prepare the state for any emergencies that may arise such as an influenza pandemic. It would strengthen the public health care system by providing a more integrated immunization process throughout the state and for all populations.

### ***Conclusion and Recommendations***

The purpose of this project was to provide information on the issues and challenges that would confront New Jersey should it seek to establish a UVPS. The following benefits and challenges should be considered in addressing this question:

#### Benefits:

- Providers were fairly supportive of a UVPS as it would provide them with unexpired supplies of vaccines.
- HMOs were fairly supportive of a UVPS as they would no longer have to negotiate with manufacturers for vaccines.
- Providers would be relieved of the financial risk of unused vaccines, thus they may be more likely to offer immunizations.
- A utilized immunization registry (needed for the ordering and distribution of vaccines) could provide improved state and local level data regarding immunization coverage within population groups (e.g., vulnerable populations).

#### Some Challenges:

- UVPSs are very expensive and would potentially cost New Jersey over \$78 million.
- Increases in both vaccine costs and the number of recommended vaccines are expected to elevate the cost of a UVPS over time.

- Decreased Section 317 grants and other public funding shifts the cost of a UVPS over time to other sources such as the State.
- Alternative sources of funding such as private funds from insurance companies/HMOs to cover children currently covered by private insurance.
- Limiting the choice of vaccine manufacturers to contain program costs would limit providers' choices, and thereby potentially reduce their support of a UVPS.
- The use of the current immunization registry to facilitate a more complex ordering and distribution system would need to be mandated.
- Stakeholders representing vaccine manufacturers and distributors were strongly opposed to the idea of New Jersey establishing a UVPS.

While there are benefits to establishing a UVPS in terms of potentially facilitating physicians' responsibilities to immunize their patients, there is a long list of fiscal and implementation challenges. Although a UVPS would have some attractive features, the significant costs and challenges of implementing a UVPS in New Jersey clearly appear to outweigh its potential benefits at this time.



# Examination of Universal Vaccine Purchasing States and New Jersey

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## Introduction

Immunization of children and adults is one of the most cost effective medical services in public health, but one that faces growing financial challenges (Institute of Medicine, 2003). With increases in the number and costs of recommended vaccines and decreasing federal support from the Federal Public Service Act section 317 grant program, which was launched in 1963 by the CDC to provide additional funds for program operations and vaccine purchases for children and adults, states continue to strive to reach the Healthy People 2010 immunization coverage rates (Hinman, et al., 2004; Institute of Medicine, 2003). In spite of these increasing costs, eight states have Universal Vaccine Purchasing Systems (UVPSs) that provide free immunization coverage to all children within their state. These UVPSs are designed to insure that children have access to immunizations without any financial barriers.

Due to recent concerns over the availability of vaccines and various organizational and financial issues that may impact immunization coverage, the Rutgers Center for State Health Policy (CSHP) was commissioned by the New Jersey Department of Health and Senior Services (NJDHSS) to examine these Universal Vaccine Purchasing Systems and the viability of this type of system for New Jersey. This project provides information on the issues and challenges that the UVPS states face and the lessons they may provide to New Jersey and other states interested in developing these systems. Additionally, this report provides information from key stakeholders in New Jersey in terms of their potential support and concerns regarding changes to the current immunization program. Finally, New Jersey is compared to the UVPS states in terms of their existing immunization rates and health care coverage so that the potential impact of establishing such a program can be estimated.

## Methods

To evaluate the existing UVPSs and the potential for New Jersey to develop a UVPS, CSHP examined the eight UVPS states regarding how they structure, implement, and finance their systems, conducted interviews with key stakeholders in New Jersey regarding their support and concerns for a potential UVPS, and compared New Jersey's immunization rates to these other states. Specifically, CSHP:

- Reviewed peer-reviewed and other journals, articles, and other materials about UVPS.
- Interviewed state officials from Alaska, Idaho, Maine, Massachusetts, New Hampshire, New Mexico, Rhode Island, and Washington. These states were selected because they are defined by the CDC as Universal States (immunization program supplies all vaccines to all providers.)<sup>1</sup> The interviews included open-ended questions about the UVPS program, its structure, implementation, and cost. Specifically, we asked how these programs operated, when and how they were developed, their impact on immunization rates, how they are financed, challenges to the system, and lessons and/or advice they might offer to other states interested in creating a UVPS.
- Interviewed officials at the Centers for Disease Control and Prevention (CDC)-Vaccine Preventable Disease Program. The interviews included open-ended questions about the Vaccines For Children (VFC) program, the pros and cons of having a UVPS, whether other states were considering moving towards or away from establishing/having a UVPS, and lessons and/or advice they might offer to states interested in creating a UVPS.
- Compiled statistics for immunization coverage in the eight UVPS states and in New Jersey.
- Interviewed New Jersey state officials and stakeholders representing providers, insurance companies/HMOs, and pharmaceutical companies regarding the potential for creating a UVPS in New Jersey. Specifically, we asked about their potential support and concerns for such a system.
- Provided potential cost impact estimates for New Jersey based on the Universal States' cost experiences. We estimated this by considering the population in terms of insurance coverage and low income groups within each state.

## Results

In this section, we present an overview of the UVPS states compared to New Jersey in terms of poverty rates among children, health care insurance coverage, and vaccination rates. Then, a profile detailing the information gathered from each state is presented. Each profile includes the state's funding structure, provider response or supports of the UVPS, challenges faced by each state, and recommendations and/or advice they have for states interested in developing a UVPS. Lastly, we present a summary of our interviews with selected New Jersey stakeholders and CDC officials.

## Overview of the States

In comparison to the eight states that have UVPSs, New Jersey ranks among the lowest in poverty rates (see Table 1). For the years 2002-2004, New Jersey has 24.2% children at or below 200% of the federal poverty level (FPL) (U.S. Census Bureau, 2005). While New Hampshire has a lower poverty rate (20.4%), all of the other UVPS states have rates that exceed New Jersey's rate by 3.5% to 18.8%. In terms of children at or below 200% of the FPL without health insurance, New Jersey's rate of 5.3% is comparable or higher than five of the eight UVPS states. While New Jersey is in the middle in terms of rates, the number of children in New Jersey without health insurance living at or below 200% FPL is 121,000.

**Table 1: Number (in Thousands) and Percent of Children under 19 Years of Age, at or below 200 Percent of Poverty, at or below 200 Percent of Poverty without Health Insurance, by State: Three-Year Averages for 2002, 2003, and 2004.**

	Total children under 19 years, all income levels	Children At or Below 200% of Poverty Level		Children At or Below 200% of Poverty Level Without Health Insurance	
		Number	Percent	Number	Percent
<b>Alaska</b>	199	67	33.9	12	5.9
<b>Idaho</b>	394	169	43.0	30	7.7
<b>Maine</b>	295	107	36.4	11	3.6
<b>Massachusetts</b>	1,567	434	27.7	53	3.4
<b>New Hampshire</b>	323	66	20.4	8	2.6
<b>New Mexico</b>	519	269	51.9	51	9.8
<b>Rhode Island</b>	262	91	34.7	9	3.4
<b>Washington</b>	1,594	567	35.6	68	4.3
<b>New Jersey</b>	2,270	549	24.2	121	5.3
<b>U.S.</b>	76,978	29,704	38.6	5,641	7.3

\*Average of the three years' percentages, not average 'Number' divided by average Total Children. Results may differ slightly based on the method used.

Source: U.S. Census Bureau, Current Population Survey, 2003, 2004, and 2005 Annual Social and Economic Supplements.

To further understand the current insurance coverage of children in these states, we reviewed data compiled by the Kaiser Foundation on the percent of children enrolled in Medicaid and State Children's

Health Insurance Program (SCHIP), covered by private insurance, and uninsured (see Table 2). These data show that compared to the UVPS states, New Jersey has a lower rate of Medicaid-enrolled children (17%), yet is in the middle in terms of uninsured children (11%). Except for New Hampshire, New Jersey also has one of the highest rates of privately insured children (73%). These data suggest that compared to the eight UVPS states, New Jersey has proportionately fewer children eligible for or enrolled in publicly funded health insurance programs, and thus compares more with New Hampshire and Massachusetts than with states such as Maine and Washington. Having a high number of privately insured children is not necessarily a problem because the majority of states (about 33), including New Jersey, have an immunization mandate that requires insurance companies to cover (or offer coverage for) vaccines (Rosenbaum, Stewart, Cox, & Mitchell, 2003). Furthermore, New Jersey, as well as other states, requires HMOs to report on certain standardized performance measures, one being the number of child and adolescent immunizations conducted within a given year. These performance measures are maintained by the National Committee for Quality Assurance through the Health Plan Employer Data and Information Set (HEDIS®).

Comparing the immunization rates for the eight UVPS states and New Jersey, we see that in 2003, Massachusetts, New Hampshire, and Rhode Island had the highest rates for both the 4:3:1:3 (four or more doses of DTP, three or more doses of poliovirus vaccine, one or more doses of any MMR, and three or more doses of Hib) and 4:3:1:3:3 (four or more doses of DTP, three or more doses of poliovirus vaccine, one or more doses of any MMR, three or more doses of Hib, and three or more doses of HepB). However, New Jersey's immunization rates (2000 to 2004) rank in the middle of these eight states over the five-year span and are comparable to national averages (see Table 3).



