

**ALASKA LEGISLATURE COMMITTEE FILES 1991-1992 8672**

**7421 SENATE HEALTH EDUCATION & SOCIAL SERVICES**

Table 5. Percentage of Children with Employment-Related Insurance, by Income, 1977 and 1987

	1977	1987
All Children	72.8	62.9
Poor Children (a)	27.5	23.0
Low Income Children (b)	63.4	47.0
Middle Income Children (c)	83.6	79.0
Upper Income Children (d)	95.4	86.9

SOURCE: HIES and NMES. Calculations by the Children's Defense Fund.

- a. Incomes below federal poverty level.
- b. Incomes between 100 to 199 percent of federal poverty level.
- c. Incomes between 200 to 399 percent of federal poverty level.
- d. Incomes at 400 percent and above of federal poverty level.

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programs designed to help such families.

**Widespread childhood poverty.** By 1990 13.4 million children (one in five U.S. children) lived in poverty. Among children under age 6, poverty claimed nearly one in four: the number of preschoolers living in poverty rose from 3.4 million in 1979 to 5.4 million in 1990. Poor families typically are unable to pay even for their children's most basic health care needs.

**An increasing proportion of children without health insurance.** Between 1977 and 1987 the number of children with employer-based health insurance fell by nearly 3 million, with declines as high as 25 percent over this period in the case of low children in families with incomes between 100 and 199 percent of the federal poverty level (Table 5). Most of these families with no health insurance

for their children earned too much money to qualify for Medicaid coverage but were too poor to buy private insurance or pay for medical care out-of-pocket.

The exodus of private physicians from childhood vaccination activities. As families lost insurance, their incomes fell, and vaccine prices skyrocketed, they became less capable of paying rising out-of-pocket prices for vaccination services. Physicians cut back on or simply stopped offering the service and sent even long-time patients to public clinics. In testimony to the Physician Payment Review Commission in 1991, a physician from Pennsylvania reported widespread refusal by that state's pediatricians to furnish immunization services in their offices because of the high price to their patients. These physicians instead referred families to public clinics for services. In a recent study, 84 percent of pediatricians and 66 percent of family physicians reported referring at least some of their pediatric patients to public clinics for immunizations, citing the high cost of vaccines to both the patients and the doctors as the underlying cause.<sup>1</sup>

This would not have been so disruptive if the public clinics had been allocated increasing resources to meet the growing demand. But the growing dependence on public sources of childhood immunizations (and other health care) has not been met by sufficient increases in funding for the public system (Table 6).

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<sup>1</sup> Schulte, JM, et al., "Changing Immunization Referral Patterns Among Pediatricians and Family Practice Physicians, Dallas County, Texas, 1988," Pediatrics 87:204-207

Table 6. Funding for Programs to Immunize Children, 1981 to 1991

	MCH Block Grant	Community Health Centers	Immuniz- ation
1981	\$456.7	\$323.0	\$31.0
1982	373.8	281.2	34.6
1983	373.0	295.0	39.0
1984	398.0	337.0	41.9
1985	478.0	375.0	54.0
1986	457.0	396.0	56.9
1987	478.0	400.0	87.3
1988	526.6	382.9	98.0
1989	554.3	414.8	142.0
1990	553.6	458.9	156.2
1991	587.3	478.2	217.2
Increase 1981-1991	28%	48%	600%

SOURCE: Children's Defense Fund.

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Indeed, over the past decade, appropriations for public providers such as community and migrant health centers and child health clinics operated by local health agencies have declined significantly in real dollar terms. Between 1981 and 1991 federal funding for the community health centers program fell by 38 percent in constant 1981 dollars, while federal funding through the Title V Maternal and Child Health Services Block Grant for state health agencies services fell by 34 percent. A 1991 study by CDF of childhood immunization services at community health centers found that declining resources, the high cost of vaccines, the dramatic upsurge in demand from patients shifted from private providers, and the shortage of vaccines for health centers from the Public Health Service significantly impaired the vaccine capability of centers.

Table 7. Health Insurance Coverage Status of All Children Younger than 18, by Race/Ethnicity, 1990

	Total	Covered by Public or Private Insurance	Covered by Any Private Insurance	Covered by Employer- Based Insurance	Covered by Medicaid	Uninsured Throughout the Year
All Races						
Number	65,049	56,634	46,369	39,964	11,993	8,414
Percentage		87.1%	71.3%	61.4%	18.4%	12.9%
White						
Number	51,929	45,444	39,484	34,356	7,132	6,486
Percentage		87.5%	76.0%	66.2%	13.7%	12.5%
Black						
Number	10,162	8,695	4,954	4,048	4,201	1,467
Percentage		85.6%	48.8%	39.8%	41.3%	14.4%
Latino						
Number	7,457	5,344	3,356	2,893	2,237	2,113
Percentage		71.7%	45.0%	38.8%	30.0%	28.3%

Note: Persons of Latino origin may be of any race.

SOURCE: March 1991 Current Population Survey, Bureau of the Census.  
Calculations by the Children's Defense Fund.

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More than 70 percent of all reporting centers were experiencing vaccine shortages at the height of the measles epidemic and were without the resources to secure sufficient doses at the private purchase price.

Another potential safety valve as other immunization resources failed should have been Medicaid. In 1990 Medicaid was the primary or sole form of health insurance for 12 million children (Table 7), including 5.3 million children under age 6 -- nearly one-quarter of all young children. Virtually all children under age 6 with family incomes below 133 percent of the federal

poverty level are entitled to Medicaid as a result of major program expansions which occurred in the late 1980s. Unlike most private health insurers, Medicaid (through its special child health component known as Early and Periodic Screening, Diagnosis, and Treatment, or EPSDT) covers all medically necessary childhood immunizations. Therefore, virtually all young children who are poor should now be able to gain access to childhood immunizations through Medicaid.

If Medicaid provided sufficient access to private providers or adequate reimbursement to public providers, that would relieve many of the key supply and resource pressure points in the rest of the system and assure immunization of poor infants, toddlers, and preschoolers. Yet a series of official investigations of the measles outbreaks in large urban areas (where the proportion of Medicaid enrolled children is especially high) point to high numbers of inadequately immunized Medicaid children. In a study of measles outbreaks in Dallas, Milwaukee, Chicago, Los Angeles and New York City, the Centers for Disease Control found that between 40 and 91 percent of preschoolers who contracted the disease received some form of federal assistance. In Milwaukee at least 86 percent of the preschool measles cases occurred among children entitled to Medicaid. Similarly, 60 percent of the cases in Los Angeles, 75 percent of the cases in New York, and 22 percent of the cases in Dallas occurred among children entitled

to Medicaid benefits.<sup>2</sup>

These studies show that despite its theoretical guarantee of coverage, Medicaid in practice does not adequately assure access to vaccination services. Explanations of Medicaid's poor performance have included: very low rates of private provider acceptance of Medicaid patients (all of the cities studied by the CDC also suffer severe shortages of health care personnel for poor and minority residents)<sup>3</sup>; inadequate support from Medicaid and other sources of funding for private and public providers furnishing vaccination services in inner cities; and the failure of heavily Medicaid-financed health maintenance organizations and other managed care plans located in these areas and enrolling Medicaid-eligible women and children to do an adequate job of immunizing children.

The survey set out to determine whether depressed levels of financial support from Medicaid for childhood immunization services could be underlying each of these causes. The Medicaid program has long been cited for its failure to pay adequately for physician and hospital services. Expert bodies such as the Congressionally established Physician Payment Review Commission (PPRC) have pointed to depressed reimbursement as a major factor

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<sup>2</sup> National Vaccine Advisory Committee, The Measles Epidemic: Problems, Barriers and Recommendations (U.S. Public Health Service, January, 1991)

<sup>3</sup> Indeed, the exceedingly long waits for child health services at the clinics and hospitals serving these neighborhoods belie the notion that families have somehow lost interest in securing health care for their children.

in low provider participation in the program in general.

In 1990, the federal Medicaid law was amended to require states to set reasonable Medicaid payment levels for services furnished by obstetrical and pediatric providers.<sup>4</sup> No study, however, has been conducted which specifically examines how Medicaid pays for childhood immunization services and whether payment levels are reasonable. For that reason, CDF, with support from the Robert Wood Johnson Foundation, undertook this study in the fall of 1991.

CDF contacted Medicaid agencies in 49 states and the District of Columbia and examined state agency manuals and documents pertaining to coverage of immunization services for children.<sup>5</sup> Written state responses to a pre-tested survey instrument were followed up with telephone interviews in any cases in which responses were unclear. Information was sought regarding both the types of vaccines covered and agencies' schedules of timing or periodicity of immunizations as well as state payment levels for vaccines and their administration. 48 states and the District of Columbia responded to our survey.

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<sup>4</sup> This new reasonable payment requirement does not specifically refer to immunization services furnished by these providers, although such services are normally furnished as an incident to a physician office visit. To date, the Health Care Financing Administration (the federal agency which administers Medicaid) has found numerous states out of compliance with these new payment requirements, but seems to be making no findings regarding immunization payment practices.

<sup>5</sup> Arizona was not included in the survey because nearly all Medicaid beneficiaries in the state are enrolled in managed care programs and vaccination costs cannot be broken out.

FINDINGS OF THE STUDY: STATE MEDICAID REIMBURSEMENT FOR VACCINATION SERVICES IS INADEQUATE TO PROVIDE IMMUNIZATIONS TO CHILDREN, AND CONTRIBUTES BOTH TO LOW IMMUNIZATION RATES AND THE RISING BURDEN ON INADEQUATE PUBLIC HEALTH RESOURCES

Coverage and frequency of vaccines and immunization services: Every state covers all the vaccines routinely recommended at the time of the survey -- measles, mumps, and rubella (MMR), diphtheria, tetanus, and pertussis (DTP), oral polio vaccine (OPV), and haemophilus influenza B (HiB). State Medicaid immunization schedules also conformed to recommended standards of practice.

