

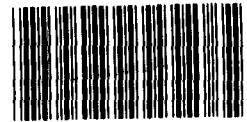
GAO

Report to the Chairman, Committee on
Finance, U.S. Senate

March 1993

CHILDHOOD IMMUNIZATION

Opportunities to Improve Immunization Rates at Lower Cost



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United States
General Accounting Office
Washington, D.C. 20548

Human Resources Division

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March 24, 1993

The Honorable Daniel P. Moynihan
Chairman, Committee on Finance
United States Senate

Dear Mr. Chairman:

This report responds to your request to examine possible ways to reduce Medicaid costs for immunizing children. We also looked at ways to improve preschool immunization rates to ensure that all children receive vaccinations. The report discusses opportunities to improve childhood immunization rates at lower costs.

Unless you publicly announce the contents of this report earlier, we plan no further distribution until 7 days from the date of the report. At that time, we will send copies to the Director of the Office of Management and Budget, the Secretary of Health and Human Services, interested congressional Committees and Subcommittees, and other interested parties.

The major contributors to this report are listed in appendix III. If you have any questions, please call me at (202) 512-7119.

Sincerely yours,

A handwritten signature in cursive script that reads 'Mark V. Nadel'.

Mark V. Nadel, National and
Public Health Issues

Executive Summary

Purpose

The United States has one of the lowest rates in the world for immunizing preschool children against such diseases as measles, mumps, and polio. In 1990—less than a decade after the United States had nearly eliminated measles from within its borders—it reported over 27,000 measles cases and 89 resulting deaths. Preschool children accounted for nearly half of these cases and 55 percent of the deaths.

At the request of the Chairman, Senate Committee on Finance, GAO examined possible ways to reduce Medicaid costs for immunizing children. We also looked at ways to improve preschool immunization rates to ensure that all children receive vaccinations.

Background

Childhood immunization is one of the most effective means of health promotion and disease prevention. Immunization against childhood diseases averts the costs of treatment for preventable diseases and saves as much as \$14 for every \$1 invested. Nevertheless, immunizations of preschool children fall far short of the Public Health Service goal of immunizing 90 percent of all children by age 2 with the basic immunization series by 1990. The recommended basic vaccine series was for measles, mumps, and rubella; polio; and diphtheria, tetanus, and pertussis. In view of the low rate of immunizations, the President announced a proposal in February 1993 to increase funds for childhood vaccinations by \$300 million.

Medicaid, the largest government health care program for the poor, is administered by the states within broad federal guidelines set by the Department of Health and Human Services' (HHS) Health Care Financing Administration (HCFA). State Medicaid programs pay a large part of the immunization costs for poor children. About half of American children are vaccinated by private physicians, and half by public providers, such as public health clinics. Medicaid programs reimburse private and public providers who vaccinate eligible children. As a result of recent program expansions, preschool children of families with incomes up to 133 percent of the federal poverty level are eligible for Medicaid. This group now accounts for about one-third of all preschool children.

The Centers for Disease Control and Prevention (CDC)—the lead federal agency for preventing childhood disease—provides technical assistance and grants to help state and local health agencies in planning, developing, and conducting childhood immunization programs. To achieve cost savings in immunization programs, CDC has contracted for the bulk

purchase of vaccines for state and local health agencies. CDC's contract prices are substantially lower than private-sector prices for vaccines.

State and local health agencies have used CDC grants to acquire vaccines at reduced cost for over half the public-sector needs. Some health agencies also buy vaccines through the CDC contract with their own funds for private-sector use. Health agencies that purchase such vaccines and distribute them to Medicaid health care providers can be reimbursed for the vaccines' cost by state Medicaid programs.

To meet its review objectives, GAO administered questionnaires on immunization practices and vaccine reimbursement costs to state health and Medicaid officials in all states. GAO also examined a universal vaccine distribution system in Massachusetts, a vaccine replacement program in Illinois, and immunization tracking systems in Great Britain and the Netherlands. GAO obtained programmatic information from CDC and HCFA officials.

Results in Brief

Most state Medicaid programs could save money if low-cost vaccines acquired through CDC contracts were made available to all health care providers administering vaccinations to poor children. Although state and local health departments are allowed to purchase low-cost vaccines for this purpose, most do not. State Medicaid programs have reimbursed providers for vaccines that cost as much as five times the CDC-contract price. These state programs could also reduce immunization costs if they reimbursed providers only for the combined measles, mumps, and rubella vaccine rather than the higher cost individual vaccines.

Savings on vaccine costs, however, will do little to improve preschool immunization levels unless funds are provided for educating parents and tracking and following up on the immunization status of children to help ensure that preschool children receive timely immunizations. Most states do not systematically carry out all three activities. GAO's national survey of immunization programs showed that states that provided immunization education materials to mothers of newborns and whose public clinics tracked the immunization status of children and followed up on those needing immunizations, were more likely to have higher immunization rates than states that did not have such activities.

Principal Findings

State Medicaid Programs Could Save on Vaccination Costs

Nine states have established vaccine replacement programs in which health agencies purchase low-cost vaccines through CDC contracts and supply them free to Medicaid providers. In the nine states, Medicaid programs achieve substantial savings because they reimburse the health agencies for CDC vaccines, which cost less than commercially purchased vaccines. For example, in 1991, Illinois saved an estimated \$1.5 million.

Ten additional states purchase low-cost vaccines from CDC and distribute them free to all providers, for Medicaid and non-Medicaid use, a practice referred to as a universal vaccine distribution program.

In the remaining 30 states that responded to GAO's survey, low-cost vaccines are not supplied to private Medicaid providers. In most of these states, Medicaid reimbursements for vaccines were made for commercially purchased vaccines at considerably higher prices than CDC-contract prices. For example, the commercial price for oral polio vaccine was almost five times greater than the CDC-contract price.

Twenty-two of the 30 state Medicaid programs that reimbursed providers for vaccines purchased commercially gave GAO information on the number of vaccines doses for which they reimbursed providers in 1990. Had all these vaccines been acquired at the CDC-contract price rather than the commercial price, Medicaid programs in those states would have saved a total of \$12.7 million.

State health agencies told GAO that funding for purchasing the initial supply of vaccines and distributing CDC-contract vaccines to private Medicaid providers is a major barrier to establishing a replacement program. Medicaid will reimburse health departments for the costs of vaccines only after they have been administered to children. Therefore, states must first come up with enough money to purchase the initial supply of vaccines.

Although the cost for the initial purchase of vaccines subsequently would be reimbursed by Medicaid, most states told GAO that funding the initial outlay is a significant hurdle. Nonetheless, this initial expenditure for vaccine purchase as well as vaccine distribution cost would be more than offset by recurring Medicaid savings while benefitting children's health. A

major vaccine manufacturer proposed an alternative replacement program whereby manufacturers would contract with states to provide vaccines directly to physicians, thereby mitigating the start-up and distribution problems. Even when states have established vaccine replacement programs, not all physicians have participated because of what they perceive as inadequate Medicaid reimbursement for vaccine administration.

Further savings of Medicaid funds could be achieved if states required the use of combined rather than single-antigen vaccines. Combined vaccines provide protection against multiple diseases, such as measles, mumps, and rubella (MMR), whereas single-antigen vaccines protect against only one disease. The average Medicaid reimbursement for the three single-antigen vaccines is about 63 percent higher than the reimbursement for the combined vaccine. Except during a disease outbreak, when a single-antigen vaccine may be acceptable, the Public Health Service and the American Academy of Pediatrics immunization guidelines recommend the use of a combined MMR vaccination for routine immunizations in preschool children over age 1. Thirty-six state Medicaid programs, however, routinely paid for single-antigen vaccinations.

**More Proactive
Immunization Programs
Needed to Improve
Immunization Levels**

To improve immunization levels, state and local immunization programs need to (1) educate parents on the importance of immunizations for their children, (2) track each child's immunization status, and (3) follow up with children needing immunizations. CDC considers these activities as key elements of an effective immunization program. Based on GAO's analysis of immunization data that states provided, 12 states provided immunization education materials to mothers of newborns and their public clinics tracked the immunization status of children and followed up on those needing immunizations. These states were twice as likely to have higher immunization rates than the other states. But even these states have not attained the Public Health Service goal of fully immunizing 90 percent of all children by age 2.

Generally, states do not systematically disseminate educational information to all mothers of newborns. Usually, states do not have adequate means to track and identify children who need immunizations and rarely track immunization status from birth. Following up on children needing immunizations is generally limited to mail notices with no personal contact with parents who do not respond to reminders of past due immunizations.

CDC considers tracking that begins at birth as the most effective way to monitor children's immunizations. CDC is collaborating with the Robert Wood Johnson Foundation on demonstration projects intended to establish immunization monitoring and follow-up systems. The Foundation's projects, together with demonstration projects CDC expects to fund in fiscal year 1993, seem to address most of the critical technical issues that are essential in developing effective systems for educating parents about immunizations and tracking and following up on children who need to be immunized. The results of these projects should provide useful information to help both CDC and states in establishing effective immunization education, tracking, and follow-up systems.

Recommendations to the Agency

To expand access to immunization services, GAO recommends that the Secretary of HHS direct the Assistant Secretary for Health and the Administrator of HCFA to (1) develop innovative financing mechanisms through Medicaid and immunization program grants to support wider implementation of vaccine replacement programs and (2) aggressively promote wider adoption of vaccine purchase and distribution programs that allow states to purchase vaccines directly from manufacturers at CDC prices.

To reduce Medicaid vaccination costs, GAO recommends that the Secretary of HHS direct the Administrator of HCFA to require that requests for Medicaid reimbursement of single-antigen vaccines include medical justifications. GAO also recommends that the HCFA Administrator specifically assess the adequacy of fees paid to providers for administering vaccines.

Agency Comments

GAO did not obtain written agency comments on this report, but discussed its contents with CDC and HCFA officials and incorporated their comments as appropriate.

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Abbreviations

CDC	Centers for Disease Control and Prevention
DTP	Diphtheria, tetanus, and pertussis
GAO	General Accounting Office
HCFA	Health Care Financing Administration
HHS	Department of Health and Human Services
MMR	measles, mumps, and rubella
OPV	oral poliovirus

Introduction

The United States has one of the lowest rates in the world for immunizing preschool children against measles, mumps, and polio. In the late 1980s, the nation experienced an outbreak of measles caused largely by the failure of the health care system to vaccinate preschool children on schedule. This outbreak caused needless illness and death, particularly among urban poor preschool children. Medicaid—a federal-state entitlement program administered by the Department of Health and Human Services' (HHS) Health Care Financing Administration (HCFA)—is the major public funding source for health services for poor children under age 6. However, budget constraints often have limited the ability of states to provide Medicaid-financed health care services, including immunizations, to children.

The Chairman, Senate Committee on Finance asked us to examine possible ways to reduce Medicaid vaccine costs for immunizing children. We also looked at ways to improve preschool immunization rates so that all preschool children receive vaccinations.

Decade of Decline in Immunization and Protection

Over the last decade, low U.S. immunization rates for preschool children have led to substantial increases in the incidence of preventable childhood diseases and death. Limited information available throughout the past decade indicates a pattern of declining immunizations nationally, especially for the urban poor. These low rates have occurred despite the recognition that childhood immunizations are cost effective and the specific guidelines issued by the Public Health Service's Advisory Committee on Immunization Practices and the American Academy of Pediatrics on scheduling childhood vaccinations by age 18 months.¹

Immunizations Are a Cost-Effective Method of Preventing Disease

Since the risk of illness, permanent disability, or death from pertussis, measles, mumps, rubella, and Haemophilus influenzae type b is greatest in infants and toddlers, their vaccines have a high benefit-cost ratio as shown on table 1.1. The benefit-cost ratio is the dollar savings in treating the disease for every dollar invested in childhood immunizations. Each year, approximately 16 million children (newborns and children ages 1, 2, and 5) require one or more vaccines.