**Table 2: Health Insurance Coverage for Children (<19 years of age) for UVPS States and New Jersey, 2002-2003**

	<b>Medicaid Enrollees<sup>a</sup></b>	<b>SCHIP Enrollees<sup>b,c</sup></b>	<b>Privately Insured (Employer and Individual)<sup>a</sup></b>	<b>Uninsured<sup>a</sup></b>
<b>Alaska</b>	36%	5.4%	50%	13%
<b>Idaho</b>	26%	3.3%	60%	14%
<b>Maine</b>	34%	4.9%	59%	7%
<b>Massachusetts</b>	21%	3.7%	71%	7%
<b>New Hampshire</b>	17%	2.1%	78%	5%
<b>New Mexico</b>	43%	2.3%	42%	15%
<b>Rhode Island</b>	29%	4.6%	66%	6%
<b>Washington</b>	31%	0.8%	60%	10%
<b>New Jersey</b>	17%	4.5%	73%	11%
<b>U.S.</b>	27%	5.0%	61.%	12%

<sup>a</sup> Source: [www.statehealthfacts.org](http://www.statehealthfacts.org); Table Population Distribution by Age, state data 2002-2003, US 2003

<sup>b</sup> Smith, Vernon, and Rousseau, SCHIP Enrollment in 50 States Dec. 04 Data Update: 9/04, Kaiser Commission on Key Facts. [WWW.KFF.org](http://WWW.KFF.org)

<sup>c</sup> Calculated from the December 2004 enrollment figure and the US Census number of children <19 in 2004 within the state. SCHIP was available in 35 states during this period. National % is based on all children in SCHIP nationwide divided by the total number of children in the US.

**Table 3: Estimated Vaccination Coverage with Individual Vaccines and Selected Vaccination Series for UVPS States, New Jersey, and US for Children 19-35 Months of Age, National Immunization Survey**

	2000		2001		2002		2003		2004	
	4:3:1:3 <sup>a</sup>	4:3:1:3:3 <sup>b</sup>	4:3:1:3 <sup>a</sup>	4:3:1:3:3 <sup>b</sup>	4:3:1:3 <sup>a</sup>	4:3:1:3:3 <sup>b</sup>	4:3:1:3 <sup>a</sup>	4:3:1:3:3 <sup>b</sup>	4:3:1:3 <sup>a</sup>	4:3:1:3:3 <sup>b</sup>
<b>Alaska</b>	77.0±5.3	70.6±5.7	74.1±5.5	71.2±5.6	78.3±5.6	75.3±5.9	81.4±5.1	79.7±5.2	76.1±6.5	75.3±6.6
<b>Idaho</b>	73.7±5.2	70.7±5.4	74.1±5.2	70.2±5.4	73.3±5.8	69.4±5.9	81.6±5.5	78.1±5.9	82.6±5.2	80.6±5.4
<b>Maine</b>	83.3±4.4	76.0±5.1	82.2±4.5	75.1±5.1	82.8±4.9	80.7±5.1	81.8±5.2	78.6±5.4	85.0±4.9	82.1±5.2
<b>Massachusetts</b>	85.2±4.0	81.4±4.3	80.6±4.4	76.6±4.7	89.2±3.4	86.2±3.8	91.7±3.2	90.7±3.4	90.9±3.4	89.1±3.7
<b>New Hampshire</b>	83.2±4.4	78.9±4.8	83.9±4.2	77.6±4.8	87.3±4.5	83.5±5.0	88.4±4.1	86.5±4.4	89.0±4.8	86.3±5.1
<b>New Mexico</b>	75.9±5.0	71.5±3.1	71.0±5.1	63.2±5.5	67.4±6.6	64.6±6.7	77.0±6.6	75.2±6.8	84.8±5.2	83.5±5.3
<b>Rhode Island</b>	82.3±4.4	80.5±4.5	83.7±4.1	81.7±4.3	85.8±5.5	84.5±5.6	87.3±4.9	85.2±5.2	88.2±4.2	86.7±4.4
<b>Washington</b>	77.2±4.0	72.5±4.2	75.5±4.3	71.2±4.4	73.1±4.9	69.2±5.0	79.7±4.3	75.3±4.6	81.2±4.3	77.7±4.6
<b>New Jersey</b>	75.9±5.0	71.2±5.3	76.2±5.4	73.1±5.5	80.4±5.0	76.1±5.4	75.8±6.1	75.0±6.1	83.3±5.3	82.7±5.4
<b>U.S.</b>	76.2±0.9	72.8±0.9	77.2±0.9	73.7±0.9	77.5±1.0	74.8±1.0	81.3±0.9	79.4±0.9	82.5±0.9	80.9±0.9

<sup>a</sup> Four or more doses of DTP, three or more doses of poliovirus vaccine, one or more doses of any MMR, and three or more doses of Hib

<sup>b</sup> Four or more doses of DTP, three or more doses of poliovirus vaccine, one or more doses of any MMR, three or more doses of Hib, and three or more doses of HepB

Source: CDC: National Immunization Survey

To provide a more in-depth view of immunization rates within these states, it is important to consider the immunization rates among various groups and populations. As one purpose of a UVPS is to eliminate the financial barrier to obtaining immunizations, it is important to consider the immunization rates among children with private health insurance, those who have publicly-funded health insurance, and those without health insurance. Unfortunately, this level of detail is not readily available, but the National Immunization Survey does provide estimated vaccine coverage rates for children 19 to 35 months of age living below or at or above the poverty level (see Table 4). These data indicate that for children living at or above the poverty level in 2004, seven of the eight UVPS states and New Jersey had immunization rates comparable to or higher than the national average for the 4:3:1:3 and the 4:3:1:3:3 vaccination series. New Jersey has the third highest rates compared to the eight UVPS states for both immunization series.

Due to sample size issues, estimates for children living below the poverty level could only be calculated for the nation and Massachusetts. For children living below the poverty level, Massachusetts' vaccination coverage rate is significantly higher than the national average. In a separate report, Washington's 2000-2002 immunization rates for children living below the poverty level was  $66.5 \pm 7.1$  for the 4:3:1:3:3 vaccination series and  $72.1 \pm 2.9$  for children living at or above the poverty level (Washington State Department of Health, March 2004).

**Table 4: Estimated Vaccination Coverage\* with Selected Vaccination Series among Children\*\* 19-35 Months of Age and Poverty Level by UVPS States, New Jersey, and U.S. National Immunization Survey, 2004†**

	Children Living Below the Poverty Level		Children Living At or Above the Poverty Level	
	4:3:1:3 <sup>¶¶</sup>	4:3:1:3:3 <sup>***</sup>	4:3:1:3 <sup>¶¶</sup>	4:3:1:3:3 <sup>***</sup>
<b>Alaska</b>	NA	NA	73.3±7.8	72.2±7.8
<b>Idaho</b>	NA	NA	85.2±5.4	84.0±5.5
<b>Maine</b>	NA	NA	87.3±5.0	84.1±5.5
<b>Massachusetts</b>	93.9±7.4	93.0±7.5	90.0±4.3	87.7±4.7
<b>New Hampshire</b>	NA	NA	87.4±5.7	85.6±5.8
<b>New Mexico</b>	NA	NA	91.2±4.7	89.5±5.0
<b>Rhode Island</b>	NA	NA	86.5±5.3	85.1±5.4
<b>Washington</b>	NA	NA	84.1±4.5	81.0±4.7
<b>New Jersey</b>	NA	NA	88.2±5.1	87.5±5.2
<b>U.S.</b>	78.0±2.2	76.8±2.2	84.6±1.0	82.8±1.0

\* Estimate=NA (Not Available) if the unweighted sample size for the numerator was <30 or (CI half width)/Estimate >0.5 or (CI half width)>10

\*\* Children in the Q1/2004-Q4/2004 National Immunization Survey were born between February 2001 and May 2003.

¶¶ Four or more doses of DTP, three or more doses of poliovirus vaccine, one or more doses of any MMR, and three or more doses of Hib

\*\*\* Four or more doses of DTP, three or more doses of poliovirus vaccine, one or more doses of any MMR, three or more doses of Hib, and three or more doses of HepB

† % ± 95% Confidence Interval

Vaccination coverage for children 19-35 months of age by race/ethnicity for the 4:3:1:3:3 series was also estimated (see Table 5). Although the gaps are decreasing, there is still a disparity between white non-Hispanics and black non-Hispanics and Hispanics for the immunization series 4:3:1:3:3 (CDC, 2004a; Chu, et al., 2004; Hutchins, et al., 2004). While estimates for non-white groups were only available for the national rate and a few of the states, New Jersey's vaccination rates for white and black non-Hispanics are comparable to or higher than the national rates and the eight UVPS states. Given the data limitations, it has been suggested that data collection methods should be improved to better identify racial disparities at the local and states levels (Chu, et al., 2004; Steyer, et al., 2005).

**Table 5: Estimated Vaccination Coverage\* with 4:3:1:3:3† Among Children 19-35 Months of Age by Race/Ethnicity‡ for UVPS states, New Jersey, and U.S., National Immunization Survey, 2004§**

	<b>Total</b>	<b>White Only, non-Hispanic</b>	<b>Black Only, non-Hispanic</b>	<b>Hispanic</b>
<b>Alaska</b>	75.3±6.6	71.9±8.3	NA	NA
<b>Idaho</b>	80.6±5.4	80.2±6.2	NA	NA
<b>Maine</b>	82.1±5.3	81.7±5.6	NA	NA
<b>Massachusetts</b>	89.1±3.7	89.0±4.9	NA	91.4±7.3
<b>New Hampshire</b>	86.3±5.1	85.8±5.6	NA	NA
<b>New Mexico</b>	83.5±5.3	80.3±9.7	NA	87.3±6.0
<b>Rhode Island</b>	86.7±4.4	87.3±5.7	NA	89.3±7.7
<b>Washington</b>	77.7±4.6	79.1±5.4	NA	NA
<b>New Jersey</b>	82.7±5.4	86.0±7.0	94.6±3.2	NA
<b>U.S.</b>	80.9±0.9	83.3±1.1	74.5±3.1	79.7±2.1

\* Estimate=NA (Not Available) if the unweighted sample size for the numerator was <30 or (CI half width)/Estimate >0.5 or (CI half width)>10; % ± 95% Confidence Interval

† Four or more doses of DTP, three or more doses of poliovirus, one or more doses of MMR, three or more doses of Hib, and three or more doses of HepB

‡ Self-reported by respondent. Individual racial groups do not include Hispanic children. Children of Hispanic ethnicity may be of any race

§ Children in the Q1/2004-Q4/2004 National Immunization Survey were born between February 2001 and May 2003.