Since the survey was conducted, the Immunization Practices Advisory Committee to the CDC recommended that all children receive vaccination against hepatitis B. The FDA also licensed a new acellular pertussis antigen to be used in the third and fourth dose of the DTP series. Though the two recommendations have been anticipated for over a year, only a few state Medicaid programs reported knowing that such changes were forthcoming. Every state Medicaid program must revise its immunization coverage to conform to the new recommendations.

Payment for vaccination services: While states in theory cover adequate immunization services, compelling evidence of inadequate payment for such services came from the survey, explaining why the theoretical coverage often did not translate to access.

In assessing the adequacy of state payment levels for

vaccination services, two separate factors must be considered. The first is the level of reimbursement for the vaccine itself -- in effect, the cost of the antigen. The second is the level of reimbursement for the actual administration of the vaccine by the provider. This includes the provider's time to recall and remind families for immunizations, to administer the vaccines, and to inform families regarding possible adverse effects, as well as the cost of the supplies (e.g., syringes, cotton balls, and bandages) needed to administer the vaccine. The tables reflect state reimbursement levels for both vaccine purchase and administration costs.

In paying for these vaccination services, state Medicaid programs can take several different approaches. The first is to participate in a statewide system under which all vaccines are distributed or made available free of charge to all physicians and clinics and other pediatric providers serving children regardless of insurance status. Under this system, parents or public or private health insurers would pay directly only for the cost of administration. A version of the system, which we term a universal distribution system, is used in 13 states (Alaska, Connecticut, Hawaii, Kentucky, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, Rhode Island, Vermont, Washington, and Wyoming) for at least one type of vaccine. Several states with universal vaccine distribution systems have insufficient resources to assure year-round availability of all the routinely used vaccines.

Under a universal system, a state health department purchases supplies of vaccine directly from the manufacturers at a special discounted price (known as the "contract price"). (In one case, the state manufactures a vaccine.) The contract prices are those negotiated by the federal Centers for Disease Control with vaccine manufacturers under the federal immunization grants program (which supplies approximately 25 percent of all doses of childhood vaccines furnished in the U.S.). State health agencies wishing to do so are permitted under the federal CDC contract to purchase additional doses of vaccine (over and above vaccine allocations received from CDC) directly from manufacturers at the contract price.

A universal distribution system assures lower cost vaccine for all families in a state, since the federal contract price for vaccines is far less than the lowest prices available private providers (Table 8). The private purchase prices are known as the "catalog" prices. They reflect the cost of purchasing vaccines in small quantities directly from manufacturers at unnegotiated prices. Oftentimes, physicians rely on intermediary pharmaceutical distributors and pay even higher costs.

A second approach is for the Medicaid agency to arrange with the health department to purchase vaccines at the federal contract price and to distribute the vaccine to Medicaid providers. Providers administer immunizations to Medicaid

Table 3. Federal Vaccine Price Discount, 1991

<u>Vaccine</u>	<u>Private Catalog Price</u>	<u>Federal Contract Price</u>	<u>Savings Per Dose</u>	<u>Percentage Discount</u>
OPV	\$9.45	\$2.0014	\$7.45	79%
DTP	\$9.97	\$6.245	\$3.73	37%
MMR	\$25.29	\$15.329	\$9.96	39%
HiB (Lederle)	\$14.55	\$5.16	\$9.39	65%

SOURCE: Centers for Disease Control.

patients and receive vaccines to replace the quantities used to immunize Medicaid-covered children rather than monetary reimbursement. We term this system a vaccine replacement system. Eight states (Illinois, Kansas, Michigan, Mississippi, Nevada, Ohio, South Carolina, and Texas) offer Medicaid vaccine replacement rather than financial reimbursement to providers. It has some of the cost containment benefits of the universal system since the Medicaid agency pays lower prices for the vaccines needed for Medicaid-covered children. There are two drawbacks. First, Medicaid vaccine replacement systems do not leverage lower vaccine costs for all children regardless of their income or insurance status. Second, vaccine replacement requires providers to lay out the initial funds for the vaccines and then wait for replacement supplies from the health department paid for by the Medicaid agency. Given the relatively high price of vaccines and the frequently long delays between provider expenditures and Medicaid vaccine replacement, providers may view these "carrying costs" as a reason not to furnish vaccines to some or all Medicaid patients. However, the vaccine replacement system does

assure that Medicaid programs pay the lowest possible price for vaccines to immunize Medicaid-covered children.

A third approach to paying for immunization services is reimbursement to providers in the traditional fee-for-service approach. This is the most costly system for a state to operate and has the biggest impediments to provider participation, so all parties lose out. Under reimbursement systems, providers are left to secure vaccines at private retail prices, with no discounted acquisition or supply arrangements developed by the Medicaid agency. Providers then bill Medicaid for the vaccination services they furnish and wait weeks (or even months) to be paid for their services. These providers experience the greatest immunization carrying costs, and the Medicaid agencies in these states would pay the highest prices for vaccinations.

Despite the cost of this approach and the disincentives to provider participation in Medicaid vaccine programs which this reimbursement system undoubtedly creates, only 20 states use either a universal distribution or Medicaid replacement system for one or more vaccines<sup>6</sup> (Table 9).

The fee-for-service approach would in theory require states to pay two to three times more per vaccine dose than do the distribution systems, plus the normal costs of office visits and

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<sup>6</sup> Even in those states with a cost efficient vaccine distribution program, reimbursement rates are important, since vaccines distributed at no charge frequently run out because of state funding shortfalls and providers must rely on fee-for-service reimbursements when they immunize Medicaid patients. States that use a fee-for-service backup for their distribution systems are included in Tables 10-12.

Table 9. State Vaccine Payment Systems

State	Vaccine Payment System
Alabama	Fee-for-service
Alaska	Universal
Arkansas	Fee-for-service
California	Fee-for-service
Colorado	Fee-for-service
Connecticut	Universal
D.C.	Fee-for-service
Delaware	Fee-for-service
Florida	Fee-for-service
Georgia	Fee-for-service
Hawaii	Universal
Idaho	Fee-for-service
Illinois	Vaccine Replacement
Indiana	Fee-for-service
Iowa	Fee-for-service
Kansas	Vaccine Replacement
Kentucky	Universal
Louisiana	Fee-for-service
Maine	Universal
Maryland	Fee-for-service
Massachusetts	Universal
Michigan	Vaccine replacement/Universal for DTP
Minnesota	Universal
Mississippi	Vaccine Replacement
Missouri	Fee-for-service
Montana	Fee-for-service
Nebraska	Fee-for-service
Nevada	Vaccine Replacement
New Hampshire	Universal
New Jersey	Fee-for-service
New Mexico	Fee-for-service
New York	Fee-for-service
North Carolina	Fee-for-service
North Dakota	Fee-for-service
Ohio	Vaccine Replacement
Oklahoma	Fee-for-service
Oregon	Fee-for-service
Pennsylvania	Fee-for-service
Rhode Island	Universal
South Carolina	Vaccine Replacement
South Dakota	Fee-for-service
Tennessee	Fee-for-service
Texas	Vaccine Replacement
Utah	Fee-for-service
Vermont	Universal
Virginia	Fee-for-service
Washington	Universal
West Virginia	Fee-for-service
Wisconsin	Fee-for-service
Wyoming	Universal

NOTE: States with universal vaccine programs may distribute only limited supplies of vaccine to private physicians.

SOURCE: Children's Defense Fund.

administration. Unfortunately, if unsurprisingly, the fee-for-service states have responded to the high and rising immunization costs they are imposing on themselves through these systems by limiting reimbursement to levels that are so low they interfere with the delivery of immunizations.

In virtually every state that uses a fee-for-service system of vaccine payment, the 1991 Medicaid reimbursement rate was well below the usual, customary, and reasonable (UCR) price of immunizing children. The UCR charge reflects the typical charge billed by private physicians for a service on a fee-for-service basis.<sup>7</sup> Table 10 compares each state's total Medicaid reimbursement rate (vaccines plus administration fees) to the usual, customary, and reasonable (UCR) fee for 4 different vaccines -- \$44 for measles, mumps, and rubella (MMR); \$22 for oral polio vaccine (OPV); \$34 for diphtheria, pertussis and tetanus (DTP); and \$25 for haemophilus influenza B (HiB).

Not a single state paid the UCR for all vaccines, and only one state (Oregon) paid 85% or better of the UCR for each of the vaccines. The average DTP payment was just 53 percent of the UCR charged by private physicians. Twenty-seven states paid less than 60 percent of UCR charges for diphtheria, tetanus and pertussis vaccination. Oral polio vaccine and measles, mumps, and rubella immunizations were reimbursed an average of 67 and 72 percent of UCR fees, respectively. Twelve states reimbursed for

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<sup>7</sup>Actuarial Research Corporation. Premiums for Preventive Pediatric Care Recommended by the American Academy of Pediatrics. February 1991.

Table 10. Medicaid Vaccine Payments, 1991.