¹The Advisory Committee on Immunization Practices is composed of representatives from federal and state health agencies, medical schools, and associations representing various health groups.

Table 1.1: Cost-Benefit Ratios of Selected Vaccines

Vaccine	Ratio
Measles, mumps, and rubella	14.4:1 ^a
Pertussis	2.1 to 3.1:1 ^b
Haemophilus influenzae type b	3.57:1 ^c

Sources:

^aCraig C. White and others, "Benefits, Risks and Costs of Immunization for Measles, Mumps and Rubella," American Journal of Public Health, Vol. 75, No. 7 (July 1985), pp. 739-44.

^bA.R. Hinman and J.P. Koplan, "Pertussis and Pertussis Vaccine: Further Analysis of Benefits, Risks and Costs," Develop. Biol. Standards, 1985; Vol. 61, pp. 429-37.

^cJ.W. Hay and R.S. Daum, "Cost-benefit Analysis of Haemophilus Influenzae Type b Prevention: Conjugate Vaccination at Eighteen Months of Age," Pediatric Infectious Disease Journal, Vol. 9, No. 4 (April 1990), pp. 246-52.

Recommended Childhood Immunization Schedules

The Advisory Committee on Immunization Practices and the American Academy of Pediatrics regularly issue guidelines to health care providers on scheduling childhood immunizations. They recommend that all children complete a schedule of vaccinations by 18 months of age that includes four doses of diphtheria, tetanus, and pertussis (DTP) vaccine; three doses of oral poliovirus (OPV) vaccine; one dose of measles, mumps, and rubella (MMR) vaccine; and a complete series for Haemophilus influenzae type b vaccine. In November 1991, the Advisory Committee also recommended three doses of hepatitis B vaccine for universal immunization of infants.

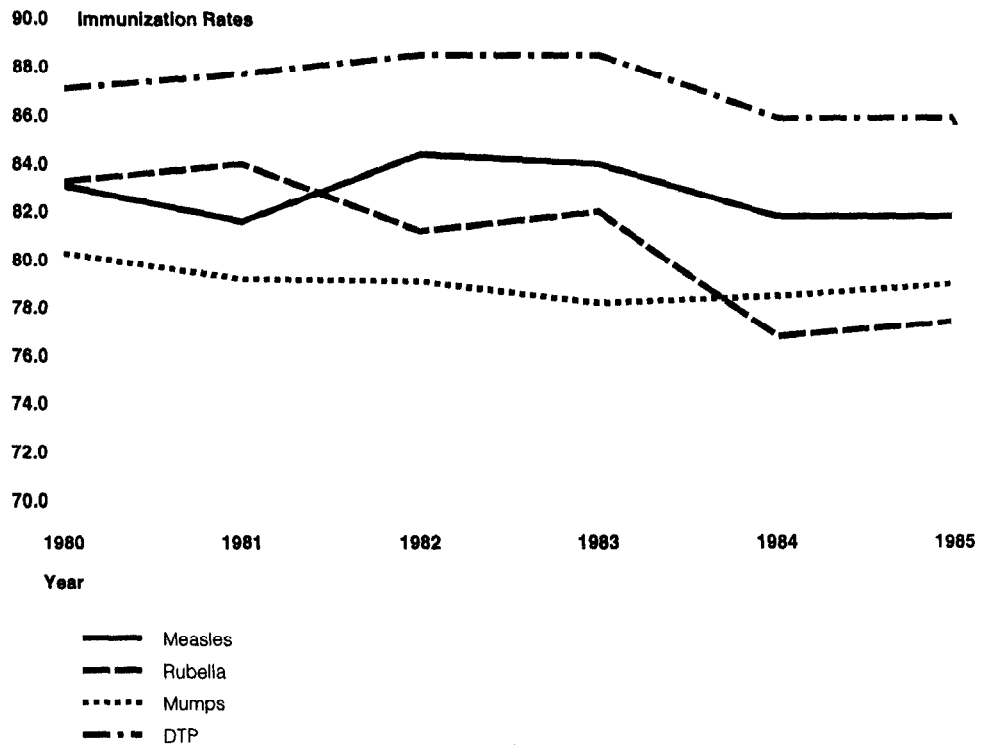
Low Immunization Rates Lead to Disease Outbreaks

In 1979, the Surgeon General of the Public Health Service established a series of national health goals for 1990. One goal was that 90 percent of all children should have completed by age 2 their basic immunization series—measles, mumps, rubella, polio, diphtheria, tetanus, and pertussis. National immunization rate data available for 1980 through 1985 showed a trend away from that 90-percent goal (see fig. 1.1), but the Centers for Disease Control and Prevention (CDC) did not consider this trend statistically significant.² CDC did, however, estimate that about 50 to 70 percent of children under age 2 were vaccinated against each disease by 1990; some areas of the country had immunization levels substantially below 50 percent. Since the 1990 goal to immunize 90 percent of all preschool children was not met, essentially the same goal has been set for

²National immunization data have not been available since 1985. Since 1991, CDC has been collecting national immunization data through the National Center for Health Statistics National Health Interview Survey. CDC expects the 1991 immunization rate data will be available in spring 1993.

the year 2000.³ In view of the low rate of immunizations, the President announced a proposal in February 1993 to increase funds for childhood vaccinations by \$300 million.

Figure 1.1: National Vaccination Rates for Children by Age 2, 1980-85



Source: U.S. Immunization Survey, 1979-85, subsample of respondents referring to an immunization record rather than relying on memory.

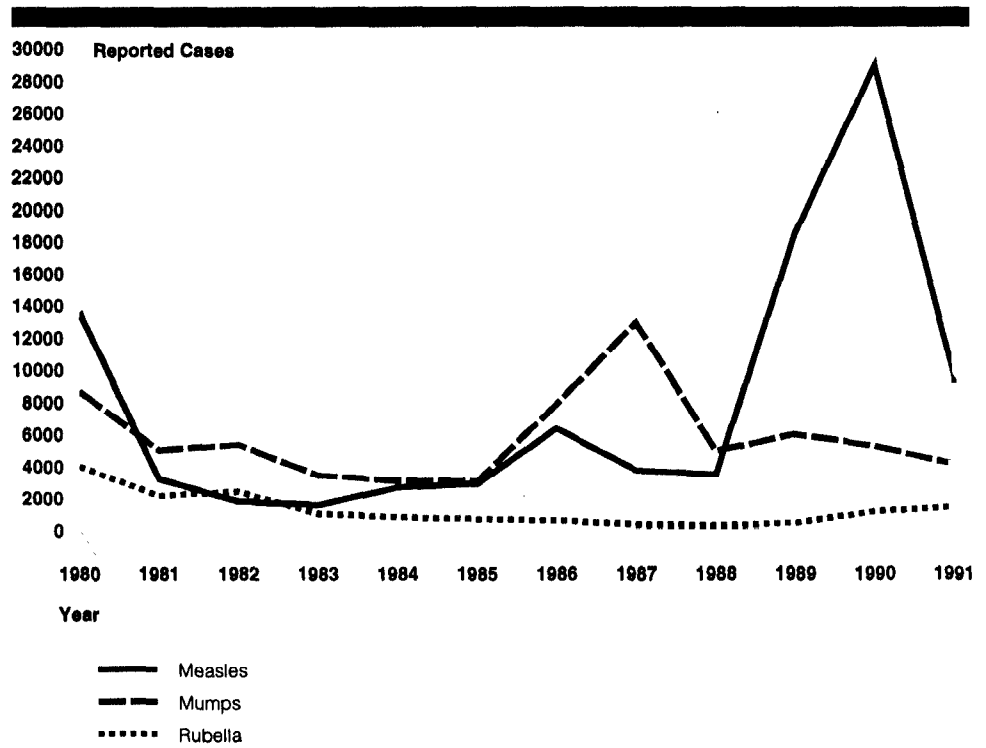
CDC obtained immunization data from 16 states between 1988 and 1990, which showed that the median immunization rate for fully immunized preschool children in those states was 57 percent. The rates for the selected states ranged from 43 to 84 percent. A 1991 CDC survey of school records in nine cities found that the proportion of children appropriately immunized by age 2 for DTP, MMR, and OPV ranged from 10 percent in

³The only changes in the basic immunization series for the year 2000 were to add three doses of hepatitis B vaccine and either a three-shot or four-shot series for Haemophilus influenzae type b.

Houston to 42 percent in El Paso, Texas. The median rate for the nine cities was 38 percent.

With the licensure of the measles vaccine in 1963, reported measles cases initially declined dramatically. By the late 1980s, however, reported measles cases had increased dramatically (see fig. 1.2) and peaked in 1990. In that year, preschool children under age 5 in the United States represented 48 percent of the total 27,672 measles cases and 55 percent of the 89 total deaths attributed to measles.⁴ Minority children living in urban areas were disproportionately affected, facing seven to nine times the risk of contracting measles as white children.

Figure 1.2: Reported Cases of Measles, Mumps, and Rubella in the United States and U.S. Territories, 1980-91



Source: CDC.

U.S. Versus International Rates of Immunizations

A 1991 preventive health care study showed that preschool immunization rates in the United States lagged substantially behind European rates as

⁴CDC, "Measles-United States, 1990," MMWR 1991;40:369-72. (These data reflect 1990 measles cases reported to CDC through May 10, 1991.)

seen in table 1.2. While overall preschool immunization rates in the United States fell during the first half of the 1980s, European countries reported steadily increasing immunization rates against all childhood diseases.⁵

Table 1.2: Immunization Rates for Preschool Children in the United States and European Countries (Most Recent Available Year)

Figures are in percent

Country	Year	DTP ^a	Measles ^b	Polio ^c
Belgium (estimated)	1987	95.0	90.0	99.0
Denmark	1987	94.0 ^d	82.0	100.0
England and Wales	1987	87.0 ^e	76.0	87.0
France (estimated)	1986	97.0	55.0	97.0
Germany (FRG) (estimated)	1987	95.0	50.0	95.0
Netherlands	1987	96.9	92.8	96.9
Norway	1987	80.0	87.0	80.0
Spain	1986	88.0	83.0	80.0
Switzerland	1986	90-98	60-70	95-98
United States ^f	1985	64.9	60.8	55.3

^aThree doses or more. U.S. rates are for children aged 1 to 4; European figures are for children under 3.

^bU.S. rates are for children aged 1 to 4; European figures are for children under age 2.

^cThree doses or more. U.S. rates are for children aged 1 to 4; European figures are for children aged 1 to 3.

^dRate is for combined diphtheria, tetanus, and polio immunizations. Pertussis (89-percent coverage) and oral polio vaccines are given at separate visits; sequential immunization against polio by both injectable and oral vaccines is recommended.

^eRate is for diphtheria and tetanus; rate for pertussis immunization is 73 percent.

^fImmunization rate data for the United States are shown for the total sample population of the 1985 United States Immunization Survey, the last year the survey was taken.

Source: B. Williams and C. Miller, Preventive Health Care for Young Children: Findings from a 10-Country Study and Directions for United States Policy, 1991.

The National Childhood Immunization System

The public and the private sector, including private physicians, and local, state, and federal governments are involved in immunizing approximately 4 million children born each year. Approximately half of these children are vaccinated by private physicians who usually purchase vaccines on the open market. Immunizations are administered as part of well child preventive health care paid for by parents or third-party sources. The

⁵B. Williams and C. Miller, Preventive Health Care for Young Children: Findings from a 10-Country Study and Directions for United States Policy, 1991.

other half receive immunizations in public clinics where vaccines are purchased at low cost using public funds. Public clinic vaccines are provided at no cost to the parents, and often independent of the child's preventive health care. Many localities do charge a small vaccine administration fee. Poor urban and rural children make the most use of public clinics for their overall health care.