The National Immunization Survey also provides information about the immunization rates for children 19 to 35 months of age whose provider participated in the VFC program, and by the provider type. In Table 6, we see that among providers who participated in the VFC program in 2004, New Jersey’s estimated vaccination rates are comparable with the UVPS states. Although these data are only for providers who participate in the VFC program, New Jersey is comparable to the UVPS states in immunization rates among children eligible for VFC vaccines. Again, the data are not available to discern whether the vaccination rates differ by children’s insurance status.

**Table 6: Estimated Vaccination Coverage\* with Selected Vaccination Series Among Children 19-35 Months of Age by Children Whose Providers Participated in the VFC Program for UVPS states, New Jersey, and U.S., National Immunization Survey, 2004†**

	Children Whose Providers Participated in the VFC Program	
	4:3:1:3¶¶	4:3:1:3:3***
<b>Alaska</b>	78.2±8.0	78.0±8.0
<b>Idaho</b>	84.1±5.2	82.6±5.4
<b>Maine</b>	89.5±4.7	87.5±5.1
<b>Massachusetts</b>	93.4±3.3	91.5±3.7
<b>New Hampshire</b>	92.7±4.4	89.5±5.1
<b>New Mexico</b>	84.3±5.5	82.9±5.7
<b>Rhode Island</b>	89.3±4.3	88.1±4.6
<b>Washington</b>	84.0±4.8	80.8±5.1
<b>New Jersey</b>	84.2±5.7	83.7±5.7
<b>U.S.</b>	83.0±1.0	81.5±1.0

\* Estimate=NA (Not Available) if the unweighted sample size for the numerator was <30 or (CI half width)/Estimate >0.5 or (CI half width)>10

\* Children in the Q1/2004-Q4/2004 National Immunization Survey were born between February 2001 and May 2003.

¶¶ Four or more doses of DTP, three or more doses of poliovirus vaccine, one or more doses of any MMR, and three or more doses of Hib

\*\*\* Four or more doses of DTP, three or more doses of poliovirus vaccine, one or more doses of any MMR, three or more doses of Hib, and three or more doses of HepB

† % ± 95% Confidence Interval

Estimated vaccination coverage was also available for provider type either public or private (see Table 7). These data suggest that for children 19 to 35 months, the immunization rate for New Jersey for the 4:3:1:3 series among private providers is comparable to the eight UVPS states. While the immunization rates for public facilities could only be calculated for Massachusetts, and Rhode Island, these states all have even higher immunization rates among their public facilities compared to the private facility type providers. In general, however, comparing the total immunization rates and the private facility type rates indicates that public and mixed providers (includes more than one type of provider) might have slightly lower immunization rates. This is especially true in New Jersey which has a total rate of 83.3±5.3 compared to the private rate of 88.5±4.8.

**Table 7: Estimated Vaccination Coverage\* with 4:3:1:3<sup>†</sup> Among Children 19-35 Months of Age By Provider Facility Type<sup>‡</sup> for UVPS State, New Jersey, and U.S., National Immunization Survey, 2004<sup>§</sup>**

	<b>Total</b>	<b>Public</b>	<b>Private</b>	<b>Mixed</b>
<b>Alaska</b>	76.1±6.5	NA	NA	93.2±8.6
<b>Idaho</b>	82.6±5.2	NA	87.4±5.7	NA
<b>Maine</b>	85.0±4.9	NA	86.7±5.9	NA
<b>Massachusetts</b>	90.9±3.4	97.0±2.7	92.7±3.8	NA
<b>New Hampshire</b>	89.0±4.8	NA	90.9±5.1	NA
<b>New Mexico</b>	84.8±5.2	NA	87.1±6.2	90.1±9.7
<b>Rhode Island</b>	88.2±4.2	NA	88.4±5.0	NA
<b>Washington</b>	81.2±4.3	92.2±7.9	80.9±5.5	NA
<b>New Jersey</b>	83.3±5.3	NA	88.5±4.8	NA
<b>U.S.</b>	82.5±0.9	80.7±2.5	84.5±1.1	83.8±3.2

\* Estimate=NA (Not Available) if the unweighted sample size for the numerator was <30 or (CI half width)/Estimate >0.5 or (CI half width)>10

<sup>†</sup> Four or more doses of DTP, three or more doses of poliovirus, one or more doses of MMR, and three or more doses of Hib

<sup>‡</sup> Self-reported by provider. Public provider includes public health clinics and community health centers. Private provider includes private clinics, HMOs, and group practices. Mixed provider includes more than one type of provider. Other provider includes all other types of providers such as hospitals, military facilities, and unknown responses.

<sup>§</sup> Children in the Q1/2004-Q4/2004 National Immunization Survey were born between February 2001 and May 2003.

Source: U.S. Census Bureau, National Immunization Survey (2005): [cdc.gov/nip/coverage/NIS/04/TOC-04.htm](http://cdc.gov/nip/coverage/NIS/04/TOC-04.htm).

Another important state characteristic is the number of provider sites.<sup>2</sup> For this, we present the number and type of provider sites in each state and the number of provider sites per 1000 children within the state’s birth cohort (number of children born in a given year) (see Table 8). These data are derived from the CDC list of VFC enrollees for 2002, so all of the enrolled provider sites are included for the eight UVPS states, but only those listed as VFC providers are included for New Jersey. Of the eight UVPS states, Maine has the most provider sites (35.0) per 1000 children in their birth cohort, and Rhode Island has the lowest with 1.8 provider sites per 1000. New Jersey has fewer VFC provider sites (8.8 per 1000 children) than seven of the eight UVPS states. For New Jersey, however, these VFC providers represent only a subset of active physicians who might provide immunization to children. New Jersey

was also one of the last states to join the VFC program in October, 1994. According to Cantor, et al., (2005), there are 2,227 active physicians who list pediatrics as their specialty, 3,272 who list general internal medicine, 1,423 who list family practice, and 313 who list general practice.

**Table 8: Number of Active VFC Provider Sites**

	<b>Total Providers</b>	<b>Public</b>	<b>Private</b>	<b>2004 Birth Cohort</b>	<b>Providers per 1000 children within the Birth Cohort</b>
<b>Alaska</b>	173	49	124	10K	17.3
<b>Idaho</b>	240	110	130	20-22K	11.4
<b>Maine</b>	473	91	382	13-14K	35.0
<b>Massachusetts</b>	1695	457	1238	80-81K	21.1
<b>New Hampshire</b>	372	131	241	14K	26.6
<b>New Mexico</b>	443	214	229	28K	15.8
<b>Rhode Island</b>	23	23	0	13K	1.8
<b>Washington</b>	1167	351	816	80K	14.6
<b>New Jersey</b>	1033	158	875	117K	8.8

Source: [www.cdc.gov/nip](http://www.cdc.gov/nip), Vaccines for Children Program (VFC) Enrollment of Public and Private Healthcare Provider Sites, Created September 18, 2003 for CY2002 (CDC, 2003b).

## **State Case Studies**

State information was collected from state officials, state reports, published articles, and websites. For each state, we present information about the UVPS's funding, its vaccine distribution system, providers' perspective, benefits and challenges, and advice they could offer to New Jersey or other states interested in developing a UVPS. A state summary table is also provided (see Table 9).

### **Alaska**

Alaska has had a UVPS since the 1980s. They cover immunizations recommended by the Advisory Commission for Immunization Practices (ACIP) for all children under the age of 18 regardless of insurance status. They also cover adults (over the age of 18) for tetanus, pneumococcal disease, and



influenza. Alaska has a total population of 650,000, and a birth cohort of 10,000 for 2004. In 2004, Alaska spent \$6 million for vaccines. Due to the cost of the new meningococcal vaccine, Menactra, public health officials estimate their vaccine costs will reach \$10 million in 2005. The estimated operations cost (personnel and travel) for 2005 is \$2 million, yielding a total annual budget for 2005 at \$12 million. While the state declined to provide the budget breakdowns by funding source, according to a report on an immunization registry needs assessment and feasibility study (CDC, 2003a), 26% of children are non-Alaska Native Medicaid eligible, 20% American Indian/Alaska Native, 13% uninsured, 2% underinsured, and 39% are not VFC eligible.

A recent report from the CDC-National Immunization Survey (NIS) stated that vaccination coverage among Alaskan Native children 19-35 months exceeded the national health objective of 90% for the 4:3:1:3:3 series. One reason mentioned for this success was Alaska's UVPS status (MMWR, 2003).