	Reimbursement for Vaccine and Administration				Reimbursement as a Percentage of UCR Fee			
	DTP	OPV	MMR	HiB	DTP	OPV	MMR	HiB
Alabama	\$16.84	\$17.64	\$36.61	\$12.53	50%	80%	83%	50%
Alaska	--	--	--	--	--	--	--	--
Arkansas	\$18.00	\$16.20	\$34.64	\$20.00	53%	74%	79%	80%
California	\$16.78	\$16.50	\$28.61	\$19.07	49%	75%	65%	76%
Colorado	\$17.90	\$20.19	\$33.35	\$20.11	53%	92%	76%	80%
Connecticut	--	--	--	\$20.00	--	--	--	80%
D.C.	\$23.02	\$17.56	\$34.91	\$35.37	68%	80%	79%	141%
Delaware	\$10.25	\$10.80	\$27.25	\$15.25	30%	49%	62%	61%
Florida	\$15.03	\$10.81	\$31.14	\$16.50	44%	49%	71%	66%
Georgia	\$10.83	\$10.84	\$24.30	\$14.10	32%	49%	55%	56%
Hawaii	\$10.08	\$10.48	\$18.74	\$17.19	30%	48%	43%	69%
Idaho	\$19.00	\$17.00	\$33.00	\$20.43	56%	77%	75%	82%
Illinois	--	--	--	--	--	--	--	--
Indiana	\$16.00	\$14.93	\$33.03	\$22.90	47%	68%	75%	92%
Iowa	\$24.33	\$16.21	\$34.52	\$22.42	72%	74%	78%	90%
Kansas	--	--	--	--	--	--	--	--
Kentucky	\$8.99	\$2.26	\$17.32	\$5.83	26%	10%	39%	23%
Louisiana	\$18.00	\$18.00	\$35.00	\$22.00	53%	82%	80%	88%
Maine	--	--	--	--	--	--	--	--
Maryland	\$15.70	\$11.04	\$29.59	\$17.00	46%	50%	67%	68%
Massachusetts	--	--	--	--	--	--	--	--
Michigan	--	--	--	\$22.20	--	--	--	89%
Minnesota	\$13.29	\$13.47	\$30.77	\$18.94	39%	61%	70%	76%
Mississippi	--	--	--	--	--	--	--	--
Missouri	\$24.00	\$16.65	\$36.75	\$23.50	71%	76%	84%	94%
Montana	\$17.72	\$17.31	\$29.60	\$18.40	52%	79%	67%	74%
Nebraska	\$20.21	\$21.01	\$23.21	\$28.36	59%	96%	53%	113%
Nevada	\$11.13	\$11.13	\$11.13	\$11.13	33%	51%	25%	45%
New Hampshire	\$17.00	\$11.00	\$33.00	\$17.00	50%	50%	75%	68%
New Jersey	\$16.34	\$14.44	\$39.87	\$25.79	48%	66%	91%	103%
New Mexico	\$20.00	\$15.00	\$36.00	\$47.98	59%	68%	82%	192%
New York	\$13.84	\$15.28	\$37.75	\$22.00	41%	69%	86%	88%
North Carolina	\$20.14	\$19.71	\$41.24	\$34.09	59%	90%	94%	136%
North Dakota	\$31.50	\$12.95	\$32.50	\$25.50	93%	59%	74%	102%
Ohio	--	--	--	\$20.62	--	--	--	82%
Oklahoma	\$16.00	\$5.18	\$32.00	\$17.90	47%	24%	73%	72%
Oregon	\$28.81	\$24.87	\$39.07	\$30.33	85%	113%	89%	121%
Rhode Island	--	--	--	--	--	--	--	--
South Carolina	--	--	--	--	--	--	--	--
South Dakota	\$18.09	\$17.02	\$39.03	\$12.50	53%	77%	89%	50%
Tennessee	\$20.45	\$14.60	\$36.95	\$24.00	60%	66%	84%	96%
Texas	--	--	--	--	--	--	--	--
Utah	\$21.72	\$19.19	\$37.12	\$21.40	64%	87%	84%	86%
Vermont	--	--	--	--	--	--	--	--
Virginia	\$17.91	\$11.72	\$29.97	\$18.45	53%	53%	68%	74%
Washington	--	--	--	--	--	--	--	--
West Virginia	\$15.00	\$10.00	\$25.00	\$13.80	44%	45%	57%	55%
Wisconsin	\$22.30	\$17.61	\$36.44	\$24.85	66%	80%	83%	99%
Wyoming	--	--	--	--	--	--	--	--
Average	\$17.92	\$14.75	\$31.84	\$21.08	53%	67%	72%	84%

NOTE: A "--" indicates that all the vaccines used for Medicaid patients are bulk purchased.

oral polio vaccine at severely depressed levels, less than 60 percent of UCR, and 6 states paid less than 60 percent of UCR charges for measles, mumps, rubella vaccine. HiB payments were the highest, averaging 84 percent of UCR charges, yet six states paid severely depressed rates.

States showed a wide variation in reimbursements for individual vaccines plus administration fees. For example, diphtheria, tetanus, rubella vaccine (DTP) reimbursements ranged from \$8.99 in Kentucky to \$31.50 in North Dakota. Oral polio vaccine (OPV) payments varied from \$2.26 in Kentucky and \$5.18 in Oklahoma to \$24.87 in Oregon. Nevada pays just \$11.13 for MMR vaccine, while North Carolina pays \$41.27. HiB vaccine payments showed the greatest variations, from \$5.83 in Kentucky to \$47.98 in New Mexico.

Several states actually reimburse physicians for immunization services at a rate less than the cost of the vaccine alone. Kentucky's reimbursements for each of the four routine vaccines fell below the catalog price. Nevada and West Virginia set reimbursements for measles, mumps, and rubella (MMR) and meningitis (HiB) vaccines below cost. Georgia, Hawaii and Nebraska pay less than the cost of vaccine for measles, mumps, and rubella immunizations. Similarly, South Dakota has Medicaid vaccination fees set below the cost of vaccine for HiB. And Oklahoma pays below the catalog price for polio vaccine.

The adequacy of payments also varied between antigens within states. For example, New Mexico pays less than 60 percent of the

Table 11. EPSDT Exams and Immunization Followup Visit Payments

State	EPSDT Exam Fee	Pays for Immunization Followup
Alabama	\$35	No
Alaska	N/A	Yes
Arkansas	35	No
California	50	No
Colorado	38	Yes
Connecticut	23	Yes
D.C.	30	Yes
Delaware	N/A	No
Florida	30	Yes
Georgia	38	Yes
Hawaii	N/A	Yes
Idaho	39	Yes
Illinois	30	Yes
Indiana	20	Yes
Iowa	22	Yes
Kansas	37	Yes
Kentucky	12	No
Louisiana	65	Yes
Maine	35	Yes
Maryland	49	No
Massachusetts	45	Yes
Michigan	53	No
Minnesota	87	Yes
Mississippi	N/A	Yes
Missouri	28	No
Montana	38	No
Nebraska	45	No
Nevada	50	No
New Hampshire	25	No
New Jersey	23	Yes
New Mexico	38	Yes
New York	29	Yes
North Carolina	45	No
North Dakota	N/A	No
Ohio	31	Yes
Oklahoma	25	No
Oregon	26	Yes
Pennsylvania	34	Yes
Rhode Island	20	Yes
South Carolina	35	Yes
South Dakota	25	Yes
Tennessee	34	No
Texas	27	Yes
Utah	29	Yes
Vermont	25	Yes
Virginia	19	Yes
Washington	N/A	Yes
West Virginia	22	No
Wisconsin	29	Yes
Wyoming	35	Yes

SOURCE: EPSDT fees are from MManus M., Flint S. and Kelly R. "The Adequacy of Physicians Reimbursement for Pediatric Care Under Medicaid." Pediatrics. 87:909. "N/A" indicates that data were not available.

usual and customary fee for diphtheria, tetanus, and pertussis (DTP) vaccine, but nearly double the UCR charge for HiB vaccine. Similarly, Nebraska pays over 90 percent of the UCR for polio and HiB vaccines, but less than 60 percent of UCR fees for diphtheria, tetanus, and pertussis (DTP) and measles, mumps, and rubella (MMR) vaccines.

One explanation for low vaccine reimbursement levels is the infrequent review of payments by state Medicaid agencies. Few states have a system to review the adequacy of payments on a regular basis. Consequently, payments fall behind increased provider costs and become less and less sufficient over time. This is evidenced by the comparatively higher payments for the relatively new HiB vaccine compared to the long-used OPV and DTP vaccines.

Another explanation is that state budgets are under considerable pressure, so states often cut corners -- and cut them deeply -- on provider reimbursements in Medicaid. In the immunization system, however, this is doubly self-defeating. First, immunizations are incredibly cost-effective for Medicaid programs and the health care system as a whole. Creating barriers to vaccination imposes very large long-term costs on the state and private insurers. Second, states that pay insufficient reimbursement for vaccination services in a fee-for-service model still are paying far more than they would if they distributed lower-cost bulk purchased vaccines and increased payment for administration costs to encourage delivery of the vaccines.

In addition to the problem of inadequate reimbursement for immunization is the problem of inadequate reimbursement for followup immunization visits. Frequently immunizations may be contraindicated during an office visit. For example, a child might be sick on the day when she is examined by a physician and found to need a vaccination. Or the child may not have the temperament to receive three or four vaccinations at a single visit. Table 11 sets forth both states' Medicaid payment for basic well-child visits, as well as state payment policies for follow up visits to complete a child's vaccinations.

Not only are comprehensive well-child visits under EPSDT reimbursed too low to begin with, but 17 states do not allow providers to bill a minimal office visit charge (generally less than \$15) when a second visit must be scheduled to complete a child's immunization series. These 17 states assume that providers will absorb the followup costs to recall a child for an immunization-only visit within the depressed EPSDT visit fee. In reality, it is as likely that a private physician will simply refer these children to a public clinic rather than bear the uncompensated cost of rescheduling a second office visit.

Table 12 graphically displays the Medicaid shortfall for a 15-month-old's typical vaccination series. At age 15 months all children should receive doses of DTP, MMR, HiB, and OPV. The total UCR for these vaccinations would be about \$125. In 10 states, total payment would be less than 60 percent of the UCR, with one state underpaying as much as \$90.60 for a \$125 visit.