Role of the Centers for Disease Control and Prevention

CDC—the lead federal agency for preventing childhood diseases—provides technical assistance and grants to all state and some local health departments to support immunization programs. Most of this grant money is used to help pay for over half the total vaccines these departments purchase through CDC contracts with vaccine manufacturers. State, local, and other federal funding sources are used to purchase the remaining contract vaccines.

Since 1977, CDC has contracted with vaccine manufacturers to provide health departments access to vaccines at prices substantially lower than commercial catalog prices. Table 1.3 compares the price differences from 1985 to 1991. In return for lower prices, CDC guarantees purchases of large vaccine amounts, waives its right to return unused or expired vaccines for credit, and handles vaccine distribution through state health departments.

Table 1.3: Comparison of Vaccine Manufacturer's Catalog Price and the CDC-Contract Price, 1985-91 (Price Per Dose)

Year	Diphtheria, Tetanus, and Pertussis		Oral Poliovirus		Measles, Mumps, and Rubella	
	Catalog price	Contract price	Catalog price	Contract price	Catalog price	Contract price
1985	\$2.80	\$2.21	\$6.15	\$0.80	\$13.53	\$6.85
1986	11.40	3.01	8.67	1.56	15.15	8.47
1987	8.92	7.69	8.07	1.36	17.88	10.67
1988	11.03	8.46	8.07	1.36	24.11	16.18
1989	10.65	7.96	9.45	1.92	24.11	16.18
1990	10.65	6.91	9.74	1.92	24.07	14.71
1991	9.97	6.25	9.45	2.00	25.29	15.33

Source: CDC.

Health departments also use some of the CDC immunization grant funds to support program operations, such as assessing immunization coverage, promoting vaccination, and providing disease and adverse events

surveillance. With supplemental fiscal year 1992 funds, CDC, for the first time, allowed health departments to use grant money to hire personnel to administer vaccines.

Medicaid's Role in Immunizations

Medicaid is a federally aided, state-administered medical assistance program for low-income people. As a result of recent federally mandated program expansions, preschool children of families with incomes up to 133 percent of the federal poverty level are eligible for Medicaid; an estimated one-third of all preschool children fall into this group. In some states, which expanded Medicaid coverage to pregnant women and infants of families with incomes up to 185 percent of the federal poverty level, about half the births are covered by Medicaid.

At the federal level, the program is administered by HCFA, which is part of HHS. Within broad HHS guidelines, each state designs and administers its own Medicaid program and sets eligibility standards and coverage policies. States must provide eligible clients with certain basic benefits, such as childhood immunizations, but each state determines provider payment levels and billing procedures, including vaccine coverage and payment policies. State immunization financing mechanisms vary. Some states reimburse providers separate rates for an office visit, vaccine administration, and vaccine costs. Other states pay global rates that include the visit and immunization cost. Still others pay different rates for different types of visits; or capitated (per individual) rates typically prepaid to managed care providers. Federal support averages 57 percent of payments for services but ranges from 50 percent to nearly 80 percent, the exact percentage depending on the state's per capita income.

Objective, Scope, and Methodology

To assess ways of reducing Medicaid vaccine costs and improve preschool immunization rates, we administered questionnaires on immunization practices, as well as Medicaid vaccine payment and coverage policies to health and Medicaid officials in all states. We did not survey individual providers. Copies of the questionnaires are included in appendixes I and II. Health officials in all states and Medicaid officials in 49 states responded to our survey. We analyzed the questionnaire results to identify the factors associated with immunization rates.

We examined a universal vaccine distribution program in Massachusetts and a vaccine replacement program in Illinois to understand how these programs function. We also examined immunization tracking systems in

Great Britain and the Netherlands to identify aspects of these programs that could help improve preschool immunization rates in the United States.

We interviewed CDC and HCFA officials, state health and Medicaid officials, and representatives from the Children's Defense Fund and the American Academy of Pediatrics on childhood immunization issues, including vaccine purchase and payment policies. Although we did not obtain written agency comments on this report, we discussed its contents with CDC and HCFA officials and incorporated their comments where appropriate. Our work was conducted between March 1991 and September 1992 in accordance with generally accepted government auditing standards.

State Medicaid Programs Could Save Vaccination Costs

Medicaid is the largest source of public funding for child health services and a major third-party payer for immunization services. While many poor children are immunized at public clinics that use low-cost vaccines obtained through Centers for Disease Control and Prevention contracts, many others obtain their immunizations from private physicians who purchase vaccines at considerably higher prices on the open market. Subsequently, Medicaid reimburses private physicians for these high-cost vaccines. Medicaid has also allowed physicians to be reimbursed for individual injections of vaccines for measles, mumps, and rubella when all three could be administered in a single injection using a combined vaccine that costs much less.

State Medicaid programs could save money if low-cost vaccines acquired through CDC contracts with manufacturers were made available to all health care providers who administer vaccinations to poor children. In these cases, state and local health departments could set up a vaccine replacement program, whereby, they purchase low-cost vaccines through CDC and distribute them free to all Medicaid providers. Medicaid programs would then save money by reimbursing the health departments at the CDC-contract price rather than the higher commercial price. Despite the potential for savings, only nine states have established vaccine replacement programs. The lack of funds to purchase CDC-contract vaccines and distribute them to all Medicaid providers statewide is a barrier to wider adoption of vaccine replacement programs.

In addition, states could achieve additional savings if providers immunized children with the combined MMR vaccine rather than the individual vaccines. Not only does the combined vaccine cost less than the single-antigen vaccines, it also involves only one injection and fewer physician visits.

Vaccine Replacement Programs Can Yield Substantial Savings

Since 1980, vaccine prices have increased dramatically and eroded the purchasing power of immunization program dollars. To ease the effect of those increases, state and local health departments can purchase low-cost vaccines through CDC's bulk-purchase contracts. Generally, these health departments distribute these vaccines to public health providers, such as public health clinics. In about half the states, these clinics are the major source of Medicaid immunization services. States can also purchase vaccines through CDC for all providers, public and private, to use for their Medicaid patients, but this is not usually done. Some states have tried to

use the CDC contracts to provide low-cost vaccines to all providers for all patients, but vaccine manufacturers are opposed to this practice.

Vaccine Replacement Programs Not Widely Accepted

Under vaccine replacement programs, state health departments purchase and distribute low-cost CDC vaccines free to all Medicaid providers and periodically replenish the vaccines providers administer to Medicaid children. Medicaid then reimburses state health departments for the costs of purchasing and distributing the vaccines, and it reimburses the providers only for administering the vaccines.

Both CDC and the Health Care Financing Administration have encouraged states to establish vaccine replacement programs to reduce Medicaid reimbursements to health care providers for vaccines administered to children. Likewise, the National Vaccine Advisory Committee's 1992 report on access to childhood immunizations recommended vaccine replacement programs as a cost-effective way to acquire and distribute vaccines to private Medicaid providers.¹

As of May 1, 1991, 9 of the 49 state Medicaid programs responding to our survey had established vaccine replacement programs.² Because vaccines acquired through CDC are considerably less costly than vaccines purchased commercially these Medicaid programs achieve substantial savings. For example, Illinois saved an estimated \$1.5 million in 1991; Ohio saved \$1.3 million in state fiscal year 1991. Even these states could increase their savings if all Medicaid providers participated in what have been voluntary programs.³

Ten additional states purchase the low-cost vaccines from CDC and distribute them free to all providers, for both Medicaid and non-Medicaid use, a practice referred to as a universal vaccine distribution program. Only one of these states used Medicaid as a source of funds to purchase childhood vaccines in state fiscal year 1991.

¹The 15-member committee includes physicians, vaccine researchers, vaccine manufacturers, members of organizations concerned with immunizations, and representatives from state and local health departments or public health organizations.

²The nine states are: Delaware, Illinois, Indiana, Kansas, Kentucky, Michigan, Nebraska, Ohio, and Texas. Delaware discontinued its vaccine replacement program in June 1991 for budgetary reasons. Providers did not submit reports of vaccine usage, therefore Medicaid reimbursements to the state were insufficient to sustain the program.

³Illinois started a mandatory vaccine replacement program for all Medicaid providers in July 1992.

In the remaining 30 states that responded to our survey, low-cost vaccines were not supplied to private Medicaid providers. In most of these states, Medicaid reimbursements for vaccines were made for commercially purchased vaccines at considerably higher prices than CDC-contract prices. For example, the 1992 private-sector commercial catalog price for oral polio vaccine was almost five times greater than the CDC-contract price. The 1992 private-sector price for the combined measles, mumps, and rubella vaccine was 65-percent higher than the CDC-contract price.

Twenty-two of the 30 state Medicaid programs that reimbursed providers for vaccines purchased commercially provided us information on the number of vaccine doses for which they reimbursed providers in 1990. Assuming vaccine price levels as of May 1991, had all these vaccines been acquired at the CDC-contract price rather than the commercial price for all Medicaid providers, the 22 state Medicaid programs would have saved at least \$12.7 million or, on average, about \$579,500 each.

Start-Up Costs a Major Barrier to Vaccine Replacement Programs

State immunization program officials told us that funding for the initial purchase of CDC-contract vaccines and distributing the vaccines to private Medicaid providers is a major barrier to establishing a vaccine replacement program. While Medicaid will reimburse health departments for the costs of vaccine after they have been administered to children, the states must first come up with enough money to purchase an initial supply of vaccines. Even though the cost for the initial purchase of vaccines subsequently would be reimbursed, most states told us that funding the initial outlay is a significant hurdle.

Nonetheless, these initial expenditure and distribution costs would be more than offset by recurring Medicaid savings while benefitting children's health. Illinois, for example, established a voluntary vaccine replacement program in late 1983. During the initial 6-month phase of the program, the state incurred costs of \$133,284 for vaccine replacement. For each year since it implemented the program, Illinois estimated savings ranging from \$400,000 to \$1.9 million.

Establishing and maintaining a system to handle, store, and distribute vaccines to private Medicaid providers entails additional expenditures. Creating such a system also expands the traditional public health role; some state health departments are reluctant to get involved in what they perceive as a wholesale distribution system.

Regarding the distribution of vaccines, one pharmaceutical manufacturer, Merck & Co. Inc., proposed a Medicaid direct purchase program for childhood vaccines.⁴ Under the program, a state could contract directly with the manufacturer for vaccines at the CDC price rather than purchase them through CDC. For a small fee the manufacturer would send the vaccines to the Medicaid health practitioners, and the state would pay the manufacturer for the vaccines administered to Medicaid children. However, to implement the direct-purchase program, a state must obtain from HCFA a waiver of federal regulations that generally prohibit payments for Medicaid services to anyone other than a provider or recipient. Only two states, Virginia and California, have sought such a waiver. HCFA recently approved Virginia's waiver request and was still reviewing California's request as of February 1, 1993.

Physicians Not Always Willing to Participate in Vaccine Replacement Programs

Even when states have established vaccine replacement programs, not all physicians have participated because they perceive Medicaid reimbursement for administering vaccines to be too low. The National Vaccine Advisory Committee believes that for a vaccine replacement program to be effective, it is important that Medicaid providers receive a fee that compensates them reasonably for their costs of purchasing and administering the vaccines. The American Academy of Pediatrics and the Children's Defense Fund have both argued that the immunization fees currently paid by Medicaid programs do not adequately compensate providers for their costs and time in obtaining from parents a history of the child's medical condition; informing parents about the risks and benefits of immunizations;⁵ maintaining separate records for Medicaid children; administering the injections; and purchasing supplies, such as cotton and syringes.

To help ensure that Medicaid children have access to health care, the Omnibus Budget Reconciliation Act of 1989 requires states to set payment rates, by procedure, for pediatric services. These payment rates must be set at a level that is sufficient to enlist enough providers so that Medicaid children have access to pediatric services at least to the extent they are available to the general population. HCFA is responsible for reviewing and approving the adequacy of the states' payment rates. When HCFA finds that

⁴Merck & Co. Inc. manufactures measles, mumps, rubella, Haemophilus influenzae type b, and hepatitis B vaccines.