The majority of the UVPS funding comes from the CDC through the VFC program and the Federal Public Service Act section 317 grant. State funds are also used, but mostly for adult vaccinations. Alaska purchases the vaccines through the VFC program and administers and oversees the program. State officials and local public health nurses work together to distribute the vaccines to providers. Program officials conduct annual site visits to the providers to conduct quality assurance to ensure they are stored and administered correctly. In 2003, the state estimated that \$500,000 was wasted by Alaska providers due to mishandling or expiration of vaccines ([www.epi.hss.state.ak.us](http://www.epi.hss.state.ak.us), 2003).

According to program officials, physicians fully support the program and serve as an advocacy group for the State. The program makes it easier for physicians to keep and store the vaccines, so they are more willing to vaccinate. Physicians are reimbursed for administering the vaccines, with the average per person administration fees ranging from \$5 to \$20. In 2003, Alaska estimated their UVPS costs for all recommended vaccines for one child at school entry to be \$513. They also estimated that physicians purchasing these same vaccines on the open market would pay \$824 ([www.epi.hss.state.ak.us](http://www.epi.hss.state.ak.us), 2003).

Due to increasing vaccine costs (mostly for Menactra and DTP) and decreases in the 317 grant, more state funding may be needed in the future. As one official explained, "We are going to need more money from state general funds and we are not sure if that's going to happen. We may actually become either just a VFC state or a universal-select (which supplies some but not all vaccines to providers for the purposes of vaccinating children) state<sup>3</sup>." If Alaska had only a VFC program rather than a UVPS, state officials said that their state would have a 2-tier system. Under the VFC program, Alaska Natives are covered, but those who are not eligible and are low income would not be included. They predict that the immunization rates would decrease as vaccines would not be as readily available and easy to provide.

Insurance companies do not contribute to the program in Alaska. They are not viable as funders because Alaska's Legislature only has authority over in-state insurance companies, and most of the insurance companies are out-of-state.

When asked to advise other states interested in creating a UVPS, Alaska officials said, "It's a great system if it can be worked out. You need the state general funds buy-in. CDC makes it very clear that it will not fund universal vaccine purchasing systems." States need to determine what level of coverage they would need as this will affect the cost to the state. As one official cautioned, "If it's all vaccines then it would be more costly for the state." Alaska officials suggested looking at what the vaccine requirements are for school or day care entry, and then make the determination for the level of coverage.

## **Idaho**

Idaho's UVPS has existed since the CDC started the VFC program in the 1990s. It covers children from birth to 18 years of age, and is funded by the VFC program, 317, and general revenue funds. The total budget is \$15 million with 16 to 20 percent coming from the State. Idaho's birth cohort is 20,000 to 22,000 children, and approximately 11.8% of the population is below the federal poverty line.

The Idaho Department of Health & Welfare purchases vaccines through the VFC program and administers and oversees the program. Idaho establishes memoranda of understanding with providers and conducts annual site visits to ensure vaccines are stored and administered correctly. Due to the cost of the vaccines, Idaho has had to create a limited selection process for providers whereby all of the recommended vaccines are available, but a committee oversees the selection of which manufacturers are included. Providers can request any of the covered vaccines, but are limited as to which manufacturer they may select. The vaccine manufacturers demanded this approach so that they could observe the process by which Idaho selected the manufacturers' vaccines.

While providers charge \$14.34 per dose for administration cost (reimbursable through private insurance or Medicaid), most physicians incorporate the vaccinations within a well-child visit. Thus, providers may charge for the well visit as well as the vaccine administration. However, there are public health clinics where children can be immunized for free. Idaho officials said that physicians are also supposed to waive or reduce visit fees if their patients cannot afford the costs. Therefore, there should not be a financial barrier for immunization.

Idaho does have an immunization registry called IRIS (Immunization Reminder Information System), but it's not mandatory for providers to register each vaccination. According to state officials, this was a legislative decision that has been controversial as it didn't foster strong buy-in from physicians.

Physicians' concerns were related to the time that was needed to enter the data. Responding to these concerns, Idaho has created a web-based system to improve data entry issues and is in the process of working on a software program for the physicians to export their data with less effort. In contrast, almost all (96%) parents do register their children. Idaho is an opt-in system where parents must enroll or authorize inclusion of their children in the registry.

Idaho's major challenge is the uncertainty of state funding. According to state officials, the UVPS's funding is determined by the legislature, and if they decide to reduce, not renew, or not purchase certain vaccines that could become a problem. Since the overseeing office is a state entity, program officials are not allowed to lobby the legislature, so they feel legislators have to rely on their general knowledge of this program. Another challenge is the increasing costs and number of vaccines. As one state official explained, with an increase in vaccine costs "there needs to be an increase in the general revenue funds and that doesn't always happen."

When asked for advice to other states considering a UVPS, Idaho officials suggested a limited vaccine selection process to help in controlling the costs and having the "political will" needed to fund such an undertaking. Since a significant amount of money is needed from state revenue, having support in the legislature is vital to sustaining a universal vaccine program.

## **Maine**

Maine's Immunization Program operates under the Maine Department of Human Services, Bureau of Health, Division of Disease Control. The program also receives oversight from the state's Bureau of Health Administration and the Division of Disease Control. Begun in the 1990s, Maine's UVPS covers all children from birth through 18 years, and provides some adult vaccination services. Their birth cohort is between 13,000 and 14,000 children. The system is financed via federal funds (VFC and 317), state funds, and HMO reimbursements. Vaccines are purchased from the CDC and manufacturers. The UVPS also receives voluntary contributions from HMOs (Johnson, 2000). The contributions are based on the proportion of covered children within the HMO. The contributions are used to purchase vaccines, and not used for operating expenses or administration fees.

Maine has had excellent immunization rates for children from birth to 2, and attributes this success to four strategies they implemented: providing vaccines to families at no cost; public awareness campaigns; conducting medical record reviews; and creating an immunization information system. With New Hampshire, Maine developed an immunization registry called *ImmPact* (Johnson, 2000). This lifetime registry is designed for all populations, not just children. The registry is also a useful tool for providers by:

- giving immunization status information to providers;
- tracking usage, ordering, and shipping;
- allowing for easy identification of children due or overdue for their immunizations;
- providing information for quality improvement;
- analyzing immunization rates by region and local area to identify unprotected and at-risk populations.

Maine's success in immunization is also attributed to its partnership of public and private providers (Massoudi, et al., 1999). The UVPS has also been mentioned as one of four factors that have contributed to the success of Maine's well-baby care rates where virtually all babies have at least the recommended number of well-baby visits (Johnson, 2000).

The state purchases all the vaccines, but contracts with a company to distribute the vaccines to the providers. Maine was unable to provide separate operating costs for its UVPS, but provided details about the savings they have seen since contracting with a vaccine distribution firm two years ago. Currently, it costs 10 cents per vaccine to distribute, where before contracting out this work it cost the state \$1 per vaccine to deliver vaccine to providers. Shipping and packaging costs have been cut by almost 90% by using this distribution service.

Providers annually renew their contract with the state. Providers report monthly on who receives vaccinations and request new inventories as needed. They are only allowed to charge \$5 per vaccination. According to program officials, the UVPS is convenient for providers because they do not have to separate their vaccine supplies (i.e., one for the federal vaccines and one for those purchased privately.) According to state officials, HMOs like the system because the state purchases the vaccine directly from the manufacturer, making the vaccines less expensive than if privately purchased. HMOs, then, contribute to the state for the purchase of vaccines. However, HMOs' funding share of the UVPS is small as less than 1/3 of the population is insured by an HMO. Also, not all HMOs participate in the reimbursement program; however, the largest HMO providers in the state do participate.

According to state officials, Maine's current challenge is to keep the UVPS operating. As the program becomes more expensive, it is getting more difficult for Maine to continue the program. Currently, the state contributes \$1.5 million towards maintaining the program. While this may not seem expensive, as one state official explained, "Maine is a poor state with a population of 1.2 or 1.3 million people... many individuals are self-insured or from rural areas. Our HMO system covers less than 1/3 of our population."

While the major drawback to the program is the increasing financial costs, a second challenge mentioned is having capable and dedicated staff to administer the program. One Maine official

elaborated that “since it is a tedious job to track vaccine usage, the state system cannot run well without capable staff that is adept at vaccine management.”

### **Massachusetts**

According to state officials, Massachusetts has always had a universal vaccine program for children. While primarily covering children, Massachusetts’ UVPS does include some vaccines for adults. They also manufacture their own DTP vaccines. The total budget for fiscal year 2005 was \$54 million, not including the 3 million doses of flu vaccine. The VFC program covers 40-45% of the population and the 317 grant covers the 15-20% of those under-insured. The remaining proportion (35-45%) is covered solely by state funds. With a 2004 birth cohort of 80,000 to 81,000, the state estimated (in 2005) that it would cost \$519.06 to fully immunize a child through age 18. They also estimated that this coverage would cost \$829.63 in the private sector. For adults, they provide approximately half a million doses of TD and influenza vaccine. They also offer pneumococcal polysaccharide immunizations and Hepatitis A and B vaccines at some specific sites (e.g., Hep A in public health sites and Hep B only for public safety workers and college students).

The State purchases its vaccines through the VFC program and distributes them to doctors who annually enroll in the program. Currently, Massachusetts has a regulation which requires a city with 10,000 or more residents to have a vaccine depot. This translates to 140 programs across the state. To decrease the administration costs, the state will be consolidating these offices into five regional offices that will distribute vaccines to physicians. Although local boards of health are required by law to distribute the vaccines, state officials said that the CDC is pushing for a direct distribution program. Massachusetts will be piloting this program in late 2006. The CDC program would have the providers ordering monthly directly from vaccine distributors. The distributors would maintain the inventory, but the state would monitor the system and continue to be the purchaser. According to program officials, physicians like the program as they do not bear any risk for purchasing vaccines and, under this new distribution system, they will continue to enjoy the program as the state would continue bearing the financial risk. In addition, physicians are able to charge administration fees which may be reimbursed by private insurance or Medicaid.