Table 12. Reimbursement at 15 Month Visit

	Medicaid Payment	Percent of UCR Charge	Underpayment
Alabama	\$73.62	58.9%	\$51.38
Alaska	--	--	--
Arkansas	\$88.84	71.1%	\$36.16
California	\$80.96	64.8%	\$44.04
Colorado	\$91.55	73.2%	\$33.45
Connecticut	--	--	--
D.C.	\$110.86	88.7%	\$14.14
Delaware	\$63.55	50.8%	\$61.45
Florida	\$73.48	58.8%	\$51.52
Georgia	\$60.07	48.1%	\$64.93
Hawaii	\$56.49	45.2%	\$68.51
Idaho	\$89.43	71.5%	\$35.57
Illinois	--	--	--
Indiana	\$86.86	69.5%	\$38.14
Iowa	\$97.48	78.0%	\$27.52
Kansas	--	--	--
Kentucky	\$34.40	27.5%	\$90.60
Louisiana	\$93.00	74.4%	\$32.00
Maine	--	--	--
Maryland	\$73.33	58.7%	\$51.67
Massachusetts	--	--	--
Michigan	--	--	--
Minnesota	\$76.47	61.2%	\$48.53
Mississippi	--	--	--
Missouri	\$100.90	80.7%	\$24.10
Montana	\$83.03	66.4%	\$41.97
Nebraska	\$92.79	74.2%	\$32.21
Nevada	\$44.52	35.6%	\$80.48
New Hampshire	\$78.00	62.4%	\$47.00
New Jersey	\$96.44	77.2%	\$28.56
New Mexico	\$118.98	95.2%	\$6.02
New York	\$88.87	71.1%	\$36.13
North Carolina	\$115.18	92.1%	\$9.82
North Dakota	\$102.45	82.0%	\$22.55
Ohio	--	--	--
Oklahoma	\$71.08	56.9%	\$53.92
Oregon	\$123.08	98.5%	\$1.92
Rhode Island	--	--	--
South Carolina	--	--	--
South Dakota	\$86.64	69.3%	\$38.36
Tennessee	\$96.00	76.8%	\$29.00
Texas	--	--	--
Utah	\$99.43	79.5%	\$25.57
Vermont	--	--	--
Virginia	\$78.05	62.4%	\$46.95
Washington	--	--	--
West Virginia	\$63.80	51.0%	\$61.20
Wisconsin	\$101.20	81.0%	\$23.80
Wyoming	--	--	--
Average	\$85.60	58.5%	\$39.40

NOTE: A "--" indicates that all the vaccines used for Medicaid patients are bulk purchased.

On average, a private physician must accept nearly \$40 less to provide needed immunizations to a 15-month-old child enrolled in Medicaid than for a similar privately-insured child.

Moreover, this table may understate the magnitude of the shortfall. Because multiple inoculations are required at age 15 months, many parents or physicians may insist on more than one visit to fully immunize a child. As a result, the shortfall for a particular state shown on Table 12 does not take into account the added burden on providers of the denial of reimbursement by some states for an office visit when the vaccination is provided during a follow-up visit.

The low Medicaid reimbursement rates for immunization services and the absence of followup visit fees lead to serious vaccination access problems.<sup>8</sup> Combined with generally depressed reimbursements for primary care services, insufficient payment for immunization services may push a pediatric provider out of Medicaid completely. More commonly, the low payment levels lead providers to cease offering immunization services to Medicaid-enrolled children and routinely refer their patients to public

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<sup>8</sup> These figures also suggest that in states using managed care plans, payment may be particularly depressed. In states that use either capitated or fee-for-service managed care arrangements, capitation payments (all inclusive monthly payments for services) and fee-for-service reimbursement rates are set at less than historic Medicaid reimbursement levels as a cost-savings measure. The data indicate that Medicaid payments for immunization services are already substantially depressed in all states but one. Further cuts in the reimbursement levels for managed care programs increase the likelihood that managed care plans will seek to avoid provision of a relatively expensive pediatric service because they are being poorly reimbursed for it.

immunization clinics. The result is that Medicaid-covered children get pushed into an already overwhelmed public health system that cannot meet their needs and safety net health services deteriorate even further for both Medicaid-eligible and other children. For children, the consequence is that more and more fall through the cracks and fewer and fewer receive protection against preventable disease.

Yet, some policymakers are intent on blaming families and refuse to identify and eliminate these systemic barriers to immunization services. For example, Maryland, which has proposed to reduce AFDC benefits to families who do not manage to immunize their children, pays providers between 46 percent and 68 percent of the UCR for their immunization services and does not reimburse for a follow-up visit at all if immunizations at the first visit are contraindicated. Given the enormous financial barrier to providers immunizing Medicaid-enrolled children in Maryland, it is unlikely such a punitive program is a reasonable approach to improving the immunization status of the state's children.

If the typical state purchased the vaccines at the federal discount price it would save nearly \$30 at the 15-month visit. Savings of that magnitude would allow a state to increase vaccine administration fees to \$10 per dose for a total of \$40 for the 15-month visit and still expend 10 percent less than current immunization expenditures. For example, New York pays providers \$13.28 per dose of oral polio vaccine plus \$2 per dose for administration of the vaccine for a total of \$15.28, just 69

percent of the UCR fee. The low payment represents a significant barrier for private physicians to offer polio immunization to the state's 1 million Medicaid-enrolled children. Yet in the neighboring New England states, vaccines are distributed free of charge to private providers at a cost to the state of only \$2 per dose of polio plus administration costs. In essence, New York discourages private physicians from immunizing Medicaid-enrolled children and pays \$11 more per dose for the privilege. If New York converted to a vaccine distribution system, its Medicaid program could increase the administration fee paid to providers to \$10 per dose, thereby encouraging actual delivery of vaccines, and still save \$3 for every dose of polio vaccine administered plus the costs of treating cases of disease prevented by higher immunization levels. When Ohio converted from a fee-for-service approach to a Medicaid vaccine replacement system, it saved \$3.3 million in the course of three years.

With vaccine distribution programs and improved immunization administration fees, more providers would participate in Medicaid, and more Medicaid providers would offer immunizations services. With an adequate supply of private Medicaid providers, pressure would be relieved from public clinics and barriers to vaccinations would be removed for millions of children.

## CONCLUSION AND RECOMMENDATIONS

Skyrocketing vaccine costs have made the cost of basic immunizations almost prohibitive to middle class families and very expensive to public and private insurers. Yet instead of instituting aggressive, readily available steps to control the price of vaccines, get vaccines to all health providers through a bulk purchase system, and pay reasonable administration fees, most states have elected to simply allow their Medicaid reimbursement rates to fall far behind the cost of immunizing children on a fee-for-service basis. The result is widespread non-participation in Medicaid programs by private physicians, and another flood of children to under-funded public providers, already faced with the diversion of uninsured or privately insured children. The public programs do not have enough free vaccine and when they depend on Medicaid to repay their costs for Medicaid recipients, they too are under-reimbursed. In the end, parents are blamed by leaders who do not understand the problem, because casting blame on poor families almost always is so much easier than fixing systems.

But this system is unusually easy to fix. The ready answer to the problem lies in establishing universal vaccine programs at the state level. Funded through general funds and other special taxes (for example, small taxes levied on all hospitals, physicians, and payments by Medicaid agencies and insurers who otherwise would have to pay higher catalog rates for vaccines), a universal bulk purchase program administered by a state health

department could secure all the vaccines a state needs at the CDC contract price, leaving parents, Medicaid agencies and insurers responsible for a reasonable administration fee only. In many states, the savings from Medicaid alone could account for much of the funding needed to operate a universal vaccine distribution system.

Medicaid savings could also be invested in more reasonable reimbursement rates and increased support to private and public providers for administration of vaccines and, ideally, other primary care services. Insufficient reimbursement levels discourage participation in the Medicaid program, and without a sufficient number of providers willing to serve Medicaid-enrolled children, a Medicaid card becomes practically useless for millions of children.

Because of the enormous cost-effectiveness of immunization services, Congress should encourage states to improve their immunization systems. Medicaid programs should be required to implement vaccine replacement systems, at a minimum. Federal grants for states to start-up vaccine distribution systems could pay for themselves through reduced Medicaid costs. Incentives could include enhancing federal financial participation for Medicaid immunization services to 90 percent to encourage better payments to providers. Another companion approach to assist states and localities would be to expand the CDC's childhood immunization program to provide resources for administering immunizations to children. The current program provides help for

vaccine costs and only limited assistance for the doctors and nurses needed to administer the vaccines. Expanded funding would allow state and local public health programs to develop innovative outreach strategies and more accessible clinic hours and locations.

While a universal vaccine distribution system can be established by any state alone, it is one that should be established for every state and for every family. All the necessary vaccines for American children could be purchased by the Centers for Disease Control and distributed free of charge to all health care providers in the country. Considering that over a quarter of all vaccines are paid for by the federal government and another quarter is purchased by states, creating a universal vaccine program is a logical next step towards eliminating preventable childhood diseases in the nation.

Physicians and clinics could continue to be reimbursed for administration activities by parents and public and private insurance plans (or alternatively, through an additional per-child administration payment made directly by CDC or a state health agency). A universal vaccine initiative should be coupled with resources for doctors and nurses to administer immunizations and other primary health care services and to provide outreach and parent education, especially in medically underserved areas. Such reforms could be instituted, for approximately \$500 million more in funding in the first year, with ongoing support coming from the health insurers and providers that will realize major

short term and long term savings from this type of system. In the end the new system would more than pay for itself.

The advantages of a universal vaccine program include better controlled costs and the guarantee that no American child will be denied immunizations because of cost. Coordinated vaccine purchasing and distribution systems are used even in many countries that otherwise maintain an insurance approach to payment for services. These nations recognize that immunizations are such a crucial public health activity and the purchase of the vaccine such a large portion of the cost of the service that the financing and distribution of childhood vaccines cannot be left to normal market forces.

This nation is in the midst of a terrible immunization crisis that cannot and need not wait for a full-blown national health plan before being resolved. Vaccines are incredibly cost-effective, saving between \$10 and \$14 for every dollar spent. Each day we delay an overhaul of state and national vaccine programs and choose instead to blame and punish parents for events far beyond their control brings us a step closer to the next epidemic, which experts say surely will come. This is a problem that national and state leaders can tackle and beat today, leaving both children, and the national health budget, far better off for their efforts.

**4 AAC 06.050. PHYSICAL EXAMINATIONS OF SCHOOL EMPLOYEES.** (a) Physical examinations shall be required for all regularly employed teachers, other employees, custodians, and clerical personnel, except those whose work does not bring them into close contact with pupils, upon initial employment by a district. A reexamination shall be required every three years for all employees. A district may require a physical or other examination at any time or at more frequent intervals at its expense.

(b) District boards shall determine which employees, if any, are exempt from the physical examination requirements.

(c) These regulations shall not be construed as exempting employees from taking physical examinations required by other regulations or law — i.e., food handlers, bus drivers, etc.

(d) Repealed 6/10/83.