⁵Beginning April 15, 1992, federal regulations require all providers administering vaccines acquired through the CDC contract to provide and review with parents or guardians the Vaccine Information Pamphlets (DTP, OPV, and MMR) and Important Information Statements (hepatitis B and Haemophilus influenzae type b).

the rates are too low, states must revise their rates to an adequate payment level and resubmit them to the agency.

A HCFA official, however, told us that HCFA's reviews focus on whether state pediatric fees in general, rather than fees for specific procedures like immunization, provide Medicaid recipients with equal access to health care. HCFA's director, Office of Medicaid Policy told us that HCFA believes that the basic intent of the 1989 act was to encourage the participation of physicians willing to provide the continuum of primary care services to Medicaid recipients. Therefore, he said that a determination of the adequacy of fees for those services should be made on the overall basis. The director said that focusing on the adequacy of payment rates for individual procedures, such as immunizations could be an administrative problem for states.

We believe that focusing on payment rates by procedure is more consistent with both the language and the purpose of the law than HCFA's approach of looking at reimbursement on an overall basis. The language of the law requires that payment rates be specified "by pediatric procedure" (such as immunization). Moreover, permitting the payment rate to be set at a level that, as we noted, leaves some physicians unwilling to administer immunizations to Medicaid children, seems inconsistent with the stated purpose of the law, to enlist enough providers so that services to Medicaid children are available to the same extent as to the general population.

Use of Single Rather Than Combined Vaccines Results in Higher Medicaid Costs

Further savings of Medicaid funds could be achieved if states required the use of combined vaccines rather than reimbursing for individual injections of single-antigen vaccines. Combined vaccines provide protection against multiple diseases, such as measles, mumps, and rubella, whereas, single-antigen vaccines protect against only one disease. Based on our survey results, the average Medicaid reimbursement for the three single-antigen vaccines was about 63 percent higher than the reimbursement for the combined vaccine (\$48.79 compared with \$30.67).

The American Academy of Pediatrics and the Public Health Service's Immunization Practices Advisory Committee recommend the use of a combined MMR vaccine for routine childhood immunizations of preschool children. This combined vaccine provides the same protection against the three childhood diseases as the single-antigen vaccines. A CDC study published in 1985 on the benefits and costs of immunizations for MMR reported that the combined vaccine results in fewer physician visits, more

efficient vaccine administration, lower vaccine costs, and a lower overall number of adverse vaccine reactions.⁶ Nevertheless, 36 state Medicaid programs routinely paid for single-antigen vaccinations.

A CDC official told us that medical justification for using a single- rather than a combined-antigen vaccine for MMR should be rare for a child over age 1. Single-antigen vaccines are recommended for children between the ages of 6 months and 1 year who live in areas of outbreaks. However, these children should be revaccinated with the combined vaccine when they are 15 months old.

Administering single- rather than combined-antigen vaccines can result in missed opportunities to more fully vaccinate preschool children. For example, a substantial number of single-antigen injections may have been given wastefully as seen in a New York State Health Department analysis of fiscal year 1989 Medicaid claims submitted by private physicians. The health department concluded that single-antigen vaccines were inappropriately administered in 45 percent of the 23,885 immunizations given in private physician offices to children between the ages of 1 and 4.

The study noted that in over 3,500 cases, only rubella or mumps vaccine was given in 1989; measles vaccine was not administered, which may have contributed to a significant measles outbreak in the state that led to over 5,000 cases being reported, and 23 deaths in 1991. This practice not only resulted in lost opportunities to fully immunize the preschool children against the three diseases, but also increased immunization costs.

As a result of the study findings, in December 1991, New York state health officials recommended to state Medicaid officials that Medicaid pay only for the administration of the combined vaccine (MMR) to children aged 1 to 3 years. In September 1992, state health officials told us that the state agreed with the recommendation and will soon issue Medicaid regulations that will limit vaccine reimbursements to the combined MMR vaccine.

Conclusions

States could save millions of dollars annually, in the aggregate, through more efficient Medicaid vaccine purchase and reimbursement strategies. Although initial start-up costs for vaccine replacement programs are more than offset by recurring Medicaid savings, most states said that funding the initial outlay has been a significant hurdle. Since, under Medicaid, at least

⁶Craig C. White and others, "Benefits, Risks and Costs of Immunization for Measles, Mumps and Rubella," *American Journal of Public Health*, Vol. 75 (July 1985).

50 percent of the savings generated from these programs will ultimately accrue to the federal government, HCFA and the Public Health Service should take the lead in providing states with funding incentives to establish vaccine replacement programs.

In this regard, CDC could require states to use a portion of their CDC immunization program grants to cover start-up costs for initiating a vaccine replacement program. Also, the additional funds the President has proposed for immunizations, if appropriated, could help states to establish vaccine replacement programs. Additionally, HCFA could help establish vaccine replacement programs by promoting Medicaid waivers that would allow states to purchase vaccines directly from manufacturers at the CDC price. Because the manufacturer under such waiver would deliver the vaccines directly to the Medicaid provider for a nominal fee, states would avoid the typical handling, storage, and distribution costs associated with a vaccine replacement program. Thus, states would be able to expand access to immunization services and achieve the benefits of a vaccine replacement program without incurring the initial start-up costs of such a program.

Medicaid vaccine reimbursement policies allow providers to administer the single-antigen vaccines without medical justification. This policy leads to increased costs resulting from differences in single- and combined-antigen vaccine prices and the separate fees charged by private physicians to administer each vaccine. Moreover, it also conflicts with recommended immunization schedules that minimize the number of provider visits needed to complete the vaccine series.

Recommendations

To expand access to immunization services, we recommend that the Secretary of Health and Human Services direct the Assistant Secretary for Health and Administrator of HCFA to (1) develop innovative financing mechanisms through Medicaid and CDC immunization program grants to support wider implementation of vaccine replacement programs and (2) strongly promote wider adoption of vaccine purchase and distribution programs that allow states to purchase vaccines directly from manufacturers at CDC prices.

To address a barrier to physician participation in immunizing Medicaid children, we recommend that the Secretary of HHS direct the HCFA Administrator to specifically assess the adequacy of fees paid to providers for administering vaccines as part of the agency's evaluations of state

compliance with provisions of the Omnibus Budget Reconciliation Act of 1989 (Section 6402) on adequate payment levels for obstetrical and pediatric services.

To reduce Medicaid vaccination costs, we recommend that the Secretary of HHS direct the HCFA Administrator to require that requests for Medicaid reimbursement of single-antigen vaccines for preschool children include medical justifications.

More Proactive Immunization Programs Needed to Improve Immunization Levels

Although making immunization programs more cost effective can save Medicaid millions of dollars, the process will do little to improve immunization rates unless funds are directed to programs that ensure that children receive immunizations according to prescribed schedules. To improve immunization levels, CDC and other public health experts believe that state immunization programs need to educate parents on the importance of fully immunizing their children against preventable diseases, track each child's immunization status, and follow up on children needing immunizations. We found that states that had all three activities throughout the state were more likely to have higher immunization rates than those that did not. However, most states did not carry out these activities statewide.

Better Education, Tracking, and Follow-Up Can Improve Immunization Levels

Starting a child's immunizations on time and completing them on schedule are critical to the success of an immunization program. Education, tracking, and follow-up are important for ensuring that children are appropriately immunized.

States that provided immunization education materials to mothers of newborns and whose public clinics tracked the immunization status of children, and followed up on those needing immunizations were twice as likely as other states to have an immunization rate that exceeded 59 percent, the median rate reported by states in our survey.¹ However, only 12 states carried out such activities. While these states do better than states that do not perform all three activities, these states still have not attained the Public Health Service's 90-percent goal.

Over 80 percent of the states in which public clinics provided all three activities statewide had immunization rates exceeding 59 percent, while only 40 percent of the other states had rates exceeding this median rate.² Five of the states that provided all three activities had rates that ranged from 72 to 84 percent. In addition to such activities, the two states with higher immunization rates—Vermont (84 percent) and Massachusetts (79 percent)—have universal vaccine distribution programs. Under these programs, the states obtain vaccines through the CDC contract or other means and distribute them free to all public and private providers. The

¹We surveyed all state health departments to obtain information about education, tracking, and outreach at their public clinics. A high proportion of Medicaid children receive their preventive health care at public clinics. It was not feasible for us to survey the large number of private health providers.

²This analysis is based on the 41 states that provided us with both immunization rates and information on immunization education, tracking, and outreach activities.

free vaccines, particularly in the private sector, may have increased access to immunization services, thereby contributing to the high rates in the two states.

Education, Tracking, and Follow-Up in Most States Are Not Comprehensive

In most states, education, tracking, or follow-up activities have not been adopted statewide. While states have programs for general distribution of educational materials on childhood immunizations, they do not systematically disseminate this information to all mothers of newborns as they leave the hospital as recommended by CDC. Public clinics rarely track children from birth, and follow-up is usually limited to mail notices with no personal contact with parents who do not respond to reminders of past due immunizations.

Public and private health care providers are expected to educate parents on immunizations. Many low-income families, however, do not have a single source of primary medical care, which makes it difficult to ensure that parents are (1) made aware of the importance of immunizations and (2) encouraged to have their children immunized.

Most states do not have an adequate means to track and identify children who need immunizations, because clinics usually do not have a record of newborns. Children are not automatically registered with a clinic at the time of birth. Usually, clinics with tracking systems track children only after they have entered the clinic for services. Therefore, public health clinics cannot track the immunization status of children who do not receive preventive health care at the clinics. In addition, as reported by the National Vaccine Advisory Committee, many public sector clinics have inefficient immunization record keeping, which do not allow programs to track or routinely notify families when vaccinations are due. The Committee further noted that computerized systems that could facilitate rapid assessment of immunization status and outreach are often absent.

Once a child in need of immunizations was identified, follow-up in most states was generally limited to mail notices with no personal contact. Clinics that followed up on children needing immunizations usually mailed reminders to the parents. Because none of the states responding to our survey made home visits, they did not personally follow up when there was no response to the reminders.

The Association of State and Territorial Health officials conducted a state survey and reported in May 1992 that public health departments lack

complete and thorough immunization data and are unable to adequately assess the needs of the population served.³ The Association concluded that a computerized network to store immunization information is needed. It advocates strong federal support for a state-based system that would be linked nationwide to (1) track and compare national and local immunization records and (2) identify early successes and problems for appropriate action.

Because federal, state, and local governments are experiencing major budgetary problems, funds may not be available to develop effective education, tracking, and follow-up systems. In many states we surveyed, budgetary constraints and other state and local funding priorities were often cited as major impediments to developing or improving education, tracking, or follow-up activities. Nonvaccine CDC grant dollars that could support such activities are limited and have remained stable since 1963.

Other Countries Have Effective Tracking and Outreach

Unlike the United States, the Netherlands, and Great Britain have established national computerized immunization systems based on birth registration information to routinely identify children in need of immunizations. The Netherlands government issues computer cards to parents that are used to track childhood immunizations; in Great Britain postcards are sent to parents to schedule immunization appointments. They also use home visitation services to educate parents about immunizations, enroll infants into tracking systems, and occasionally administer vaccines. In 1990, the percentage of children completing their immunization schedule by age 2 was 85 percent in Great Britain, and 93 percent in the Netherlands.

Health Officials Advocate a National Birth Registry to Track Immunizations

Health officials believe that a national birth registry is needed to track and monitor immunizations provided to children. CDC considers tracking that begins at birth as the most effective way to monitor children's immunizations. Two other groups—a CDC-convened expert panel and the National Vaccine Advisory Committee—also believe that a national birth registry system is needed to effectively track the immunization status of children. These groups believe that a national registry, which is linked to state tracking systems, would provide a centralized data base on immunization records accessible to public and private health care providers.

³Association of State and Territorial Health officials, State Immunization Survey: Requirements to Achieve a 90% Immunization Rate for Two-Year-Olds, May 1992.