While this program has had tremendous support from the Massachusetts Legislature, the program faces shortfalls which, according to state officials, are at times difficult to cover. These budgetary shortfalls are attributed to the disjunction between when the new state budgets are developed and approved and the time when the CDC bases its prices for the year. For example, in 2005, the UVPS budget was short \$1 million. Currently, the state is still supporting the program despite the anticipated

smaller federal funding, but state officials are concerned that they may not be able to continue to provide free coverage for non-poor children.

In terms of advice for other states, state officials recommend that distribution of vaccine be done through the VFC program. This method eliminates the need for separate VFC and non-VFC inventory and storage issues. State officials also said that legislative and political support is critical to overcome challenges due to state funding issues.

### ***New Hampshire***

New Hampshire has had a universal vaccine program for children for many years. The New Hampshire UVPS uses VFC program and 317 grant funds for children who qualify for these programs and state funds are used to cover the remaining population. Vaccines are purchased mostly from the CDC and distributed by the Department of Health and Human Services (DHHS) New Hampshire Immunization Program. Originally, the program had a voluntary contribution system whereby insurance companies supported the program. However, four years ago, the state enacted legislation to further solidify their program. Each insurance company contributes to the UVPS program based on the proportion of covered lives they have in the state (extrapolated from the number of children in the state). These contributions account for approximately 33% of New Hampshire's UVPS budget. These private funds are paid into a special non-profit account which is set up solely for this purpose. The New Hampshire Vaccine Association Board includes representation from three large insurance companies, DHHS, and pediatricians. The board oversees the funds, meets bi-annually, and determines the assessments. While the VFC program cannot use private funds to purchase vaccines, this program was "grandfathered in" to allow New Hampshire to use private funds to purchase through the VFC program.

In 2005, the program's budget was approximately \$10 million with approximately 10% of the total funding for administration costs. For this budget, they estimated 320,000 children through 18 years of age with a birth cohort of 14,000. They have estimated the cost of vaccinating a child under 1 to be \$300 (vaccine cost only). By purchasing through the VFC program, state officials estimate a savings of \$5 million compared to purchasing the vaccines through the retail market.

In terms of success, New Hampshire boasts a top 10 national ranking for child immunization, and is especially proud of this given that they have only 11 staff members in their program. Program officials feel that this program allows them to concentrate on monitoring the usage and ensuring that doctors always have unexpired vaccine by reallocating unused vaccines. This results in less than 1% wastage. Additionally, officials say they are not spending time "policing the doctors and making sure they separate

the VFC vaccines or on marketing.” According to the program, doctors like the program because it is easy to get the vaccines and it also takes away the financial risk they have in keeping vaccines in stock.

While this program is successful, the administration fees charged by physicians present a challenge to the program’s vaccine coverage rate. While Medicaid pays \$3 for one vaccine and \$5 for two or more vaccines for the VFC population, physicians are able to charge privately and non-insured patients for the vaccine administration. New Hampshire conducted a survey of physicians and found that physicians often provided vaccinations only as part of a well-visit. The charges for these private visits ranged from \$70-\$250, and could present a real barrier to vaccination coverage.

Overall, New Hampshire attributes the success of their program to a number of factors. First, program officials said they did not start with legislation; rather, the New Hampshire DHHS approached the insurance agencies to contribute to state funds for vaccines, thereby engaging the support of the industry and not having an adversarial relationship. Second, New Hampshire doesn’t face the same immigration patterns as New Jersey, which means a fairly stable population with a small birth cohort. Third, most medical care in New Hampshire is delivered by private practice physicians. In fact, 90% of vaccine goes to private providers with 10% going to health departments which operate mostly through community health clinics.

Since the CDC does not allow the use of private funds for the purchase of vaccines through the VFC program to cover non-VFC children, the insurance assessment method that New Hampshire uses would not be available to New Jersey; therefore, state officials recommended the Minnesota Multi-State Contracting Alliance for Pharmacy (MMCAP) (see Appendix A for a description of the program). This program serves as a consortium of states that negotiates discounted rates for medical supplies including pharmaceuticals.

New Hampshire officials advise states interested in creating a UVPS to approach the insurance industry before passing legislation, but then to create legislation to “seal the deal.” They also recommend diversifying the funding streams, and not to depend on state funds alone. Having a stable system that “you can count on” was also mentioned as very important to a successful program.

### ***New Mexico***

In response to decreasing immunization rates among 1 to 2 year olds in the 1990s, New Mexico developed several initiatives to improve its vaccination rates. One initiative was New Mexico’s UVPS program. With a 2004 birth cohort of 28,000, the program covers children from birth to age 18 for the immunizations recommended by the ACIP. The UVPS current budget is \$13 million. The program is funded by VFC funds (9 million-69%), 317 funds (2 million-15%), state funds (1 million-8%), and

reimbursed funds from HMOs (1 million-8%). State funds are not used for administrative costs or other provider costs. Most of the vaccines are purchased through the CDC's VFC program, while the HMO funds are used to purchase vaccines through the Minnesota Multi-State Contracting Alliance for Pharmacy.

The federal funds provide immunization coverage for most children in New Mexico including those on Medicaid and Native American children. State funds are used to provide vaccinations for non-poor children. These state funds include the HMO reimbursements. As one state official explained, New Mexico had developed an agreement with the state's three major private HMOs whereby "they reimburse us for the cost of the vaccines for children who are privately insured...the provider [submits] a zero or one dollar cost bill for the vaccination and they include the CPT code. From there, the HMO knows to reimburse the state." Since the HMOs reimburse the state for insured children, there is almost no cost to the state for these covered children. However, only a small part of the state's children are covered by private insurance.

According to state officials, the benefits of this program are really for the providers who do not have to keep track of vaccines purchased privately. Easing the system for providers allows them to keep stocks of vaccines and to continue to immunize all children. Although they have a long established program, they attribute part of their increased immunization rates to the ease of the system for the providers. New Mexico purchases vaccines for all providers in the state by having providers estimate the number of children they serve. To participate, providers must enroll annually. The process is the same as the paperwork they must complete for using federally-provided vaccines. In spite of having a UVPS, however, they have experienced vaccine shortages (Associated Press, 2002).

Although providers are now satisfied with the UVPS, this was not the case in the beginning. As a program official explained, "[we] experienced pushback from the providers in the beginning of the program because they were able to charge quite a bit for vaccines." Confusing and inefficient billing and Medicaid reimbursement practices for administration costs attributed to providers' initial dissatisfaction and lack of enrollment (New Mexico Comprehensive Strategic Health Plan, July 2004).

Although providers cannot charge for the vaccines, they can charge for the administration costs. Physicians can also incorporate vaccinations into well-visits which then increases the encounter charges. Typically, the well-visit costs are reimbursed by the private insurer or Medicaid. However, New Mexico estimates that the administration fees and/or visit charges create barriers for 25% of families without Medicaid or private insurance.

Another initiative associated with the UVPS is a statewide immunization registry. The electronic registry is voluntary for both patients and providers. This internet-based database is designed to improve documentation issues as populations move. New Mexico has a "Health Passport" that provides parents



documentation on vaccination. These passports can be transported to new providers who often do not have access to other physicians' records.

Due to its poverty rate (51% at or below 200% of the FPL), New Mexico is a state where a large percentage of children's immunizations are covered by the federal government. As one official explained, "one benefit to the system is [that] if your state goes up to a high percentage in Medicaid, up to 200% above poverty level, Medicaid pays for those children's immunizations." Although New Mexico's immunization rates have gone up in the past few years, public health officials feel that raising the immunization rate is a matter of raising awareness and having enough money to campaign for vaccinations. In fact, they also attribute the increases in immunization to the UVPS and active campaigning by Governor Richardson.

According to state officials, one challenge to the program is the increasing costs of vaccines. In fact, according to state officials, this program will be looking to use more state funds as the number and cost of vaccines increases. Also, they are not sure they could maintain the program without the HMO reimbursements. Their recommendation for other states considering a UVPS is, "If your state can afford to provide immunizations for the percentage of kids that are insured in the state, then you'd be okay. If one's state cannot cover those costs, then you would need funding from other sources."

### ***Rhode Island***

Rhode Island has had a universal vaccine program for children for over 25 years. Originally, the state worked with the primary health care insurance industry to create its UVPS, and passed legislation in the 1990s to solidify the program. The original program's funding came from the health care insurance carriers with each insurance company contributing proportionally to the amount of policies they covered in the state. The program adjusted with the advent of the VFC program and Medicaid programs. Now, once the total budgets are calculated, and the VFC and 317 funds are accounted for, the remainder of the program costs are funded by the insurance companies. Currently, the cost for the program is \$12 million, with 47% coming from the VFC program, 12% from the 317 grant, and 41% of the budget coming from insurance funds. Although private funds cannot be used to purchase VFC vaccines, the state's program funding system precedes these rules and, therefore, their methods have been "grandfathered in" to allow the private funds to purchase vaccines through the VFC program. According to program officials, the state's Business Regulation Department handles the money from the insurance companies, and the insurance assessment rate is handled directly between the insurance industry and the state's Director of Health. Approximately 0.45% of each insurance premium goes for the vaccine program into a restricted receipts account.