(e) Each employee of a school district or private elementary or secondary school shall obtain a tuberculin skin test annually in the manner required by AS 18.15.145. (Eff. 10/9/66, Register 24; am 10/10/69, Register 29; am 5/30/71, Register 38; am 7/9/72, Register 42; am 10/4/73, Register 47; am 5/10/78, Register 66; am 6/10/83, Register 86; am 8/30/86, Register 99)

Authority: AS 14.07.020(7)  
AS 14.07.060  
AS 18.15.145

Editor's notes. — The history note that appeared under 4 AAC 06.050 before Register 86 (July 1983) was found to be incorrect. With the distribution of that register, the note has been corrected.

**4 AAC 06.055. IMMUNIZATIONS REQUIRED.** (a) Prior to first entry in an Alaska public school district or nonpublic school offering pre-elementary education through the 12th grade, or any combination of these grades, a child shall be immunized against diphtheria, tetanus, polio, pertussis, measles and rubella, except that pertussis is not required in children over six and rubella is not required in children 12 years or older

(b) This section does not apply if the child

(1) has a valid immunization certificate defined as

(A) an international immunization certificate; or

(B) a statement by a physician listing the dates of immunizations; or

(C) a copy of clinic or health center record showing the immunization requirement has been fulfilled;

(2) has an affidavit signed by a physician (M.D.) or osteopath (D.O.) licensed to practice in Alaska affirming his opinion that immunization would be injurious to the health and welfare of the child or members of his family or household;

(3) has an affidavit signed by his parent or guardian affirming that immunization conflicts with the tenets and practices of the church or religious denomination of which the applicant is a member.

(c) A student registering in a school in a community where regular medical services are not available on at least a weekly basis and who does not have the required immunizations, may be provisionally admitted to a pre-elementary, elementary or secondary program for a reasonable period of time for the prevailing circumstances but not exceeding 90 days after enrollment. No children will be provisionally admitted except in exceptional circumstances. Where exceptions are granted, they shall be reported to and discussed with the Communicable Disease Section of the Division of Public Health, Department of Health and Social Services, who will then be responsible for determining that the required immunizations are completed during the provisional period.

(d) If a parent or guardian is unable to pay the cost of immunization, or immunization is not available in the district or community, immunization shall be provided by state or federal public health services.

(e) Immunizations shall be recorded on each pupil's permanent health record form.

(f) School districts shall initiate action to exclude from school any child to whom this section applies but who has not been immunized as required by this section. (Eff. 1/13/73, Register 44; am 8/28/77, Register 63)

Authority: AS 14.07.020  
AS 14.30.125

**4 AAC 06.060. SUSPENSION OR DENIAL OF ADMISSION.**

(a) In a public school, the superintendent or principal may suspend a pupil under the provisions of AS 14.30.045, and the pupils may be reinstated by the superintendent or principal or by the school board. A child who is diagnosed as having the disease known as acquired immune deficiency syndrome (AIDS) or AIDS-related Complex (ARC) or who is infected with the AIDS-producing virus, does not have a condition "which will cause the attendance of the child to be inimicable of the welfare of other pupils," within the meaning of AS 14.30.045(4), unless, in addition, the child has uncoverable oozing lesions or other symptoms, or displays behavior, such as biting, which in the opinion of a team made up of the child's physician, public health personnel, the child's parent or guardian, and school personnel associated with the child's educational placement, substantially increases the risk of transmission of the AIDS virus to other pupils.

REASONABLE PEOPLE CAN DISAGREE  
(POSITION PAPER ON MANDATORY VACCINATIONS)

The rationale for allowing  
philosophical exemptions  
to vaccinations

by Sandy Mintz  
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POSITION PAPER ON MANDATORY VACCINATIONS by Sandy Mintz  
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In order to attend both public and private school in Alaska, the State of Alaska currently requires the following vaccinations of its children: DPT, polio, measles and rubella.\* Exemptions or waivers from these vaccinations are only allowed on medical or religious grounds at this time. In spite of appearances, however, there is no consensus about the degree of efficacy of all vaccines for all children. The arguments which follow support the contention that reasonable people can disagree about vaccines and that loving, conscientious, informed parents might choose to refuse one or more vaccinations for their children. I am hoping to engage your support to change the law to allow an additional waiver for personal or philosophical convictions. Similar laws are currently in effect in 22 states.\*\*

The proposed law, presently before the State Senate, is a copy of current California law. In addition, an effort will be made to include in the bill an as yet formally unidentified action or actions to be required of those seeking a philosophical exemption. The inclusion of such an action will be for the purpose of discouraging an otherwise uninformed or negligent parent from choosing the exemption as the least resistance. (One idea is to require

\* Interestingly enough, although mumps is not required, neither the schools nor pediatricians are forthcoming with information to that effect: school health forms which must be submitted to the state and which indicate student vaccination histories list measles-mumps-rubella (MMR) only and pediatricians do not inform parents that the mumps vaccine is optional.

\*\*The following states allowed the exemption as of August 1987: Arizona, California, Colorado, Delaware, Idaho, Indiana, Louisiana, Maine, Michigan, Minnesota, Missouri, Montana, Nebraska, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, Utah, Vermont, Washington and Wisconsin.

an essay of undetermined length stating the parent's position on the issue, another that well-child visits, to the health practitioner of the parent's choice, be required and timed for the same intervals were the child to be immunized.)

I. THE VACCINES ARE RISKY, AND PROBABLY MUCH RISKIER THAN IS CURRENTLY KNOWN OR EVEN ACKNOWLEDGED

A. Reported and Theorized Adverse Effects Are Vast and Varied

There have been numerous reports about adverse effects. Reported adverse reactions are varied and include moderate to severe brain damage and death(20,42,44,49,170,53,60,63,64,65,66,67,69,70,71,73,74,75,76,77,79,80,85,90,91,97,105,43,84,109,136,143b,146,149,156,163a,163b,165). These reactions appear to be the result of toxins in the vaccines themselves (65,106,109,110,152), as well as poor quality control of the product (106,135,166). Also included in the many adverse reactions reported is contracting the very disease the vaccine was supposed to offer protection against (29,30,54,57,81,68,150), sometimes in a more virulent form than occurs naturally(45).

It is easy to dismiss fears about long-term unknown effects as paranoia. But legitimate concern is being raised about long-term autoimmune diseases, abnormalities of the immune system, and even cancer resulting from the use of vaccines(166,171,97,109). The difficulties in proving long-term effects are well-known. Clinical evidence is slowly mounting, however, as was the case with smoking and lung-cancer initially. There is concern, for instance according to the The London Times, 1987(177), that AIDS may have been triggered by smallpox vaccine. To quote "The Times": "Dr. Robert Gallo(SIC), who first identified the Aids virus in the US, told "The Times": 'The link between the WHO programme and the epidemic in Africa is

an important and interesting hypothesis. I cannot say that it actually happened, but I have been saying for some years that the use of live vaccines such as that used for smallpox can activate a dormant infection such as HIV. No blame can be attached to WHO, but if the hypothesis is correct it is a tragic situation and a warning that we cannot ignore.'" It has been long known that a small percentage of polio cases were "provoked" by the pertussis vaccine(106). We can all hope that the fears about AIDS are groundless, that "provocation polio" is an aberration, and that there are not other equally worrisome ramifications of vaccination lurking around the corner. But the need to keep an open mind and maintain vigilance remains paramount.

#### B. Current Vaccination Policy Is A Shotgun Approach To The Problem of Infectious Diseases

Protecting children against relatively mild childhood diseases only to leave them vulnerable to these diseases as adults, when the diseases are frequently more serious(124,125), is an example of how short-sighted these policies may be. No one knows for sure how long protection is afforded(32,109,92,131). If vaccines mimicked real diseases, immunity would be life-long for most(109,121,124), and boosters would be unnecessary. Thus the price our children may have to pay as adults for the privilege of avoiding these diseases may be high.

One example of an innocuous childhood disease for which there is mass vaccination is german measles or rubella(124,122). Women who conceive and are not immune to rubella are at risk of developing the disease in pregnancy. Some of these pregnancies result in severe congenital abnormalities. But the german measles vaccine is not

administered to women of child-bearing age, nor do we know that it confers lifelong immunity(32). The rubella vaccine also has a reasonably high failure rate(109). Unless there is 100% eradication of the disease, a pregnant woman who was vaccinated as a child and did not contract measles is more, not less, vulnerable than one who was allowed an opportunity to get the disease as a child(92). As Dr. Hugh Paul stated in "The Control of Diseases"(124), before formulation of the rubella vaccine, "The disease (rubella) cannot be prevented, and in view of its very mild character, and the possibility that it may have catastrophic effects if contracted by an expectant mother, it is questionable if it should be prevented in childhood and adolescence even if this were possible. It has been suggested that female children should be deliberately exposed to infection in order to achieve a life-long immunity from the disease and possibly from malformation in the offspring in later life. This idea is not an unreasonable one... Rubella does not kill, and even complications are uncommon." Perhaps it would be more prudent to vaccinate only pubescent schoolgirls, allowing those who wish to avoid vaccination to take a blood test to ascertain whether or not they have acquired natural immunity(35,109) than to require vaccinations of all children, as is presently done.

Although it is now known that naturally acquired immunity to rubella is not always lifelong, according to Dr. Vincent Fulginiti, life-long immunity occurs far more often among the naturally immune than the vaccine-immune (90-97.5% lifelong immunity for naturally acquired vs. 20-97% for the vaccine-induced)(109).

The hard or red measles (rubeola) is an example of a disease which generally is unpleasant but not serious in healthy children

(102,121,68,125,124), yet which can be deadly serious for adults. When this measles first hits a population, the adults contracting it are hit very hard, with whole populations sometimes being wiped out(122,124). It then settles into the population, thereby effecting mostly children, since the adults have already been exposed. Statistics which cite disturbing incidence rates for encephalopathy and other adverse effects of measles do not take into consideration the general health status of the individual, and socio-economic factors which have reduced disease severity, nor do they give much weight to the vast incidence of problem-free disease.