In 1991, CDC convened a panel of experts to assess immunizations for preschool children. The panel recommended that the federal government establish and maintain a central data base of children's immunizations. The states would be responsible for updating the data base and using it to follow up on children who need vaccinations.

The National Vaccine Advisory Committee reported in April 1992 that surveillance and tracking are key to assuming that children are appropriately immunized.⁴ The Committee recommended planning and developing a national immunization registry based on birth certificates that would (1) provide immunization notices to every family, (2) keep up-to-date immunization records, (3) help target outreach efforts, (4) allow for monitoring clinic coverage levels, and (5) provide better reporting of adverse events.

Before establishing a state-based national immunization registry system, barriers other than funding must also be addressed. Some major barriers involve state laws restricting access to birth certificates, concerns of privacy and confidentiality, and questions on the compatibility or even availability of state computer systems.

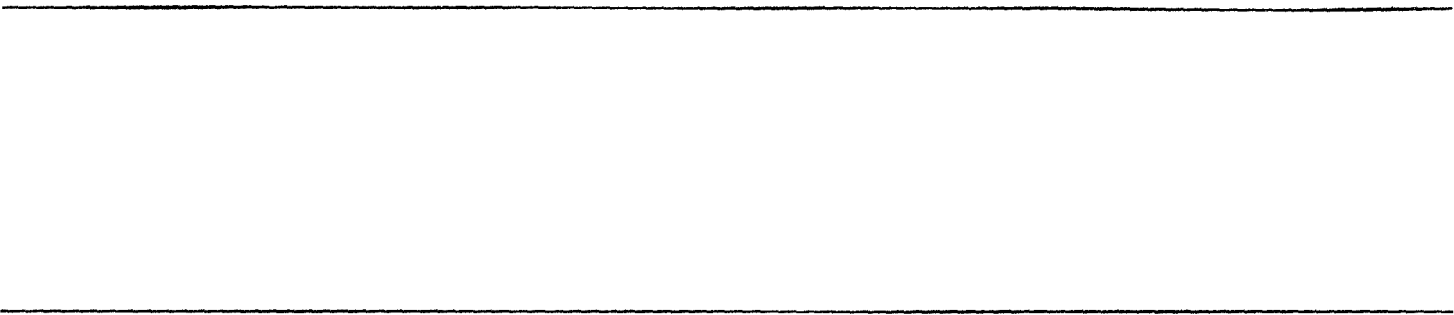
CDC plans to fund several demonstration projects to, among other things, pilot test alternative methods of measuring immunization coverage, including registration of all children from birth certificate information and reporting of vaccinations by all providers to a central data bank. CDC is also collaborating with the Robert Wood Johnson Foundation on demonstration projects the Foundation is supporting to establish immunization monitoring and follow-up systems. The Foundation expects project grantees to initially develop comprehensive plans for immunizing preschool children. These plans will at least include identifying existing immunization record-keeping systems, determining their suitability for inclusion in a comprehensive monitoring system; developing a computerized record-keeping system that can be adapted or linked to regional, state, or national systems; establishing guidelines for maintaining the confidentiality of client records; and developing a system for follow-up (letters, phone calls, home visits) and referral.

CDC envisions a system that would routinely identify children in need of immunizations so providers could initiate appropriate notification efforts

⁴National Vaccine Advisory Committee, Access to Childhood Immunizations: Recommendations and Strategies for Action, April 22, 1992.

and monitor immunization coverage by location to allow health officials to take corrective action when rates decline.

Both the Robert Wood Johnson Foundation's demonstration project and CDC's seem to address the critical technical issues, which are essential in developing effective systems for educating parents about immunizations and tracking and following up on children who need to be immunized. The results of these projects should provide useful information to help both CDC and states in establishing effective immunization education, tracking, and follow-up systems.



Our Survey of Immunization Project Directors

U.S. GENERAL ACCOUNTING OFFICE SURVEY OF IMMUNIZATION PROJECT DIRECTORS

INTRODUCTION

The Congress has asked the U. S. General Accounting Office to study current childhood immunization programs that may affect Medicaid-enrolled children in the 50 states, Washington, D.C., and other local jurisdictions that receive separate CDC immunization grants. The objective of the study is to examine how Medicaid-enrolled children can be cost effectively immunized. As part of the study, we are surveying state and local immunization project directors to obtain information on their state and local immunization practices for (1) purchasing vaccines, (2) distributing vaccines and, (3) tracking systems that monitor the immunization status of preschool children.

INSTRUCTIONS

In answering this questionnaire, you may need the help of other agency officials, such as your immunization program manager or public health advisor.

For the purposes of this questionnaire, we are defining vaccines to mean the routine childhood vaccines recommended by the American Academy of Pediatrics and the Immunization Practices Advisory Committee of the U.S. Public Health Service.

We are asking for some information by state fiscal year (SFY) which we are defining as the period between July 1 thru June 30.

We realize that childhood immunization programs may differ, and that, in some states or localities, certain practices may not exist. We are interested in information about your state health department's experience; however, regardless of these possible differences.

In addition, we realize that completing the questionnaire will take some time. However, you

will probably not need to respond to all sections of the questionnaire.

If you have any question about this survey, or how to answer any questions please call Teruni Rosengren, Evaluator in Charge, Boston Regional Office, at 617-565-7538.

Please return the questionnaire in the postage paid envelope within 2 weeks of receipt to:

Teruni Rosengren
U.S. General Accounting Office
Room 575
10 Causeway Street
Boston, MA 02222

Please provide the name, title and telephone number of the person responsible for completing this questionnaire so that we may call to clarify information, if necessary.

Name: _____

Title _____

Phone No. _____

We sincerely appreciate your help in completing this questionnaire.

VACCINES PURCHASED

1. Does the state health department purchase vaccines through CDC's federal contract with vaccine manufacturers? (CHECK ONE)
 1. Yes (GO TO QUESTION 2)
 2. No (GO TO PAGE 9, QUESTION 16)

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2. Listed below are childhood vaccines which can be purchased with CDC funds, state funds or other sources. For each vaccine listed below, please indicate if your state's childhood vaccines were purchased with CDC funds, state funds, or other funds for state fiscal years (SFYs), July 1 thru June 30, 1990 and 1991.

(CHECK ALL THAT APPLY FOR EACH VACCINE)

VACCINE	SFY 90 FUNDING SOURCES				SFY 91 FUNDING SOURCES			
	Did not Fund	CDC Funds	State Funds	Other Funds	Did not Fund	CDC Funds	State Funds	Other Funds
1. Diphtheria, pertussis, and tetanus (DPT) or Diphtheria/Tetanus (DT)								
2. Oral Poliovirus Vaccine (OPV)								
3. Measles, mumps, and rubella (MMR), DOSE 1								
4. Measles, mumps, and rubella (MMR), DOSE 2								
5. Haemophilus influenzae Type b (Hib), DOSES 1, 2, and 3								
6. Haemophilus influenzae Type b (HIB), DOSE 4								
7. Hepatitis B								
8. Other (SPECIFY)								

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3. Listed below are funding sources to purchase childhood vaccines for your state. For SFYs 1990 and SFY 1991 (estimated), please provide the amount your state received from (1) CDC direct assistance vaccine funding, (2) state funding, and (3) other funding sources. (ENTER AMOUNTS FOR EACH YEAR)

FUNDING SOURCE	SFY 1990	SFY 1991 (est.)
1. CDC Direct Assistance vaccine funding	\$	\$
2. State funding	\$	\$
3. Other funding sources	\$	\$

4. Except for the immunization grant with CDC and state funding, please indicate whether or not the following funding sources, if any, were used to purchase childhood vaccines for your state during SFYs 1990 and 1991? (CHECK ONE FOR EACH YEAR)

SOURCE	Other Funding?			
	SFY 1990		SFY 1991	
	Yes (1)	No (2)	Yes (1)	No (2)
1. Women, Infants, and Children				
2. Maternal and Child Health Services block grant				
3. Medicaid				
4. Clinic fees				
5. Other local government funds				
6. Other funding sources				
7. No other funding				

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VACCINE DISTRIBUTION AND COSTS

We are interested in your state's vaccine distribution policies and practices to Medicaid and non-Medicaid enrolled providers in your state. Medicaid providers are defined as providers who are enrolled in the Medicaid program and can bill Medicaid for services.

In the pages that follow, we will ask you some specific questions about each vaccine (and in some cases, specific doses) that we have listed in question 2.

5. Does your health department distribute the following vaccines to any Medicaid-enrolled providers in your state? (CHECK ONE FOR EACH.)

YES NO

- | | | |
|-----------------------------|--------------------------|---|
| 1. <input type="checkbox"/> | <input type="checkbox"/> | Diphtheria, pertussis, and tetanus (DPT) or Diphtheria/Tetanus (DT) |
| 2. <input type="checkbox"/> | <input type="checkbox"/> | Oral Poliovirus vaccine (OPV) |
| 3. <input type="checkbox"/> | <input type="checkbox"/> | Measles, mumps, and rubella (MMR) DOSE 1 |
| 4. <input type="checkbox"/> | <input type="checkbox"/> | Measles, mumps, and rubella (MMR) DOSE 2 |
| 5. <input type="checkbox"/> | <input type="checkbox"/> | Haemophilus influenzae Type b (Hib) DOSE 4 |
| 6. <input type="checkbox"/> | <input type="checkbox"/> | Haemophilus influenzae Type b (Hib) DOSES 1, 2, AND 3 |
| 7. <input type="checkbox"/> | <input type="checkbox"/> | Other (SPECIFY) |
-

6. Did you check 'no' to all parts of question 5? (CHECK ONE)

1. Yes (GO TO QUESTION 10, PAGE 7)
2. No (GO TO QUESTION 7)

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7. Consider the currently enrolled Medicaid providers in your state. Please indicate if your state health department distributes the listed vaccines to all, some, or none of the types of enrolled Medicaid providers listed below.

(FOR EACH TYPE OF PROVIDER, CHECK ONE FOR EACH VACCINE.)

TYPES OF ENROLLED MEDICAID PROVIDERS	Does Not Apply	(A) DPT, OPV, MMR (Dose 1), Hib (Dose 4)			(B) MMR (Dose 2)			(C) Hib (Doses 1, 2, and 3)		
		All Providers	Some Providers	No Providers	All Providers	Some Providers	No Providers	All Providers	Some Providers	No Providers
1. Public hospital outpatient clinics										
2. Public health clinics										
3. Federally qualified health centers										
4. Private physicians										
5. Private hospital outpatient clinics										
6. Private community- neighborhood health centers										
7. Private HMOs										
8. Other providers (SPECIFY)										

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8. Did you check some enrolled Medicaid providers in any part of question 7? (CHECK ONE)

1. Yes (GO TO QUESTION 9)

2. No (GO TO QUESTION 10)

9. Consider your response to question 8. For the enrolled Medicaid providers which you indicated that your health department distributes vaccines to only 'some' providers:

(A) consider the 'some' which are public providers, if applicable. Which of these Medicaid public providers receive the vaccines listed below from your state health department and

(B) consider the 'some' which are private providers, if applicable. Which of these Medicaid private providers receive the vaccines listed below from your state health department.

TYPES OF MEDICAID-ENROLLED PROVIDERS RECEIVING VACCINES	(1) DPT, OPV, MMR (Dose 1), Hib (Dose 4)	(2) MMR (Dose 2)	(3) Hib (Doses 1, 2 and 3)
PUBLIC PROVIDERS			
1. Public providers with large Medicaid practices			
2. Public providers in outbreak areas			
3. Public providers in medically underserved urban areas			
4. Public providers in medically underserved rural areas			
5. Other public providers (SPECIFY)			
PRIVATE PROVIDERS			
6. Private providers with large Medicaid practices			
7. Private providers in outbreak areas			
8. Private providers in medically underserved urban areas			
9. Private providers in medically underserved rural areas			
10. Other private providers (SPECIFY)			

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10. Does your state health department distribute each of the following vaccines to non-Medicaid providers (providers who are not enrolled in the Medicaid program) in your state? (CHECK ONE FOR EACH VACCINE.)