Rhode Island's 2004 birth cohort is 13,000. Vaccines are free for all children from birth to 18 years old regardless of income. Physicians get the vaccines directly from the state department of health, and are allowed to charge private insurance carriers for the vaccine administration fees. Half a million immunizations are given annually, mostly to children ages 0-2 and to school age children. Rhode Island also has a strong adolescent "catch-up" program (designed to bring adolescents up-to-date on their immunizations). According to program officials, the state has consistently been in the top three states for immunization coverage, and they estimate that over 90% of young children are immunized, with the percent rising to 98% for school-age children. Rhode Island also has an "electronic, integrated child health information system (KIDSNET)" that allows providers to track a child's immunization history as well as providing valuable data to support the state's outreach and education efforts (Healthy Rhode Islanders Progress Review, 2000; [www.ri.gov](http://www.ri.gov)).

Currently the program is restricted to childhood vaccines, but according to program officials the state's Legislature is close to passing a law to purchase influenza and pneumococcal vaccines for adults. The state does have a few programs for adults. For instance, it uses some of its 317 grant money to purchase Hepatitis B vaccine for women prisoners.

The success of the UVPS is attributed to the state's small size, which minimizes the distribution issues, and the long-term commitment that both state and insurance companies have for this program. As a recommendation to a state who might be considering a UVPS, Rhode Island state officials recommend engaging with the private health insurance and service industry to garner and support the program, and then to enact legislation that is supported by the private sector to ensure the continuation of the program.

## **Washington**

Washington's UVPS has existed for approximately 15 years. The program was designed to provide vaccines to children from birth to 19 years of age regardless of ability to pay. Currently, the overall budget is approximately \$42 million with approximately \$12 million coming from state funds. Most of Washington's UVPS was funded by the VFC program (60%), with a third coming from the state general funds (30%), and about 10 percent from their 317 grant.

Vaccines are purchased from the CDC's VFC program, and state funds are used to purchase the vaccines for the non-VFC eligible children at the discounted government rate. The discounted vaccines provide a savings over the retail costs, which providers would normally have to pay. For example, program officials said that if a private physician purchased a new vaccine such as Menactra, it would cost \$84 per dose, while the government price is \$68 per dose. Washington requires an approval process for new vaccines before the vaccines are purchased. According to state officials, this becomes problematic

because the approval process is lengthy and sometimes the vaccine may not be available for up to 1½ years. To stay in compliance with the VFC program during this waiting period, Medicaid reimburses providers for purchasing the vaccine at market cost and administering the vaccine until it is available through the UVPS program.

The UVPS distributes vaccines from the state storage office to local health jurisdictions (LHJ) who then distribute it to public and private providers. According to program officials, this system became problematic because storage of vaccines overwhelmed staff and created storage/space problems. In at least one county, providers were required to pick up the vaccines from the LHJ. As a result, a decision was made to contract with an outside company to handle the inventory and distribution of vaccines to providers.

Providers charge an administration cost of \$15.65 unless the child is enrolled in Medicaid and then the cost is \$5. Washington also has a web-based immunization registry. The registry is designed to offer parents and providers a number of benefits such as mailed reminders to parents for children through the age of six, and immunization tracking and population reports for providers (Washington State Department of Health, March, 2004). Almost all providers offer vaccines and about 50% of providers use the vaccine registry with participation in the registry increasing (Marcuse, 2002).

Although there are benefits to the system, state officials were not able to say that there is a correlation between an increase in immunization rates and having a universal system. In fact, the percentage of children immunized for basic vaccines (i.e., DTP, polio, & MMR) declined from 1998 to 2002. Additionally, Washington is still experiencing vaccine shortages in spite of the fact that they have a UVPS. Also, program officials said that the UVPS entails a lot of work and resources in terms of both personnel and money, from the state department. The CDC requires monitoring for storage and appropriate administration of vaccines. Washington performs this review at the county level with 20% of providers annually.

The biggest challenge with this system is continuing to get state funding (approximately \$4 million). According to state officials, when the UVPS was first started, the vaccine schedule was much simpler (fewer vaccines), but now not only are there more vaccines needed but the vaccines have become more expensive. Continued state funding by the legislature has become increasingly more difficult. In fact, 317 grant funding from the CDC has decreased, and there is even concern over the level of VFC funding.

**Table 9: Summary of Universal Vaccine Purchasing Systems by State**

	<b>Alaska</b>	<b>Idaho</b>	<b>Maine</b>	<b>Massachusetts</b>	<b>New Hampshire</b>	<b>New Mexico</b>	<b>Rhode Island</b>	<b>Washington</b>
<b>Coverage</b>	All children 0 to 18 years old. Adults: tetanus, pneumococcal, and influenza	All children 0 to 18 years old.	All children 0 to 18 years old.	All children 0 to 18 years old; Adults: influenza only	All children 0 to 18 years old.	All children 0 to 18 years old.	All children 0 to 18 years old.	All children 0 to 19 years old.
<b>Total Vaccine Budget</b>	\$12 million	\$15 million	Unable to report the total budget but the state contributes \$1.5 million.	\$54 million for children; \$3 million for influenza for adults	\$10 million	\$13 million	\$12 million	\$42 million
<b>Cohort of Children</b>	10K	20-22K	13-14K	80-81K	14K	28K	13K	80K
<b>Total Program Costs/Cohort of Children<sup>a</sup></b>	Unable to be calculated	\$714.29	Unable to be calculated	\$670.81	\$714.29	\$464.29	\$923.08	\$525.00
<b>Funding of UVPS</b>	VFC, 317, and state funds for children. State funds only for adults.	VFC, 317, and state funds (16-20%).	VFC, 317, state funds, and HMO reimbursement.	VFC (40-45%), 317 (15-20%), and state funds (35-45%).	VFC, 317, private industry pays the remaining costs (33%).	VFC (69%), 317 (15%), state funds (8%), HMO reimbursement (8%).	VFC (47%), 317 (12%), Private insurance industry pays the remaining costs (41%).	VFC (60%), 317 (10%), and state funds (30%).
<b>Immunization per person cost</b>	\$513 thru age 18	Not reported	Not reported	\$519.06 thru age 18	\$300 for child under one	\$500 thru age 18	Not reported	Not reported
<b>Administration Fees</b>	\$27 and up for the first vaccine and then it's pro-rated. On average, \$5 to \$20.	\$14.34 per shot. Reimbursed by insurance or Medicaid. Most physicians charge for a well-visit.	Providers only charge \$5.	Not reported.	Provider charge an administration fee; Recent survey showed that the range of fees were \$70-\$250 which includes a well-visit.	Not reported.	Not reported.	Providers charge \$15.65 for administration for non-Medicaid children and \$5 for Medicaid children.

<sup>a</sup> Calculated by dividing the total program costs by the number of children in the birth cohort. Calculated cost does not account for wastage, and only provides an estimate of the cost per child in the cohort. Does not include Alaska, as their program covers a number of adult immunizations, and Maine, as they did not provide a total budget.

## New Jersey

As mentioned earlier, New Jersey’s immunization rates are above the national average (CDC, 2004b). For example, the 2004 vaccination coverage of a combination 4:3:1:3:3 (i.e., of DTP, poliovirus vaccine, MMR, Hib, and Hep B) is 82.7% compared to the national rate of 80.9% (see Table 3). Moreover, according to data from the Health Plan Employer Data and Information Set (HEDIS®, also known as “HMO Report Cards”), the vaccination rate for this combination for children enrolled in commercial HMOs (i.e., not Medicare or Medicaid HMO members) was 75% in 2004 (NJDHSS, 2004). In fact, the vaccination rate among commercially-enrolled children has increased considerably since 2001 (see Table 10). These findings are expected since New Jersey as well as other states have state laws mandating immunization coverage by insurance companies. New Jersey’s law is one of the few state laws that approaches a comprehensive statute, which, according to the 2003 report by the Center for Health Services Research and Policy, includes covering all children, setting coverage at the ACIP standard, and prohibiting deductibles (Rosenbaum, et al., 2003). New Jersey’s immunization mandate that is part of the health insurance law targets coverage to group markets only, but it includes all childhood immunizations and it adheres to ACIP standards and other additional standards. Furthermore, New Jersey’s statute prohibits deductibles.

**Table 10: New Jersey’s Immunization Coverage by Vaccine Type for Children 2 years and Younger Enrolled in a Commercial HMO: 2001-2004.**

	2001	2002	2003	2004
<b>Combination 1<sup>a</sup></b>	64%	70%	72%	75%
<b>4 Doses of DTP</b>	76%	81%	82%	86%
<b>3 Doses of IPV/OPV</b>	78%	83%	85%	88%
<b>1 Dose of MMR</b>	93%	90%	91%	91%
<b>3 Doses of Hepatitis B</b>	78%	82%	83%	89%
<b>3 Doses of Hib</b>	81%	85%	86%	88%

<sup>a</sup>All doses of DTP, IPV/OPV, MMR, Hepatitis B, and Hib

Source: New Jersey Department of Health & Senior Services (2004). *New Jersey Commercial Health Maintenance Organizations: A Comprehensive Performance Report*. Health Care Quality Assessment, Division of Health Care Quality & Oversight.

However, even with these positive rates, the effectiveness of the vaccination program for children as well as adults has been questioned in New Jersey (Morgan, NJ Public Health Council Immunization Policy Summit: Executive Summary, September 20, 2002). Concerns have been voiced regarding: a lack of availability of vaccines in providers’ offices; no mandatory system that tracks vaccines given by private physicians; inadequate reimbursement by insurance companies; the increasing cost of vaccines;

low immunization rates particularly among low-income communities; and minimal incentive for providers to immunize in a timely fashion. To address these concerns, the question has been raised as to whether New Jersey should develop a universal vaccine purchasing system since presently New Jersey is classified as a VFC-only state by the CDC.