Compounding the problem is the fact that the population most vulnerable to measles, infants, is least protected. Vaccinating too early can cause vaccine failure more often(36,101) and/or later booster shots to be ineffective(36,96). The Catch-22 is that in the past, most mothers passed on naturally acquired measles antibodies transplacentally to their offspring who were protected until 6-9 months(124,99,48a). With the advent of vaccines, a higher percentage of mothers will be seronegative (have no antibodies) and will not pass those antibodies on to their children, at precisely the time that the vaccines are not effective, and yet the infant is most vulnerable(99,48a). On the other hand, those who would ordinarily be better off receiving maternal antibodies might find themselves in the untenable position of having those very antibodies interfere with vaccine efficacy(36,100), with the end-result that neither the vaccine nor the antibodies were protective.

The MMR (measles, mumps, rubella) vaccine probably does not confer

lifelong immunity(109). What will happen to our children when they become adults? The medical community cannot possibly be confident that 100% eradication will occur with routine childhood immunization and that our children are not going to get seriously ill as adults(100). At a minimum, questions like these require better answers before anyone is forced to be vaccinated. These issues are barely being addressed in the medical literature.

C. Unreliable Methods For Collecting and Analyzing Data Are Being Used To Assess Vaccine Risk

At the current time only minimal information is available about short-term, known, acute reactions, while no hard data on long-term health and behavioral effects exists. To most accurately assess all risk, controlled, human experiments would have to be conducted. Of course, such experiments would not be considered ethical. The next best approach would be to conduct 20-30+ year studies of matched groups (vaccinated vs. unvaccinated) in which all problems, including even minor behavioral and learning problems, would be recorded and compared. These have not been done, nor are they in progress.

Current reporting methods, unlike the aforementioned are fraught with bias and inaccuracies. First, they depend upon accurate reporting. Second, they depend upon the doctor or parent connecting a symptom with the vaccine. Third, they usually compare vaccinated groups to each other rather than a vaccinated group to an unvaccinated group. In the "Report of the Task Force...(177)" for instance, a study is cited in which immunization status is supposedly considered. But upon closer examination, it becomes clear

that immunization status was not used; instead timing of immunization was the factor. What if a large percentage of vaccine-associated events occur after it is presumed they do not? The result will dramatically effect conclusions.

In fact, no one knows the relevance of time. Dr. Fulginiti, a well-known vaccine-use proponent, who has edited the book "Immunization in Clinical Practice", says: "A second confusing factor is the time relationship between vaccine administration and adverse event. How long an interval is possible in a vaccine-induced central nervous system infection or other untoward effect? Strom recorded data on some patients who first fell ill with neurologic symptoms 1 week after receipt of vaccine. Is that disease relatable to the vaccine? Most experts accept an interval of 24 hours between vaccine and onset of encephalopathy; a few suggest 2-3 days as an acceptable delay in onset. But there is no proof for any interval."(109) Most studies don't even make a pretense of controlling for immunization, instead opting to use time or some other equally questionable variable.

It is not possible to predict the potential intelligence, future health, etc., of a given child. Claims, for instance, that a child has suffered no residual effects from a vaccine and is normal based on observation are totally unfounded. The only way to determine potential, be it intelligence or whatever, is to study groups. When attempting to determine vaccine effects, those groups must be unvaccinated vs. vaccinated, with the distribution of effects compared.

The utter inadequacy of the reporting system for even the most obvious and serious effects is accepted (42,74,80,106), even by vaccine proponents(105,43,109). In the U.S. there was

no requirement to report adverse effects until recently, but even making it mandatory cannot change the basic problem with a reporting system of any kind. Furthermore, much of the analysis of adverse effect rates uses the number of doses administered(32,43,68,77,105,106,109,115,121,124,139,140,146,152,160), rather than the number of children affected. Who cares how many doses it takes to damage a child? What should be sought is data on how many CHILDREN are harmed by a given vaccine, no matter how many doses have been received. Using doses skews results in favor of lower adverse effect rates for all multi-dose vaccines, and in the case of pertussis, dramatically so, since 4- 5 doses are usually required. These dose-related conclusions are made all the more insidious when they are then compared to disease-related problems among children. Even worse, in some known cases, reporting, as well as follow-up, appear to have even been discouraged(170). To quote P. Isacson (Progr. Med. Virol. 13,263, 1971, cited in a 1972 "Science" article (166), "There has been a tendency on the part of certain higher government circles to play down any open discussion of problems associated with vaccines...Perhaps this has been overdone. Scientists now find themselves in the position of balancing the benefits of a vaccine against the risks, yet are in no position to judge what the long-term risks are." Thus current analytical and data collection methods should be seriously questioned.

Where more effort is made to follow adverse effects, the riskiness of one or more of the vaccines appears to increase, although the totality of adverse effects is still unknown (70,74,78,80,85,90).

## II. THERE IS NO PROOF TO THE CLAIM THAT UNVACCINATED PEOPLE THREATEN THE GENERAL PUBLIC HEALTH

A major argument in favor of compulsory vaccination is that

the unvaccinated threaten the general public health. However, if the vaccines work, they protect anyone choosing to be vaccinated. Some people additionally claim, nevertheless, that since there are vaccine failures, the unvaccinated threaten those who try but fail to get protection. Even here, however, there are mitigating effects: first, in at least one of the more serious diseases, whooping cough, a vaccinated person who contracts the disease will usually get a less serious form of the disease. (105, 62, 32, 43, 46, 51, 68, 78, 106, 121, 134, 135); second, vaccine failure rates can be so high (32, 43, 46, 87, 100, 105, 109, 116, 131, 134, 135, 152) that one could question the extent of any additional risk created by the unvaccinated. Even proponents of achievement of so-called "herd immunity" admit that nowhere near 100% compliance is necessary to result in protection to the entire population, although at least 80% is usually advocated(51, 22, 47).

There is virtually no threat posed by states allowing philosophical exemptions. Five states provided their rate of philosophical exemptions: California, Vermont, Ohio, Arizona, and Wisconsin. Less than 1% took the exemption. Other states provided overall compliance rates: Missouri, Minnesota, Pennsylvania, and Delaware were all 98% or better, meaning philosophical exemptions have to be less than 2%. Two other states, Indiana and Oklahoma, were 97% or better, while none of the reporting states were less than 91%(172, 173, 179). We know that vaccine failure rates have been equal to or greater by far than the philosophical exemption rates which are occurring. There is no reason to assume the unvaccinated are totally responsible for disease outbreaks unless vaccine proponents are

unreasonably arguing that vaccine failures do not contribute to them in any way. Surely no one is arguing that, while a "vaccine failure" can catch a disease and spread a disease, it cannot be the first one to get the disease in an area.

Besides, a disease doesn't START anywhere. When public health officials cite the unvaccinated as the source of an outbreak, they are being arbitrary. Where did the alleged source catch the disease? Everyone gets these diseases from someone. Outbreaks are not isolated events with some sort of spontaneous (measles/pertussis/whatever) eruption at their source; they are part of chains of events. Where one looks for the source will determine what one finds. Where one stops will determine who is held responsible.

There are a number of diseases which can be mild enough that they would go unrecognized, particularly among the vaccinated. Pertussis is a well-accepted example, as discussed earlier. Measles has been noted to be milder among the vaccinated as well(46). A very credible scenario would be to have, for instance in the case of pertussis, a number of sub-clinical cases among the vaccinated causing a full-blown recognized case in an unvaccinated person. The blame could then easily be placed on the unvaccinated with no concern about where THEY got the disease.

Let's examine the role of vaccine failure more closely. It is commonly assumed that vaccine failure rates are low - after all, there are few outbreaks of the diseases in question, and what outbreaks have occurred are often attributed to the unvaccinated few. When actual outbreaks have occurred, however, as high as 80% of those contracting the disease have been reported to have been vaccinated(174) . Upon close inspection, the success rate of the vaccines themselves must be questioned. Estimates of failure vary widely (109,46,87,100,152,134,26,32,43,105), but it would

appear that to some extent, success rates are statistical illusions - as long as no outbreaks occur, the vaccines appear to be working. By the same token, however, being unvaccinated appears to be working as well. Given these high failure rates among the vaccinated during disease outbreaks, it is hardly reasonable to conclude that the unvaccinated add any appreciable risk, especially in the small numbers seen in the "philosophical exemption states".

Another concern raised by vaccine proponents is fear that formerly vaccinated adults, whose immunity has waned, will then be threatened by disease outbreaks. Those same adults, can, however, choose to be revaccinated in most cases. One exception to that case is pertussis, which is not a safe vaccine for adults(105,108,175). Pertussis is also not usually serious for adults, however. (106) In fact, the practical effect of waning vaccines is to make formerly vaccinated adults contributors to disease outbreaks(108,68,135). Had they acquired natural immunity, this would be unlikely.

But what about pertussis and infants? Isn't it true that pertussis is mostly a problem for them? Shouldn't everyone be vaccinated to protect them? It is true that most fatalities occur among infants under 1 year of age(178,106). The vaccines are not recommended for use before 2 months of age, with protection sometimes not being conferred before the third administration at 6 months. But a number of factors make this a more complicated issue than would appear on the surface.

First, improvements in medical management, especially the use of antibiotics, have enhanced our arsenal against this disease. Antibiotics can, as stated in the "Task Force Report"(178) and elsewhere, prevent further contagion, prevent serious disease, particularly if timed

right, and combat secondary infections like pneumonia, which are the major cause of death in infants contracting whooping cough.

Second, even if everyone under 6 were vaccinated, infants would still be at risk. It is widely acknowledged(108,175,105) that booster shots given to anyone 6-7 years of age or older are not recommended because of the risks involved. Because of the known seriousness pertussis can pose to infants under 1 year of age, vaccinations are then given, but only to children up to 6-7 years old. It is also widely accepted that pertussis vaccine significantly loses its effectiveness over time(135,109, 108,131). With widespread waning immunity from pertussis vaccine a fact of life, however, large reservoirs of susceptibles exist in the older groups capable of infecting infants(108). Yet we do not vaccinate these older groups because of the risks associated with doing so. I have shown that the medical community has no hard, reliable data to back up claims of low risk from the vaccine to younger children. The most that can legitimately be said is that although some short-term risks have been established, both short-term and long-term risks are virtually unknown. It should not be acceptable to force young children to face risks which are unacceptable for older children and adults. The practical effect of not revaccinating either group is to put infants at risk. But because of unsubstantiated claims that the risks are low for children 6 and under, children 6 and under are being asked to shoulder the burden of protecting infants even though they cannot do it alone. I am not suggesting that older children and adults now be compromised. I submit, on the other hand, that the addition of small numbers of unvaccinated young children to the already significant pool of vaccine failures and

larger pool of immunity-waned older children and adults adds marginal increased risk.