YES NO

1. Diphtheria, pertussis, and tetanus (DPT) or Diphtheria/tetanus (DT)
2. Oral Poliovirus vaccine (OPV)
3. Measles, mumps, and rubella (MMR) DOSE 1
4. Measles, mumps, and rubella (MMR) DOSE 2
5. Haemophilus influenzae Type b (Hib) DOSE 4
6. Haemophilus influenzae Type b (Hib) DOSES 1, 2, AND 3
7. Other (SPECIFY)

11. Did you check 'no' to all parts of question 10? (CHECK ONE)

1. Yes (GO TO QUESTION 15)
2. No (GO TO QUESTION 12)

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15. In distributing childhood vaccines to providers in your state, does your state health department make a distinction between those who are enrolled Medicaid providers and those who are not? (CHECK ONE)

- 1. Yes
- 2. No

VACCINE PROCUREMENT AND DISTRIBUTION

16. Other than the federal contract, what strategies does your state health department use to lower childhood vaccine prices? (CHECK ALL THAT APPLY)

- 1. Negotiate own contract --> (GO TO QUESTION 17)
- 2. Manufacture own vaccine (GO TO QUESTION 18)
- 3. Other (PLEASE SPECIFY)
_____ (GO TO QUESTION 18)
- 4. No other strategies (GO TO QUESTION 18)

17. Please indicate if (1) each of the following childhood vaccines was covered under the state negotiated contract and if it was, (2) the cost per vaccine for SFY 1991.

Vaccines	Vaccines Covered?		Cost/ Vaccine (\$)
	No	Yes --->	
1. DPT			
2. DT			
3. OPV			
4. MMR			
5. Hib			
6. Hepatitis B			
7. Other vaccines (SPECIFY) _____			

18. Have you ever discussed with or proposed to your state Medicaid office the idea of distributing publicly supplied childhood vaccines to all Medicaid-enrolled providers (CHECK ONE)

- 1. Yes, discussed only
- 2. Yes, proposed only
- 3. Yes, both
- 4. No

19. Has your state ever considered distributing vaccines to all Medicaid-enrolled providers in your state? (CHECK ONE)

- 1. Yes
- 2. No

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20. Listed below are factors that might hinder the distribution of recommended childhood vaccines to all Medicaid-enrolled providers in a state. Regardless of your state's distribution policies, on the basis of your experience and knowledge of vaccine distribution policies, please indicate whether each of the following factors hinders, if at all, the distribution of vaccines to all Medicaid-enrolled providers in your state.

(CHECK ONE FOR EACH FACTOR)

FACTOR	Doesn't Apply/ Don't Know	Doesn't Hinder (1)	Slightly Hinders (2)	Somewhat Hinders (3)	Moderately Hinders (4)	Greatly Hinders (5)
RESOURCES						
1. Availability of vaccine transportation system from state health department to providers						
2. Availability of storage facilities for state health department use						
3. Increase in vaccine prices						
4. Availability of funding to purchase vaccines						
5. Availability of Medicaid staffing						
6. Availability of local public health staffing						
7. Other (PLEASE SPECIFY)						
ADMINISTRATION						
8. Level of coordination and cooperation between Medicaid and local public health department						
9. Physician recordkeeping to account for doses administered to Medicaid-enrolled children						
10. Public health responsibility for preparation of vaccine use reports to CDC						
11. Medicaid responsibility for furnishing data on doses administered						
12. Inadequate number of willing Medicaid providers						
13. Other (PLEASE SPECIFY)						

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12. Consider non-Medicaid enrolled providers in your state. Please indicate if your state health department distributes the listed vaccines to all, some, or none of the types of non-Medicaid enrolled providers listed below.

(FOR EACH TYPE OF PROVIDER, CHECK ONE FOR EACH VACCINE.)

TYPES OF NON-MEDICAID ENROLLED PROVIDERS	Does Not Apply	(A) DPT, OPV, MMR (Dose 1), Hib (Dose 4)			(B) MMR (Dose 2)			(C) Hib (Doses 1, 2, and 3)		
		All Providers	Some Providers	No Providers	All Providers	Some Providers	No Providers	All Providers	Some Providers	No Providers
1. Public hospital outpatient clinics										
2. Public health clinics										
3. Federally qualified health centers										
4. Private physicians										
5. Private hospital outpatient clinics										
6. Private community-neighborhood health centers										
7. Private HMOs										
8. Other providers (SPECIFY)										

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13. Did you check 'some' non-Medicaid enrolled providers in any part of question 12? (CHECK ONE)
1. Yes (GO TO QUESTION 14)
2. No (GO TO QUESTION 15)
14. Consider your response to question 13. For the non-Medicaid enrolled providers in which you indicated your health department distributes vaccines to only 'some' providers:
- (A) consider the 'some' which are public providers, if applicable. Which of these non-Medicaid public providers receive the vaccines listed below from your state health department and
- (B) consider the 'some' which are private providers, if applicable. Which of these non-Medicaid private providers receive the vaccines listed below from your state health department.

TYPES OF NON-MEDICAID ENROLLED PROVIDERS RECEIVING VACCINES	(1) DPT, OPV, MMR (Dose 1), Hib (Dose 4)	(2) MMR (Dose 2)	(3) Hib (Doses 1, 2 and 3)
PUBLIC PROVIDERS			
1. Public providers serving large numbers of medically indigent families			
2. Public providers in outbreak areas			
3. Public providers in medically underserved urban areas			
4. Public providers in medically underserved rural areas			
5. Other public providers (SPECIFY)			
PRIVATE PROVIDERS			
6. Private providers serving large number of medically indigent families			
7. Private providers in outbreak areas			
8. Private providers in medically underserved urban areas			
9. Private providers in medically underserved rural areas			
10. Other private providers (SPECIFY)			

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21. Of the factors listed above, which most hinders the distribution of vaccines to all Medicaid-enrolled providers in your state? (ENTER FACTOR NUMBER FROM LIST ABOVE)

Most hinders _____

Second most hinders _____

Third most hinders _____

HEALTH DEPARTMENT TRACKING SYSTEM

22. At the end of federal fiscal year 1990, that is September 30, 1990, about what percentage of all children in your state had completed the recommended basic immunization series by the age of 2? (ENTER PERCENTAGE)

_____ Percent completed

State health department cannot determine

23. The Omnibus Budget Reconciliation Act of 1989 required states which received Maternal and Child Health Services (MCHS) block grant to report data on the proportion of children appropriately immunized by their second birthday in their FPY 1991 Title V (MCHS) annual report. Have you or anyone on your staff discussed with the MCHS program staff the methods to be used in reporting this number? (CHECK ONE)

1. Yes (GO TO QUESTION 24)

2. No (GO TO QUESTION 25)

24. What methods, if any, will your state use to enable you to report this number? (CHECK ANY THAT APPLY)

1. Special surveys

2. Retrospective studies from immunization records at school entry

3. Age specific estimates based on sampling

4. Data on 2 year olds at licensed day care centers

5. Other (Please Specify _____)

6. Unknown at this time.

25. Does your state health department have a tracking system to monitor the immunization status of children under the age of 6? (CHECK ONE)

1. Yes (GO TO QUESTION 26)

2. No (GO TO QUESTION 28)

3. Don't know

26. What types of tracking does your system do? (CHECK ALL THAT APPLY)

1. Identifies children who are eligible for immunization

2. Identifies children who are due for immunizations

3. Identifies children who are behind immunization schedule

4. Other (SPECIFY _____)

**Appendix I
Our Survey of Immunization Project
Directors**

27. Does your state health department have a computerized tracking system to monitor the immunization status of children under the age of 6? (CHECK ONE)

1. Yes

2. No

28. What portion, if any, of the public health clinics in your state have a tracking system to monitor the immunization status of children under the age of 6? (CHECK ONE)

1. All or almost all

2. More than half

3. About half

4. Less than half

5. None or almost none (GO TO QUESTION 30)

6. Don't know

29. For what group of children under the age of 6 do most of these public health clinics monitor their immunization status? (CHECK ONE)

1. Medically indigent children

2. Medicaid-enrolled children

3. Public health department clients under age of 6

4. Other (PLEASE SPECIFY)

30. What portion, if any, of the public health clinics in your state have a system which identifies newborn babies to enroll them in an immunization program? (CHECK ONE)

1. All or almost all

2. More than half

3. About half

4. Less than half

5. None or almost none (GO TO QUESTION 32)

6. Don't know

31. What system do these public health clinics use most to identify newborn babies and enroll them in an immunization program? (CHECK ONE)

1. Through birth certificates.

2. Through hospital records.

3. Previous enrollment in maternity/prenatal clinics

4. Other means (PLEASE SPECIFY)

**Appendix I
Our Survey of Immunization Project
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32. What portion, if any, of the public health clinics in your state have a system that follows infants and children once they have contact with a public health clinic to keep them on schedule? (CHECK ONE)

- 1. All or almost all
- 2. More than half
- 3. About half
- 4. Less than half
- 5. None or almost none
- 6. Don't know

33. What portion, if any, of the public health clinics in your state have a reminder system to remind parents when immunization appointments are due? (CHECK ONE)

- 1. All or almost all
 - 2. More than half
 - 3. About half
 - 4. Less than half
 - 5. None or almost none
 - 6. Don't know
- (GO TO QUESTION 35)

34. What reminder system is used most often by the public health clinics in your state to remind parents when immunization appointments are due? (CHECK ONE)

- 1. Notice by mail
 - 2. Notice by phone
 - 3. Field visits
 - 4. Other system (PLEASE SPECIFY)
- _____

35. Consider the parents whose children have missed immunization appointments. What portion, if any, of the public health clinics in your state have a recall system in place to inform these parents that their children need immunizations? (CHECK ONE)

- 1. All or almost all
 - 2. More than half
 - 3. About half
 - 4. Less than half
 - 5. None or almost none
 - 6. Don't know
- (GO TO QUESTION 37)

36. What recall system is most often used to inform parents of children who missed an appointment to be immunized? (CHECK ONE)

- 1. Notice by mail.
 - 2. Notice by phone.
 - 3. Field visits.
 - 4. Other system (PLEASE SPECIFY)
- _____

**Appendix I
Our Survey of Immunization Project
Directors**

37. In your state, which of the following special population groups of children, if any, have been targeted to receive immunization services? (CHECK ALL THAT APPLY)

- 1. Migrants
- 2. Homeless
- 3. Illegal aliens
- 4. Newly legalized aliens
- 5. Medically underserved
- 6. Other high risk groups (SPECIFY)

- 7. Do not target special groups

38. Does your state health department provide published materials on the benefit of childhood immunizations? (CHECK ONE)

- 1. Yes (GO TO QUESTION 39)
- 2. No (GO TO QUESTION 40)

39. To whom does your state health department provide most of these published materials? (CHECK AT MOST THREE.)

- 1. Public health clinics
- 2. Hospitals
- 3. Local boards of health
- 4. Vaccine distribution centers other than those listed above
- 5. Mothers of newborns
- 6. Other providers (SPECIFY)

40. Do any public health clinics in your state have staff who conduct outreach (personal contacts) visits to induce medically underserved parents to bring their children in for immunizations? (CHECK ONE)

- 1. Yes (GO TO QUESTION 41)
- 2. No (GO TO QUESTION 42)

41. How many state public health department staff members in your state conduct outreach full-time and part-time (less than 25 hours per week) to Medically underserved children? (ENTER NUMBER)

- _____ staff provide outreach full-time
- _____ staff provide outreach part-time