For New Jersey to develop a UVPS, the State or other public health institution would have to centralize the purchasing, funding, and distribution of vaccines. Like the UVPS states, New Jersey would purchase vaccines through the CDC or, if private funds are utilized, vaccines would be purchased through another source such as the Minnesota Multi-State Contracting Alliance for Pharmacy. As in the other states, physicians would have to estimate the amount of needed vaccines based on the number of children in their practice. In order to keep a record of physicians' vaccination activities and needs, New Jersey's vaccine registry<sup>4</sup> would need to be better utilized by providers (Morgan, NJ Public Health Council Immunization Policy Summit: Executive Summary, September 20, 2002). As in the UVPS states, the VFC program and 317 grant would need to fund a proportion of the program, while costs for non-poor children would have to be either covered by the state or through a reimbursement system from insurance companies.

Since any proposed UVPS would involve the participation of the State, vaccine manufacturers, insurance companies, and providers, we interviewed representatives of these various groups regarding their concerns and support for such a system.

### *Cost Impact*

Currently, New Jersey's VFC program covers children who are uninsured, underinsured, covered by Medicaid or New Jersey FamilyCare, or Alaskan Natives, and is presently (i.e., 2005) allocated approximately \$31 million for vaccines for a 10-month period. This amount does not include the additional \$1 million or more in operating costs for personnel and vendor fees for the storage and distribution of vaccines. In 2006, this cost will increase approximately 22% because the warehousing and distribution services will be changed to a new vendor.<sup>5</sup>

Part of the personnel cost is the monitoring of providers to ensure correct vaccine inventories and storage. Monitoring is done by conducting site visits to about 1/3 of providers annually. In the present VFC program, there are about 1,200 physicians enrolled. Expansion of this type of program to include all children in a UVPS program would require increased expenditures, not only for the purchase of vaccines but also for operating costs and ensuring the compliance and accountability of a large number of physicians. According to one interviewee, "...to cover all children (in New Jersey) would be at least \$100 to 120 million, and then there are the administrative costs which include personnel costs and storage

and distribution costs.” While the vaccine-only costs (VFC prices) are approximately \$513 to immunize a child from birth to age 18, we calculated an estimated state average cost per child by dividing the state’s total program budget by the number of children within its birth cohort (see Table 9). With a range of costs from \$464 to \$923 for five<sup>6</sup> of the eight UVPS states, we calculated an average of \$668.62 per child. Using this average (i.e., \$668.62 per child) and multiplying by the number of children in New Jersey’s birth cohort (i.e., 117,000 [New Jersey Center for State Health Statistics, 2005]), New Jersey would need to spend approximately \$78.2 million annually for a UVPS program. As this is based on the averages within these states, this estimation does not include any additional costs that New Jersey would potentially incur compared to other UVPS states due to the larger number of physicians located in New Jersey, differences in personnel costs, and differences in wastage rates. If private funds were also used (e.g., from insurance companies and HMOs), then some vaccines would have to be purchased from vendors at higher than VFC rates.

In addition to cost, several individuals interviewed raised concerns as to whether increased government involvement would alleviate or exacerbate vaccine shortages and that adding an intermediary step in the vaccine purchase and distribution system would slow down the process. When talking about new vaccines on the market, one individual commented “It (a vaccine) will get to the private sector much faster than the public sector.” Through the VFC program, new vaccines need to be approved at a federal level. As experienced by other states, a UVPS program would require new vaccines to be approved at both the federal and state levels before making it available to the public, making the process more complex and time-consuming.

Others questioned whether resolving vaccine shortages are a state or federal responsibility. The federal government addressed the potential problem of vaccine shortages by creating vaccine stockpiles. Six month federal stockpiles of almost all pediatric vaccines have been established and legislation is being proposed to simplify the sales and administration of these stockpiles. Unfortunately these stockpiles are currently only available to those in the VFC program (CDC, 2005, [www.cdc.gov/programs/immun08.htm](http://www.cdc.gov/programs/immun08.htm)). Expanding the use of vaccine stockpiles to include all children and adults may be a possible method for addressing unexpected vaccine shortages. As one individual suggested, “State legislators and policymakers can encourage federal agencies to complete these stockpiles (rather than re-designing an entire state vaccination program).”

### *Vaccine Manufacturers*

Representatives from four manufacturing companies were interviewed. They opposed the development of a UVPS. Most did not feel that there is a lack of availability of vaccines in physicians' offices. Regional managers for these companies stated that most physicians' primary objective is to immunize and very few physicians forego purchasing children's vaccinations to save money. According to these respondents, physicians may ensure reimbursement by the managed care companies before purchasing vaccines and some smaller offices may purchase fewer vaccines, but overall there is no lack of availability in these offices. In fact, manufacturers believe that lack of immunization falls more on the individual (and/or family) level due to reluctance or inability to access immunizations in a timely manner.

Another issue raised by manufacturers regarding a UVPS is that it may have manufacturers drop out of the "vaccine business." Reducing the purchase price of vaccines will reduce the profit margin for manufacturers. Producing vaccines is costly because of the research involved in ensuring that vaccines are appropriate for children. Many children need to be involved in clinical trials and more post-licensing studies need to occur. Additionally, in testing vaccines, a negative needs to be proved (i.e., a certain vaccine prevents a certain disease); therefore, a large number of studies need to be performed with large sample sizes in order to obtain statistical significance. In conclusion, reducing the purchase price of vaccines likely would not only lead to manufacturers dropping out of the "vaccine business," but also damage the current, established manufacturing practices.

### *HMOs*

Representatives from two large HMOs (both included Medicaid enrollees) were interviewed. They saw both the benefits and challenges in having a UVPS. The benefits include having a more centralized system where an entity, not necessarily the State, would perform the function of purchasing, distributing, and obtaining reimbursement for the cost of vaccines. Therefore, in terms of vaccine purchasing, insurance companies would need to coordinate only with one entity as opposed to multiple providers. The challenge for insurance companies would be the lack of competition for vaccine prices. As one respondent noted, "(insurance companies) would have no say in the matter." Nevertheless, this was a minor concern to insurance companies compared to having a coordinated system that would make vaccinations a priority and allow them to meet vaccination standards effectively.

Although a few states do obtain reimbursement from insurance companies, the ability to do so presently is in question. Current legislative mandates do not allow vaccines that are purchased through the CDC to be reimbursable by insurance companies. According to a CDC representative, this would be



considered a “resale of the vaccine,” and therefore not permitted. However, New Jersey could either not have the State be the purchasing agent or purchase vaccines through a group-purchase collaboration such as the Minnesota Multi-State Contracting Alliance for Pharmacy. Through this alliance, states have the ability to purchase certain pharmaceutical items as a group, therefore reducing costs (Minnesota Department of Administration, 2005). Respondents also suggested other funding strategies such as extracting money from unemployment funds and/or having the State propose a “dollar tax” to large insurance companies to accumulate funds, with a future goal of having the vaccine program become a line item in the legislative budget.

### *Providers*

Provider representatives included two people who represented physician associations and two providers in practice. Providers mentioned several different ways this system would be beneficial to them. First, storage of vaccines for VFC populations and non-VFC populations would be easier. Currently, providers need to keep separate supplies and adhere to different regulations for the VFC vaccines versus the non-VFC ones; pooling the two would simplify storage and administration. Another benefit is that providers will have “equal footing” in terms of costs, which is not the case when small and solo practitioners have to pay more for vaccines than large group-practice providers. Since the source of obtaining vaccines is the same (e.g., the State), obtaining vaccines for their patients would be less complicated, therefore allowing all providers to have the necessary vaccines available. Furthermore, because the state would purchase vaccines rather than the provider, providers would not need to expend their own capital to purchase vaccines without knowing whether they will obtain reimbursement for this purchase by the insurance companies.

One drawback to this type of system raised by providers was the lack of profit from administering vaccines. Providers could not make a profit because the only reimbursement they would receive is for administration costs, not for the cost of the vaccines themselves. However, given the high costs of vaccines privately purchased by providers, it is not clear how large the profit margin is when the costs are reimbursed by managed care companies.

Providers also agreed that creating such a system in New Jersey would not be difficult because the state already has an established VFC program. Like other states, a UVPS could be an expansion of the existing VFC infrastructure. As one provider mentioned, “the VFC is well organized...it works well and this [the new UVPS] would be the same in its operations.” An additional advantage according to the respondents would be that having a vaccine system in place for all children and adults would prepare the state for any emergencies that may arise such as an influenza pandemic. It would strengthen the public

health care system by providing a more integrated immunization process throughout the state and for all populations.

## **Discussion**

According to statistics compiled by the CDC, New Jersey's current immunization rates are comparable to the eight UVPS states. Although New Jersey does not have a UVPS and has been a VFC state for only 11 years, its rates are comparable to the New England states that have very long-established UVPS programs, less population movements, and either contribute a significant amount of state revenue to their UVPS (Massachusetts) or receive private funding from health insurance companies (New Hampshire and Rhode Island). While some of the UVPS states' officials attributed these successful coverage rates to their UVPS programs, others were not sure that their rates would be dramatically less without these programs. Certainly, the VFC and Section 317 grants have improved the vaccination coverage for low-income children. The question remains whether coverage among non-poor children has been affected by the UVPS. Clearly, the providers enjoy the benefits of unexpired vaccine supplies and easier storage systems. Having these financially risk-free vaccines enhances providers' ability to offer vaccinations. This is particularly important to states such as Alaska where income and distance present significant barriers to immunization coverage.