III. MUCH OF THE CREDIT FOR THE DECLINE IN DANGEROUS  
CONTAGIOUS DISEASES SHOULD GO TO FACTORS OTHER  
THAN THE VACCINES

The benefits of vaccination are over-rated since much of the decline in morbidity and mortality of the diseases targeted by the vaccines occurred before the vaccines were introduced(26,27,30,34,91a,91b,105,124,126,90,106,108). Pro-vaccine reports will often begin around 1950 or later(34,68,98,178), after declines were already in effect, thereby giving unsubstantiated weight to the role of vaccines. As implied by the declining death rate, severity of the illnesses also has diminished for the unvaccinated(89,90,124).

Socioeconomic factors, including improved health care and living conditions, have contributed dramatically to both disease incidence and severity decreases(26,55,58,90,121,126,85,51,98,108,113b,119,121,124,135). Even our previous inability to treat whooping cough has been aided in particular by antibiotic therapy aimed at secondary infections like pneumonia (105,118,78,91a,121,134,135) which is a primary factor in pertussis mortality if left untreated (107,106,152,124), and improvements in hospital care for the seriously ill (105,106,25).

Perhaps even more important, it would appear that a well-organized effort to control the spread of whooping cough could be effective since certain antibiotics like erythromycin given to an identified whooping cough victim will prevent the spread of disease to others, (107,108,120,121,117,134) and erythromycin given to an exposed person before the paroxysmal stage can actually prevent the disease in the treated individual(120,117,118).

The "Task Force"(173) reports that erythromycin even given during the paroxysmal stage has been shown to reduce symptoms, contrary to popular belief. Hence widespread, uncontrolled spread of whooping cough could be a thing of the past without the risks associated with the vaccine and moral dilemmas posed by making it compulsory.

Two prominent examples of diseases which have decreased dramatically without the aid of vaccines are scarlet fever and TB.

Scarlet fever is no longer the scourge it once was. (103,122,126)

There is no vaccine for it, but if there were, the vaccine probably would be given credit for a decline it had nothing to do with. In

most places, where the general health of the population is good, TB is no longer a problem either(122,123,124,126,59,129). What would have happened had there been a TB vaccine? Sometimes the conditions the world used to face are forgotten - no toilets, unclean water, lack of refrigeration, crowding, lack of heat, poor nutrition, etc. Where those conditions and/or others still exist, for instance in parts of rural Alaska vis a vis TB,

disease morbidity and mortality increase. But those conditions in Alaska, for instance, have existed for a long time, and yet do not pose a threat to the general population, because the general population does not face those conditions.

#### IV. MUCH IS UNKNOWN ABOUT THE MECHANISMS UNDERLYING VACCINE PROTECTION

How vaccines work is not truly understood(109). When a human being contracts most of the diseases for which there are vaccines, lifelong immunity occurs. With the vaccines, boosters are needed and adults may go unprotected.

How well vaccines work is also not clear since, as discussed in section II, varying percentages of the vaccinated can contract the disease, and varying percentages of the ill have been vaccinated (3,46,85,86,87,98,101,169,95,108,147). Nowhere near 100% of the vaccinated are protected. For example, Dr. Stephen A. Hoffman, an expert on infectious diseases at Harvard University, and a proponent of vaccines writes(130), "In the majority of recent (measles) cases , the administered vaccine apparently never took hold in the first place. This suggests that our ability to wipe out measles may, after all, be limited by a built-in failure rate of the vaccine itself." In the first 26 weeks of 1985, according to the Centers for Disease Control(174), 80% of those between the ages of 16 months and 28 years who contracted measles were vaccinated; in 1986(147), 57% from 16 months on up had been vaccinated.

#### V. POLICY WHICH MAKES VACCINATIONS COMPULSORY IS UNJUST AND UNWISE

Since anyone who wishes to be vaccinated has the right to do so, and built-in vaccine failures insure that the diseases remain in the population, no one can unequivocally argue that the unvaccinated appreciably affect the vaccinated. I would like to include some of the testimony made to Congress in 1962 by Clinton R. Miller of the National Health Federation because he so eloquently framed this issue in the context of history.

"The only time (NHF) would feel justified in violating an American's exercise of choice in matters of health would be when such exercise of freedom violated the equal right of another. Clearly at the present time no one is denied vaccination for themselves or their children if they desire it. Therefore, citizens who exercise their freedom of choice by choosing not to be vaccinated are not denying an equal right to another by the exercise of this freedom.

This principle of freedom is a superior and more fundamental

consideration than that of vaccination. There are those people who so stoutly believe in the principle of vaccination that their enthusiasm leads them to an intolerance of anyone who just as stoutly does not believe in it.....

Those who believe in freedom of choice in matters of politics, religion, and health, emphasize that minority views of one generation become majority views of another. History has a wonderful lesson to teach us here if we will learn it. History will record a man of one age as a wise man, even though subsequent research might prove his theories to be in error, if he refrained from force of any kind in sharing of his beliefs with his disciples and contemporaries. But it will record the same man with the same theories as a fool or a tyrant, who uses, or allows to be used, force of any kind- not the least of which is governmental force - to gain acceptance for his beliefs.

Humility about the extent of one's knowledge, or of the collective knowledge of any age is always the mark of greatness, progress, and understanding....

Dr. Benjamin Rush, a signer of the Declaration of Independence, and Congressman is quoted as saying 'The Constitution of the Republic should make provision for medical freedom as well as for religious freedom.... All such laws' (which restrict health choices)'are un-American and despotic. They are fragments of monarchy and have no place in a Republic'.

....We maintain that this right was implied, if not written.... But the fact is that it was not written, and we are left to argue that it was certainly implied. At the time Benjamin Rush made this plea, it was argued that this 'right' was assumed by the guaranteed freedom of religion and didn't need to be codified. ...Incidentally, Dr. Rush was a strong believer in vaccination theories of Jenner, but emphasized the greater need for freedom in all health matters."(104)

#### VI. MOST OF THE FREE WORLD HONORS THESE PARENTAL RIGHTS

As of August 1987, 22 states allowed for personal or philosophical exemptions. Indeed, but for the former communist-bloc countries, most of the world does not deny this basic right. The following countries compulsory vaccination laws: the Eastern block nations (Albania, Bulgaria, Hungary, East Germany, Czechoslovakia, Poland, Romania, U.S.S.R., and Yugoslavia) as well as the Bahamas, Bolivia, Brazil, Costa Rica, Ecuador, Granada, Mexico, Peru(93), and about 28 states in the U.S. Obviously, allowing for this exemption is not a radical notion. I would like Alaska to join the many U.S. states and free world which currently allows for a choice.

VII. IN A FREE SOCIETY IT IS PARENTS, AND NOT  
THE GOVERNMENT, WHO SHOULD DECIDE AMONG  
REASONABLE RISKS FOR THEIR CHILDREN

The state should not have the right to force a child to have a potentially harmful vaccine, no matter how statistically remote the possibility. Reasonable people can argue which is riskier for an individual child, the vaccines, or the diseases they are designed to prevent. In places where the standard of living is high and adverse effects conscientiously reported, arguments have been made to support the contention that the risks from the vaccines approach that of the disease(80,90). But even if the vaccines in general are safer, for a particular child they may not be. No one, not even public health proponents of compulsory vaccination, is arguing that individual children are not harmed by vaccines, only that the general public good is served by vaccination. The argument regarding general public good has been addressed and I think shown to be weak. There is incontrovertible evidence that individual children are harmed by vaccines. It is the parent, not the state, who should be allowed to choose risk for an individual child.

VIII. HISTORY MUST NOT BE IGNORED

If government is going to force people to put known toxins into their bodies, they have a tremendous responsibility to be absolutely right. Of course that is not possible. History is replete with examples of medical procedures which were touted at one time, with nary a dissenting voice, which were later totally discredited. Examples are routine tonsillectomies, appendectomies, hysterectomies, X-rays and Cesarean-sections. X-ray pelvimetry during pregnancy, DES, coronary bypass surgery, the original Salk vaccine, the killed-cell virus

measles vaccine and swine-flu shots are additional examples of now defunct or largely discredited medical approaches. Actual dangers or procedures have often been utterly denied, radiation being a most glaring example, only much later to be admitted, leaving many damaged health-care consumers. Where is our sense of humility and history? While there is nothing wrong with a medical professional informing a person about all sides of an issue, giving his or her opinion based on personal evaluation of current knowledge, and getting consent to proceed according to a certain plan, there is something terribly wrong about forcing individuals to comply.

If physicians and government saw themselves as providers of information and respectfully deferred the decision-making to willing patients, I submit that fewer malpractice suits would be brought. One cannot insist upon taking responsibility for a decision and reasonably deny responsibility for the outcome.

Obviously, the point of all this is not that anything has been proved here or elsewhere on the scientific level, but that reasonable people can disagree on this issue. In a free society, reasonable disagreement on matters of conscience and health should be honored.

(There are approximately 115 references in all.)

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MARK THOMAN, M. D.

1426 WEST 14TH AVE.

DES MOINES, IOWA 50309

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February 11, 1991

Sandy Mintz  
6981 Kincaid Road  
Anchorage, Alaska 99502

Dear Ms. Mintz:

This letter is to follow-up your request for my opinions regarding immunizations in the current medical climate. Let me begin by stating this has and continues to be of serious interest. I give immunizations thousands of times a year and have been for the past 26 years of medical practice. As a pediatrician I believe in the need and theory of immunizations, and am concerned about the efficacy and cost; but as a toxicologist, I must consider another aspect, the safety and toxicity of immunizations in the children who receive them.