42. Do any other state government agencies assess the immunization status of any preschool children? (CHECK ONE)

- 1. No
- 2. Yes (PLEASE SPECIFY THE AGENCY, A CONTACT PERSON AND PHONE NUMBER)
- 3. Don't know

**Appendix I
Our Survey of Immunization Project
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43. Do any other state government agencies have a tracking system to monitor the immunization status of any preschool children? (CHECK ONE)

1. No

2. Yes (PLEASE SPECIFY THE AGENCY, A CONTACT PERSON AND PHONE NUMBER)

3. Don't know

44. Do any other state government agencies track preventive care (well baby visits) for Medicaid-eligible children? (CHECK ONE)

1. No

2. Yes (PLEASE SPECIFY THE AGENCY, A CONTACT PERSON AND PHONE NUMBER)

3. Don't know

45. Do any state government agencies plan to implement a tracking system for Medicaid-enrolled children within the next 12 months? (CHECK ONE)

1. No

2. Yes (PLEASE SPECIFY THE AGENCY, A CONTACT PERSON AND PHONE NUMBER)

3. Don't know

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46. We would like to know your opinion about ways to immunize more Medicaid-enrolled children cost effectively. What suggestions do you have? (DESCRIBE BELOW)

COMMENTS

47. Thank you for taking the time to fill out this survey. We would like your comments on this survey, and more importantly, on what you feel the Federal government might do to improve the immunization procedures in your state. (COMMENT BELOW)

Our Survey of State Medicaid Directors

U.S. GENERAL ACCOUNTING OFFICE
SURVEY OF STATE MEDICAID DIRECTORS

INTRODUCTION

The Congress has asked the U. S. General Accounting Office to study current childhood immunization services that may affect Medicaid-enrolled children in the 50 states and Washington, D.C. The objective of the study is to examine how more Medicaid-enrolled children can be cost effectively immunized. As part of the study, we are conducting a survey of state Medicaid (1) reimbursement policies for childhood vaccines and (2) tracking systems, if any, of their enrolled preschool population's immunization status.

INSTRUCTIONS

In answering this questionnaire, you may need the help of agency officials in your state who are involved in primary care and children's health issues. In addition, if your state health department supplies vaccines to enrolled Medicaid providers, you may want to consult with your immunization project director about state vaccine distribution policies.

For the purposes of this questionnaire, we are defining vaccines to mean the routine childhood vaccines recommended by the American Academy of Pediatrics and the Immunization Practices Advisory Committee of the U.S. Public Health Service.

We realize that Medicaid programs may differ in size and complexity and that, in some cases, certain procedures may not exist. We are interested in information about your state's experience; however, regardless of these possible differences.

If you have any questions about this survey or the study, please call Teruni Rosengren, Boston Regional Office, at 617-565-7538.

Please return this survey in the postage-paid envelope, within 2 weeks of receipt, to

Teruni Rosengren
U.S. General Accounting Office
Room 575
10 Causeway Street
Boston MA 02222

In the spaces below, please fill-in the name, title and telephone number of the person responsible for completing this questionnaire so that we may call to clarify answers, if necessary.

Name: _____

Title: _____

Phone No. _____

We appreciate your help in completing this questionnaire.

VACCINE COVERAGE

1. As of May 1, 1991, please indicate whether or not each of the following childhood vaccines was covered by your state Medicaid plan for children under the age of 6, regardless of whether your state reimburses for these vaccines. (CHECK ONE FOR EACH VACCINE)

YES NO

1. [] [] Diphtheria, pertussis, and tetanus (DPT) or diphtheria/tetanus (DT)

2. [] [] Oral poliovirus vaccine (OPV)

3. [] [] Measles, mumps, and rubella (MMR), DOSE 1

4. [] [] Measles, mumps, and rubella (MMR), DOSE 2

5. [] [] Haemophilus influenzae Type b (Hib), DOSES 1, 2, and 3

6. [] [] Haemophilus influenzae Type b (Hib), DOSE 4

7. [] [] Hepatitis B

8. [] [] Other (SPECIFY.)

**Appendix II
Our Survey of State Medicaid Directors**

<p>2. What immunization schedule does your state Medicaid program currently recommend? (CHECK ONE)</p> <p>1. <input type="checkbox"/> American Academy of Pediatrics (AAP) only</p> <p>2. <input type="checkbox"/> Immunization Practices Advisory Committee (ACIP) of US Public Health Service only</p> <p>3. <input type="checkbox"/> Both AAP and ACIP</p> <p>4. <input type="checkbox"/> Other (PLEASE SEND A COPY)</p> <p style="text-align: center;">_____</p> <p>3. Who administers your state Medicaid EPSDT (Early and Periodic Screening, Diagnosis and Treatment) program? (CHECK ONE)</p> <p>1. <input type="checkbox"/> State Medicaid program only</p> <p>2. <input type="checkbox"/> State health department only</p> <p>3. <input type="checkbox"/> Both state Medicaid program and state health department</p> <p>4. <input type="checkbox"/> Other (SPECIFY)</p> <p style="text-align: center;">_____</p> <p>4. Using HCFA Form-416, what was the total number of children, 0 to 5 years of age, that were eligible for the EPSDT program during federal fiscal year (FFY) 1990? (ENTER NUMBER)</p> <p>_____ children</p> <p><input type="checkbox"/> Medicaid program cannot determine</p> <p>5. Using HCFA Form-416, what was the total number of EPSDT-eligible children, 0 to 5 years of age, that were provided child health screening supervision during FFY 1990? (ENTER NUMBER)</p> <p>_____ children</p> <p><input type="checkbox"/> Medicaid program cannot determine</p>	<p>6. Using HCFA Form-416, what was the total number of screening (examination) services given to children, 0 to 5 years of age, during FFY 1990? (ENTER NUMBER)</p> <p>_____ services</p> <p><input type="checkbox"/> Medicaid program cannot determine</p> <p>7. At the end of FFY 1990, that is September 30, 1990, about what percent of all EPSDT children had completed the recommended basic immunization series by the age of 2? (ENTER PERCENTAGE)</p> <p>_____ percent completed</p> <p><input type="checkbox"/> Medicaid program cannot determine</p> <p>8. Listed below are many of the pediatric providers in a state. Please indicate the providers that currently immunize the greatest number of Medicaid-enrolled children in your state, the second greatest, and the third greatest.</p> <ol style="list-style-type: none"> 1. Public health clinics 2. Federally qualified health centers 3. Physician offices 4. Health maintenance organizations (HMOs) 5. Nonfederal community health centers 6. Hospital outpatient clinics 7. Other settings (SPECIFY) <p style="text-align: center;">_____</p> <p>(ENTER PROVIDER NUMBER FROM ABOVE LIST)</p> <ol style="list-style-type: none"> 1. _____ Immunize greatest number 2. _____ Immunize second greatest number 3. _____ Immunize third greatest number
---	---

**Appendix II
Our Survey of State Medicaid Directors**

9. Listed below are many of the pediatric providers in a state. For all Medicaid-enrolled children in your state, please estimate the percentage of Medicaid-enrolled children who receive their childhood immunizations from each of these providers. (ENTER PERCENTAGE)

- 1. ____% Public health clinics
- 2. ____% Federally qualified health centers
- 3. ____% Physician offices
- 4. ____% Health maintenance organizations (HMOs)
- 5. ____% Nonfederal community health centers
- 6. ____% Hospital outpatient clinics
- 7. ____% Other providers (SPECIFY)

100% TOTAL

Don't know

MEDICAID VACCINE REIMBURSEMENT

This part of the questionnaire is divided into two sections: the first concerns privately supplied vaccines (vaccines purchased by providers through the private sector); while the second concerns publicly supplied vaccines (vaccines purchased by the state health department through the CDC federal contract).

Privately Supplied Vaccines

10. Does your state Medicaid program reimburse any providers for vaccine costs in which vaccines were privately supplied (purchased through the private sector)? (CHECK ONE)

- 1. Yes (GO TO QUESTION 11)
- 2. No (GO TO QUESTION 16)

11. Does your state Medicaid program have a maximum rate of reimbursement for any privately supplied childhood vaccines? (CHECK ONE)

- 1. Yes, all (GO TO QUESTION 13)
- 2. Yes, some (GO TO QUESTION 12)
- 3. No (GO TO QUESTION 12)

12. If there is no maximum rate of reimbursement for any or some vaccines, does your state Medicaid program pay for acquisition costs to purchase childhood vaccines? (CHECK ONE)

- 1. Yes
- 2. No
- 3. Not applicable: state Medicaid program has a maximum rate of reimbursement for all vaccines

13. Does your state Medicaid program customarily revise vaccine reimbursement rates as a result of changes in vaccine prices? (CHECK ONE)

- 1. Yes (GO TO QUESTION 14)
- 2. No (GO TO QUESTION 15)

14. Generally, within what time period following a childhood vaccine price change, does your Medicaid program revise its reimbursements rates? (CHECK ONE)

- 1. Within a few days
 - 2. Within 1 week
 - 3. Within 1 month
 - 4. Within 4 months
 - 5. Within 1 year
 - 6. Within other time period (SPECIFY)
- _____

**Appendix II
Our Survey of State Medicaid Directors**

15. Listed below are privately supplied vaccines or single antigens for which a state Medicaid program might reimburse for vaccine costs. For each vaccine/antigen as of May 1, 1991, please indicate (A) whether or not your state Medicaid program reimbursed the cost of each vaccine/antigen and if it did, (B) provide the number of doses your program reimbursed during state fiscal year 1990 (SFY 90), and (C) excluding the injection fee, provide the average allowable (or flat rate) amount that Medicaid reimburses for each dose, as of May 1, 1991.

VACCINE/ANTIGEN	(A) (CHECK ONE) Reimbursed for Privately Supplied Vaccine/Antigen?		(B) (ENTER NUMBER) Total Number of Doses Reimbursed, SFY 1990	(C) (ENTER AMOUNT) Average Allowable (or Flat rate) Amount Per Dose
	No (1)	Yes (2) --->	(#)	(\$)
1. DPT				
2. DT				
3. Td				
4. Oral Polio Virus (OPV)				
5. Measles				
6. Mumps				
7. Rubella				
8. Measles and Rubella				
9. Mumps and Rubella (MR)				
10. MMR				
11. Hib				
12. Hepatitis B				
13. Other (PLEASE SPECIFY)				

**Appendix II
Our Survey of State Medicaid Directors**

Publicly Supplied Vaccines

16. Does your state health department distribute publicly supplied vaccines to any Medicaid-enrolled provider? (CHECK ONE)

- 1. Yes (GO TO QUESTION 17)
- 2. No (GO TO QUESTION 20)

17. Does your state Medicaid program repay the state health department for the purchase or distribution costs of publicly supplied vaccines? (CHECK ONE)

- 1. Yes, purchasing costs only
- 2. Yes, distribution costs only
- 3. Yes, both types of costs
- 4. No (GO TO QUESTION 20)

18. Listed below are publicly supplied vaccines for which Medicaid might reimburse the state health department for purchasing vaccines. For each vaccine, please indicate, (A) whether or not the state Medicaid program reimburses the state health department for costs to purchase each vaccine. If the state does, please indicate (B) the total number of doses purchased in SFY 90 and (C) the reimbursement amount to purchase each vaccine dose as of the end of SFY 90.

VACCINES	(A) (CHECK ONE)		(B) (ENTER NUMBER)	(C) (ENTER AMOUNT)
	Reimbursed?		Number of Doses Reimbursed (#)	Cost Per Dose (\$)
	No (1)	Yes (2) ---->		
1. DPT				
2. DT				
3. OPV				
4. MMR				
5. Hib				
6. Other Vaccines (SPECIFY)				

**Appendix II
Our Survey of State Medicaid Directors**

19. For SFY 1990, please provide the total amount your state Medicaid program reimbursed the state health department for (1) the vaccine costs and (2) nonvaccine related costs (personnel, transportation, storage, and others.) (ENTER AMOUNT.)