Most states with a UVPS limit their program to children (see Table 9). Most have three funding sources for the program (the VFC program, the federal Section 317 grant, and state funding), and purchase their vaccines from the CDC through the VFC program. A few of the states receive funds from private insurance companies to cover the proportion of children that would normally be reimbursed by insurance companies/HMOs. These states are able to use insurance company/HMO funds to purchase vaccines through the VFC program because their private funding systems existed prior to the VFC program, so they were allowed to continue to use private funds to purchase through the VFC program. Other states use the private insurance company funds to purchase from manufacturers or from the Minnesota Multi-State Contracting Alliance for Pharmacy (MMCAP).<sup>7</sup> Since private funds may not be used to purchase vaccines through the VFC program, New Jersey or other states interested in developing a UVPS would need to use state funds to purchase through the VFC program or use private funds to purchase through the MMCAP to get discounted prices from vendor pharmaceutical companies.

In spite of the federal funding and discounted prices, participating states still spend state revenues to cover non-poor children. Because New Jersey has a lower percent of its children enrolled in publicly-funded health insurance programs and below the federal poverty level, it is comparable to more affluent states. Therefore, should New Jersey elect to become a UVPS state, the program's proportion of funding

for the non-publicly funded children would be comparable to New Hampshire and Massachusetts, rather than to Alaska and New Mexico. In the less affluent states, the majority of their UVPS program costs are covered by VFC and Section 317 funds. Based on New Jersey's current VFC funding of \$31 million, New Jersey would need at least an estimated \$47 million in additional resources to fund a UVPS for children ages 0 to 18. While the eight UVPS states have supported these programs for many years, most state officials were concerned about continued support for their programs. Current state support is threatened by increasing prices for vaccines, continuing expansion of the number of recommended vaccines as new ones are developed, and decreases in the Section 317 grant funding. Advice from these state officials to any state considering a UVPS was to get financial support from the private sector (e.g., insurance industry, HMOs) first, and then enact legislation to strengthen and ensure funding the program. As several state officials noted, these programs require a lot of political will and financial support.

In terms of health care providers, state officials said their providers are very supportive of the system. Interviewees representing New Jersey's providers were also very supportive of a UVPS as it would provide them with free vaccines and easier storage requirements. Although the separation of VFC and non-VFC vaccines would be eliminated only if all the vaccines were purchased through the VFC program with states dollars, these storage issues would remain if private sector funds were used to purchase vaccines from manufacturers. Insurance companies/HMO interview respondents also noted that a UVPS would minimize the coordination required in negotiating for vaccines. While free to the providers, the states bore the risk of increasing vaccine costs and number of recommended vaccines. To contain the cost of their UVPS program, states such as Idaho have had to limit the choice of vaccine manufacturers. While physicians are still able to receive the recommended vaccines, limiting their choice of vaccine manufacturer may reduce their satisfaction with the program.

When health care providers did voice concerns, they usually resulted from the states' vaccine registries that were difficult or time-consuming to use. These systems are critical, however, as they are often tied to the ordering and stocking of vaccines. Moreover, having a voluntary immunization registry was considered problematic from the state's perspective, as these also proved inadequate for estimating vaccination rates among specific groups such as those publicly-funded and/or uninsured.

Although providers in a UVPS state are not permitted to charge for vaccines, they may charge for the administration, with the fees for publicly-funded children controlled. Most UVPS states also reported that physicians tied vaccination administration with well-visits so that providers could charge for the more expensive office visits. State officials echoed the providers' beliefs that while these children may have come for the immunizations, the providers should take the opportunity to ensure that these children also get all of the recommended well-care.

While receiving and maintaining vaccine supplies in UVPS states were made easier for providers, the distribution systems often presented administrative challenges for these states. New Jersey stakeholder respondents voiced concern over increasing the state's administrative and distribution role should a UVPS be developed. In fact, a number of states have delegated distribution to private vendors who distribute the vaccines more cost-effectively. Massachusetts will be one of the pilot states where providers will receive their vaccines directly from a distribution center contracted through the VFC program. This pilot program will start March 2006 and will not only include Massachusetts, but also Washington, Maryland, California, Chicago (Illinois), and possibly even New Jersey. States still maintain their administrative responsibility for quality control as specified by the VFC program but funding from the CDC for warehousing and distribution of vaccines will no longer go directly states. Additionally, having a UVPS program was not a guarantee against vaccine shortages as several UVPS states experienced vaccine shortages in 2002 (Marcuse, 2002).

## **Conclusion and Recommendations**

The purpose of this project was to provide information on the issues and challenges that would confront New Jersey should it seek to establish a UVPS. Having completed a case study of the eight UVPS states and interviews with various New Jersey stakeholders, we present the following benefits and challenges that should be considered in addressing the question of whether New Jersey should establish a UVPS:

### Benefits:

- Providers were fairly supportive of a UVPS as it would provide them with unexpired supplies of vaccines;
- HMOs were fairly supportive of a UVPS as they would no longer have to negotiate with manufactures for vaccines;
- Providers would be relieved of the financial risk of unused vaccines, thus they may be more likely to offer immunizations;
- A UVPS may reduce providers' vaccine storage requirements by eliminating the need to separate VFC and non-VFC vaccines; and
- A better utilized immunization registry (needed for the ordering and distribution of vaccines) could provide improved state and local level data regarding immunization coverage within population groups (e.g., vulnerable populations).

Challenges:

- UVPSs are very expensive and would potentially cost New Jersey over \$78 million;
- Increases in both vaccine costs and the number of recommended vaccines are expected to elevate the cost of a UVPS over time;
- Decreased Section 317 grants and other public funding sources shifts the cost of a UVPS over time to other sources such as the State;
- Alternative sources of funding such as private funds from insurance companies/HMOs to cover children currently covered by private insurance might need to be secured;
- Using private funds would necessitate purchasing non-VFC vaccines, thus not completely eliminating physicians' storage challenges;
- Limiting the choice of vaccine manufacturers to contain program costs would limit providers' choices, and thereby potentially reduce their support of a UVPS;
- The use of the current immunization registry to facilitate a more complex ordering and distribution system would need to be mandated;
- Expanding the current VFC distribution system and/or contracting to an outside distribution vendor to handle the larger and more complex system would be needed<sup>8</sup>;
- Stakeholders representing vaccine manufacturers and distributors were strongly opposed to the idea of New Jersey establishing a UVPS.

Although all states are interested in improving their immunization rates, New Jersey's rates are already comparable to the eight UVPS states and national averages. As the statistics demonstrate, having a UVPS does not ensure higher immunization rates, nor does it protect a state from vaccine shortages. Although officials from the eight UVPS states expressed satisfaction with their programs, they all had concerns regarding the ability to continue to fund their UVPS programs as Section 317 grants are decreased, vaccine costs rise, the number of recommended vaccines continues to increase, and state dollars are more difficult to secure. In fact, several states (e.g., Alaska and Washington) said they may have to limit their UVPS programs to Universal-Select or VFC-only programs.

Given the potential cost of over \$78 million and current state budgetary constraints, it is likely that New Jersey would have to seek private funding in order to minimize the state budget impact to cover immunizations for children already enrolled in private insurance plans. Although using private funds would not allow New Jersey to purchase all of its vaccines through the VFC program, it could still purchase vaccines at discounted prices through an organization such as the MMCAP. However, this would reduce the benefit of easier vaccine storage for providers. Instituting a limited selection of

manufacturers (purchasing only through the VFC program or an alliance) would help to contain costs, but would potentially remove or decrease the providers' choice of vaccine manufacturers.

New Jersey's existing immunization registry would need to be more fully utilized to be effective as an ordering and distribution system. Additionally, New Jersey would need to strengthen its current distribution system or consider contracting to an outside vendor that would be able to handle the volume and complexity of New Jersey's primary care system. While there are benefits to establishing a UVPS in terms of potentially facilitating physicians' responsibilities to immunize their patients, there is a long list of fiscal and implementation challenges. Although a UVPS would have some attractive features, the significant costs and challenges of implementing a UVPS in New Jersey clearly appear to outweigh its potential benefits at this time.

## Endnotes

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- <sup>1</sup> Universal Select (n=7), VFC & Underinsured (n=18), VFC & Underinsured Select (n=7), and VFC Only (n=18) states were not included.
- <sup>2</sup> A provider site may include more than one individual provider, i.e., a clinic with multiple physicians is counted as one site.
- <sup>3</sup> Defined by the CDC as a universal vaccine purchasing state which does not include all of the recommended vaccines.
- <sup>4</sup> NJ currently has a vaccine registry but usage of this registry by physicians is low; however, there are draft regulations which will require physicians to register immunizations by 2010.
- <sup>5</sup> The current warehouse and distribution vendor for the VFC program will end its contract with the State of New Jersey at the end of December 2005. The only vendor that has bid for the VFC vaccine distribution contract is 22% more costly than the current one.
- <sup>6</sup> Only those five states that could provide total budgets were included. Alaska was not included because their program included adults for influenza, pneumococcal disease, tetanus, and MMR. Those states that cover only a small, select amount of adult immunizations were included.
- <sup>7</sup> The MMCAP was the only purchasing alliance that was mentioned and that we could find through the literature search.
- <sup>8</sup> Expanding the current VFC program in New Jersey may actually not even be feasible if New Jersey is included in the CDC pilot program (i.e., VIMBIC) that has warehousing and distribution of VFC vaccines come directly from the CDC.

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