(1) Vaccine costs \$ _____

(2) Nonvaccine costs \$ _____

21. Has your state ever considered supplying vaccines to all enrolled Medicaid providers in your state? (CHECK ONE)

1. Yes

2. No

20. Have you ever discussed with, or proposed to officials in your state health department the idea of distributing publicly supplied vaccines to all Medicaid-enrolled providers? (CHECK ONE)

(CONTINUE TO NEXT PAGE)

1. Yes, discussed only

2. Yes, proposed only

3. Yes, both

4. No

5. Not applicable (all Medicaid providers receive vaccines)

**Appendix II
Our Survey of State Medicaid Directors**

22. Listed below are factors that might hinder the distribution of recommended childhood vaccines to all enrolled Medicaid providers in a state. Regardless of your state's vaccine distribution policies, on the basis of your experience and knowledge of vaccine distribution policies, please indicate which of the following factors hinders, if at all, the provision of vaccines to all enrolled Medicaid providers in your state.

(CHECK ONE FOR EACH FACTOR)

FACTORS	Does Not Apply/ Don't Know	Does not Hinder (1)	Slightly Hinders (2)	Somewhat Hinders (3)	Moderately Hinders (5)	Greatly Hinders (5)
RESOURCES						
1. Availability of vaccine transportation system from state health department to providers						
2. Availability of storage facilities for state health department use						
3. Increase in vaccine prices						
4. Availability of funding to purchase vaccines						
5. Availability of Medicaid staffing						
6. Availability of public health staffing						
7. Other (PLEASE SPECIFY)						
ADMINISTRATION						
8. Level of coordination and cooperation between Medicaid and public health department						
9. Physician recordkeeping to account for doses administered to Medicaid-enrolled children						
10. Public health responsibility for preparation of vaccine usage reports to CDC						
11. Medicaid responsibility for furnishing data on doses administered						
12. Inadequate number of willing providers						
13. Other (PLEASE SPECIFY)						

**Appendix II
Our Survey of State Medicaid Directors**

23. Of the factors listed above, which most hinders the distribution of vaccines to all enrolled Medicaid providers in your state, second most hinders, and third most hinders? (ENTER FACTOR NUMBER FROM LIST IN QUESTION 22)

Most hinders _____
 Second most hinders _____
 Third most hinders _____

24. With the exception of the CDC federal contract, does your state Medicaid department reimburse the state health department for vaccines obtained through state-negotiated contracts with vaccine manufacturers? (CHECK ONE)

- 1. Yes
- 2. No
- 3. Not applicable

MEDICAID TRACKING SYSTEM

25. At the end of FFY 1990, about how many children, aged 0 to 5 years, were enrolled in Medicaid in your state? (ENTER NUMBER)

_____ Children
 Medicaid program cannot determine

26. At the end of FFY 90, about what percent of all Medicaid-enrolled children had completed the recommended basic immunization series by age 2? (ENTER PERCENTAGE)

_____ percent completed
 Medicaid program cannot determine

27. Of all Medicaid-enrolled children who have been immunized, about what percentage have been vaccinated in public and private settings in your state currently? (ENTER PERCENTAGE)

_____ % Public settings
 (Publicly funded clinics, centers and hospitals)
 _____ % Private settings
 (Physicians, for-profit HMOs and hospitals, for example.)
 100% % Total
 _____ Date
 Medicaid program cannot determine

28. Does the state Medicaid program systematically assess the immunization status of Medicaid-enrolled children under the age of 6? (CHECK ONE)

- 1. Yes
- 2. No

Appendix II
Our Survey of State Medicaid Directors

29. Does your state Medicaid program currently have a tracking system to monitor the immunization status of Medicaid-enrolled children under the age of 6? (CHECK ONE)

1. Yes (GO TO QUESTION 33)

2. No (GO TO QUESTION 30)

30. Has your state Medicaid program ever had a tracking system that monitored the immunization status of Medicaid-enrolled children under the age of 6? (CHECK ONE)

1. Yes (GO TO QUESTION 31)

2. No (GO TO QUESTION 32)

31. What was the major reason that the tracking system was discontinued? (CHECK ONE)

1. Tracking was not effective

2. Tracking was not cost effective

3. Resources not available to track

4. Other (PLEASE SPECIFY)

32. Is your state Medicaid program planning to implement an immunization tracking system for enrolled children within the next 12 months? (CHECK ONE.)

1. Yes

2. No

33. Does your state Medicaid program provide information on the benefits of health preventive services, including immunizations, to the parents of EPSDT-eligible children? (CHECK ONE.)

1. No

2. Yes --> (Please send a copy of the literature/brochure that you provide to parents of EPSDT eligible children)

34. Currently, what special groups of Medicaid-enrolled children, if any, are targeted to receive immunization services? (CHECK ALL THAT APPLY)

1. Migrants

2. Homeless

3. Illegal aliens

4. Newly legalized aliens

5. Medically underserved

6. Other high-risk groups (SPECIFY)

7. No special groups targeted

35. Does your state Medicaid program directly provide or fund outreach services to induce parents of Medicaid-enrolled children to enroll them in the EPSDT program? (CHECK ONE)

1. Yes, directly provides only

2. Yes, funds only --> (GO TO QUESTION 39)

3. Yes, directly provides and funds

4. No

Appendix II
Our Survey of State Medicaid Directors

36. Except for the EPSDT program, does your state Medicaid program directly provide or fund outreach services to induce parents of Medicaid-enrolled children to bring them in for immunizations? (CHECK ONE)

- 1. Yes, directly provides only --> (GO TO QUESTION 37)
- 2. Yes, funds only --> (GO TO QUESTION 39)
- 3. Yes, directly provides and funds --> (GO TO QUESTION 37)
- 4. No --> (GO TO QUESTION 40)

37. How many Medicaid staff members directly provide full-time and part-time (less than 25 hours per week) outreach services to Medicaid-enrolled children? (ENTER NUMBER)

_____ Full-time staff
_____ Part-time staff

38. What type of outreach services does your state Medicaid program directly provide or fund? (CHECK ALL THAT APPLY)

- 1. Mail notices
 - 2. Telephone clients
 - 3. Make personal visits
 - 4. Other (SPECIFY)
- _____

39. Which of the following programs for outreach services, if any, does your state Medicaid program fund? (CHECK ALL THAT APPLY)

- 1. Maternal and Child Health Program
 - 2. Women, Infants and Children (WIC)
 - 3. Head Start
 - 4. Public health department
 - 5. State welfare agency
 - 6. Other programs (SPECIFY)
- _____
- 7. State does not fund any programs for outreach services

40. Which of the following, if any, have a tracking system to monitor the immunization status of children? (CHECK ALL THAT APPLY.)

- 1. Local health department
 - 2. State health department
 - 3. Enrolled Medicaid providers
 - 4. Maternal and Child Health Services program
 - 5. Other (SPECIFY)
- _____
- 6. No others have a tracking system

Appendix II
Our Survey of State Medicaid Directors

41. Except for the EPSDT program, does your state Medicaid program have a tracking system to monitor preventive care (well-baby visits) for Medicaid-enrolled children?
(CHECK ONE)

1. No

2. Yes -> (PLEASE SPECIFY THE AGENCY, A CONTACT PERSON, AND PHONE NUMBER)

43. We would like to know your opinion about ways to immunize more Medicaid-enrolled children cost effectively. What suggestions do you have? (DESCRIBE BELOW.)

COST CONTROL

42. What cost control strategies, if any, does the state Medicaid program use to reduce payments for childhood immunizations?
(CHECK ALL THAT APPLY)

1. Vaccine replacement program under which vaccines are distributed to Medicaid providers on a replacement basis

2. Prudent purchasing agreements under which Medicaid obtains vaccines through the public health vaccine purchase order (under the CDC federal contract)

3. Medicaid-enrolled children receive immunization services at public health clinics

4. Other (PLEASE SPECIFY)

5. Do not use any other cost control strategies

COMMENTS

44. Thank you for taking the time to complete this survey. We would like your comments on this survey and in addition, what you believe the Federal government might do to improve the immunization procedures in your state. (COMMENT BELOW.)

HRD/LMM/6-11-91

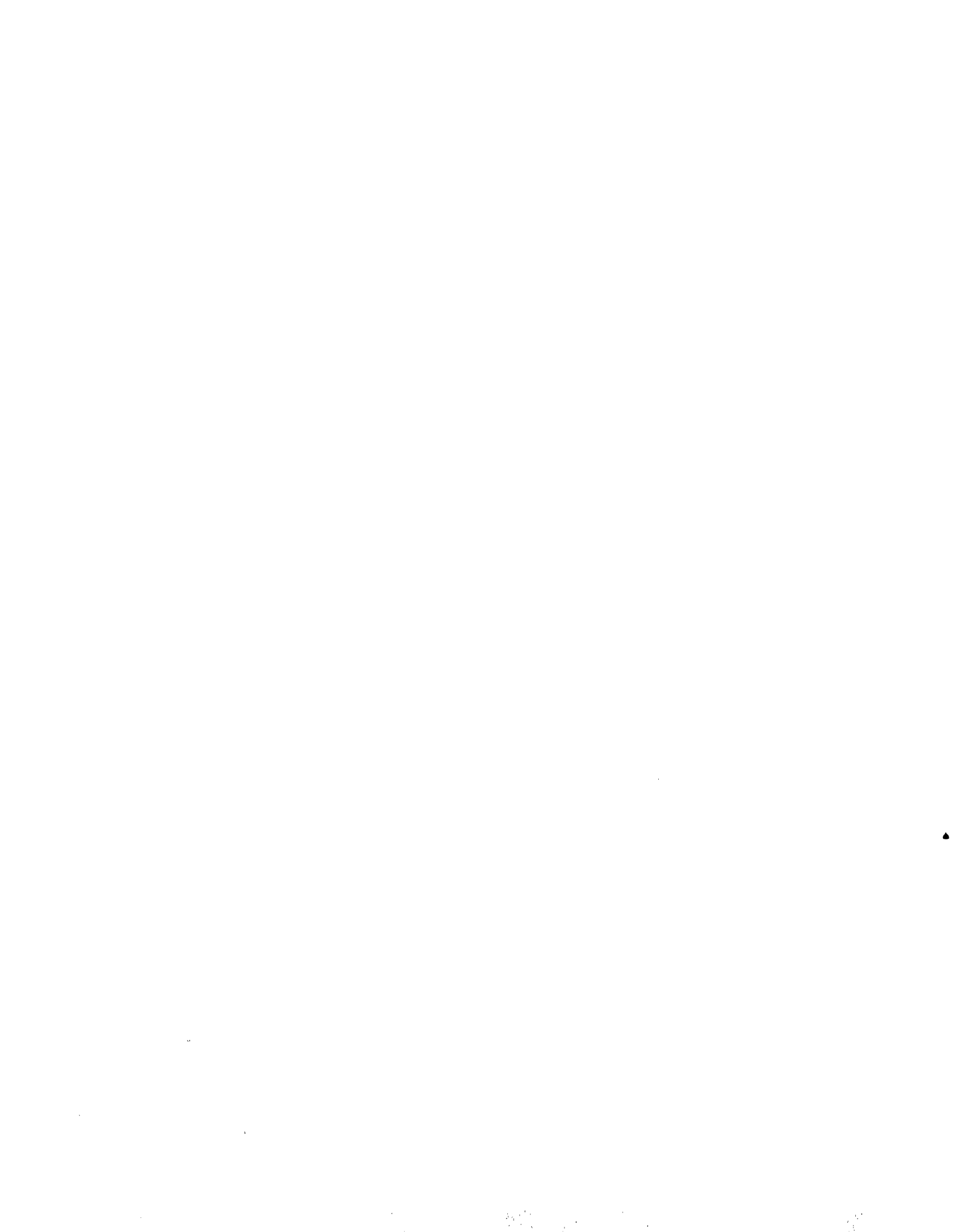
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