As a means of introduction, I am a board certified physician in private practice in the specialties of pediatrics and clinical toxicology. I have also spent the past twelve years studying the pertussis vaccine and the reactions it causes in infants and younger children. This research involves well over 200 case histories which was presented by request to the CDC and other experts in the field of vaccine reactions. (Please see enclosed CDC outline and C.V.) This group of experts rewrote the brochure on immunization reactions including pertussis for the federal government to be distributed to parents by the states in their immunization programs. The rewrite done by these experts has been changed and the new "brochure" has yet to be published.

Vaccines, like all other substances that we might inhale, ingest or inject into our bodies, can be poisonous or toxic. Careful histories of a patient and family must be taken; a thorough physical exam, temperature and often, as indicated, appropriate laboratory studies (i.e. complete blood count) may also give additional information as to whether it is appropriate for a child to receive a specific vaccine. An additional element of the history to consider is the environment to which this child may be exposed?

Risks: Short and long term? By mandating through law, the administration of virtually all vaccines, we are as a society putting at risk some children who may have an untoward, sometimes serious, reaction. Are vaccines held to a more permissive standard than other drugs? The mandated and broad use of vaccines due to their preventative character vs. a specific treatment shows that they are considered differently. However, society and more especially the medical profession has not

studied, sufficiently, the short and long term risks of vaccination, nor have they advanced research in the treatment of many diseases against which we immunize. In fact, for some children treatment to the disease itself, may be better/safer/less potential for harm than immunization for the disease.

What do VACCINES do? Simply, they fool the body, if you will, in an effort to mimic a specific disease. This in turn, causes an "antibody" response with the body's immune system responding as though it has the disease, with a single or series of boosters or "challenges"(immunization injections.) However, the complexity of this process can also entail significant negative side effects. The body may do one of several things 1. react appropriately where disease protection will occur, 2. not react where no immunity is built up, or 3. overact, if you will, causing the body to involve organs which are not 'supposed' to behave in this non-typical or untoward fashion. There can also be a mini-disease caused by the immunization, or an "autoimmune" process where the body may attack itself or where it can even cause a ~~case~~ case of the disease itself.

Therefore, some individuals will have "more trouble with the prevention than with the illness itself" - a good case in point is the pertussis whole cell vaccine first accepted by the AMA in 1914 and used to this day.

It must be: "CHEAP - SAFE & WORK"

Example: the present DTP being administered to the children in this country is tremendously expensive (in the 70's and early 80's it was a few cents per dose now it is several dollars a dose.) It is not safe - up to 1:300 infants who get the shot can risk a seizure or convulsion (less often(1:100,000), permanent brain damage) and even death, although rare. It does not work - several recent studies have indicated that over 90% of those who have actually acquired the whooping cough disease, have been fully immunized. Though, statistics of the other vaccines may indicate an increased level of safety, no adequate long term studies have been done showing efficacy and safety.

Additionally, it must be remembered that if the immunized may be at risk to acquire the disease as well as potentially suffer reactions to the vaccines, then the non-immunized are also at risk to potentially get the disease. Also, the non-immunized children benefit from the "herd immunity" without risk from the immunization itself. Furthermore, depending upon their environment and genetic make-up less risk of the disease.

It is important to do more good than harm. (PRIMUM NON NOCERE - "above all do no harm") Therefore, it is a must to carefully screen individuals who may have a predisposition to an untoward reaction, and in some cases, to be allowed to forgo the "cure" or

in this case the prevention which would be worse than the disease itself.

As long ago as the 1930's studies were done on the incidence of disease which decreased due to improved health, medical treatment and sanitation in the United States. A decline in the incident of the whooping cough was noted prior to the wide use of pertussis vaccine. Further studies needed regarding the other diseases that we immunize against.

Are we changing relatively mild childhood disease, in today's medical community, for dangerous adult diseases in later life. Most of the childhood diseases showing up in the adult population today have been shown to be very dangerous. Furthermore, the impact on the elderly population won't be felt for another 30 years. Most 35+ year olds had the measles\mumps\ rubella and chickenpox diseases as children, so their immunity has been conferred by the disease process not vaccines.

Philosophically, exemptions do not, in fact, threaten public health due to the following:

Those wishing vaccination receive immunity to what ever degree possible based upon the individual and the "take" or host response.

The diseases are, in reality, still with us as seen in the vaccine failures of the past and present (DPT, MSL etc.)

Generally, it has been found that only a small number of parents or individuals choose to be exempt from immunizations and generally these are for health reasons, however, those who choose exemptions for religious or philosophical reasons are making choices based on the what they believe is right for them and their family.

#### In Summary:

1. Immunization, when done, must be carried out under very careful conditions.
2. Medical research should encourage development of safer, cheaper and more efficacious vaccines as well appropriate alternate prevention and therapies for those who are not immunized.
3. Immunizations are not for everyone. Exemptions should be allowed as long as the present vaccines are not necessarily safe, cheap and in some cases simply don't work (i.e. the present whole cell pertussis vaccine.)
4. Studies should be encouraged in the long term implications of both the long and short term risks.

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And finally, from Dr. H.C. Wilson's book, HAZARDS OF IMMUNIZATIONS, the last page of the book Dr. Wilson reminds us of our responsibility in the use of ANY immunization. First quoting Shakespeare;

AND YOU ALL KNOW SECURITY IS MORTALS CHIEFEST ENEMY

And in summary, Dr. Wilson goes on to say:

"It is for us, and for those who come after us, to see that the sword which vaccines and antisera have put into our hands is never allowed to tarnish through over confidence, negligence, or want of foresight on our part."

If further information is needed or if additional data becomes available please feel free to contact me.

Submitted by:

d:\transfer\mintz

CURRICULUM VITAE

MARK THOMAN, MD, FAAP, FAACT  
ABMT, Sr. AME

February 11, 1991

PERSONAL DATA:

Birthdate: February 15, 1936  
Birthplace: Chicago, Illinois  
Marital status: Married

Social Security Number: 492-36-7025  
IRS ID Number: 42-1228316  
DEA (Narcotics) Number: AT-539-6216  
FAA Certificate Number: 13191-9 (Sr. Aviation Medical Examiner)

Address: Business - Solo Private Practice  
1426 Woodland Avenue, Des Moines, IA 50309

Phones: Business (Listed): 515-244-4229  
Direct Toxicology Line: 515-244-1131  
FAX: 515-244-1131 \*  
After hours: 515-286-1130 (24 hours)

EDUCATION:

Residency: Raymond Blank Childrens Hospital Iowa Methodist Medical Center Des Moines, IA	1963-65
Internship: University of Missouri Medical Center Columbia, MO	1962-63
Doctor of Medicine: University of Missouri Medical Center Columbia, MO	1958-62
Bachelor of Arts: University of Missouri (Zoology) Columbia, MO	1956-58
Associate of Arts: Graceland College, Lamoni, IA	1954-56
Other: William Jewell College, Liberty, MO	1955

FEDERAL SERVICE & APPOINTMENTS:

United States Marine Corps (R), Service #1451655	1954-59
Rank: Private First Class Duty: San Diego, CA; Camp Pendleton, CA (NCO school); 29 Palms, CA.	
United States Public Health Service, Service #19188 (Active)	1965-67
Rank: Lt. Commander (Inactive Reserve 1967-88)	1967-88
Duty: Washington, DC Toxicology/Pediatrics Tokyo, Japan (TDY) Toxicology	1965
Shiprock, New Mexico Navajo Indian Hospital (Chief of Pediatrics)	1966-67

United States Navy Reserve	1988-
Service #492-36-7025	
Rank: Commander	1988-
Director - Ancillary Services	1990-
USNR Fleet Hospital(500) - Combat Zone 23	
Officer in Charge - Detachment D	1989-90
Department Head: Laboratory	1989-
AT: Camp Pendleton, CA/ Bridgeport, CA	
(Cold Weather Medicine)	

LICENSES:

Missouri	#28476	1962-
Iowa	#16679	1963-
Virginia	Inactive/non-resident	1965-67
North Dakota	#1459	1967-
Washington	#12721	1972-

CERTIFICATIONS:

Diplomate: American Board of Pediatrics	1967
Diplomate: American Board of Clinical Toxicology	1977
Fellow: American Academy of Pediatrics	1967
(By application)	
Fellow: American Academy of Clinical Toxicology	1976
(By appointment only)	

HOSPITAL APPOINTMENTS:

Iowa Methodist Medical Center - Sr. attending	1969-
Raymond Blank Childrens Hospital - Attending	1965-
Mercy Medical Center - Courtesy staff	1965-
Iowa Lutheran Hospital - Chief of Pediatrics	1969-80
Iowa Lutheran Hospital - Consulting staff	1980-
Broadlawns Medical Center (County) -	
Chief of Pediatrics	1969-77
Chief of Pediatrics	1991-
Broadlawns Medical Center (County) - Consulting	1977-
Northwest (Charter) Community Hospital -	
Chief of Pediatrics	1970-75
Charter Community Hospital - Consulting staff	1975-

APPOINTMENTS:

President : American Academy of Clinical Toxicology	1982-84
Medical Consultant/Reviewer:	
Iowa State Board of Medical Examiners	1972-
Medical Consultant:	
Bureau of Criminal Investigation, Iowa	1972-
Editor-in-Chief: AACTion (Official publication	
of the American Academy of Clinical Toxicology)	1975-
Medical Director: Iowa Poison Information Center	1969-
Medical Director: North Dakota Poison Information Ctr	1967-69

Delegate: World Federation of Associations of Clinical Toxicology and Poison Control Centers	1982-
Medical Director: Iowa Cystic Fibrosis Clinic (Central Iowa Region)	1972-82
Delegate: Iowa Medical Society House of Delegates	1972-
Delegate: International Union of Toxicology	1982-
Editor: The SAFETY PEN (Iowa Chapter, AAP, Accident Prevention Committee)	1981-83
Medical Director: Mid-Iowa Drug Abuse Center	1972-76
Medical Examiner: American Board of Medical Toxicology	1975-
Chairman: Polk County Drug Abuse Committee	1978-
Chairman: American Academy of Pediatrics Accident Prevention Committee (Iowa)	1976-
Trustee: American Academy of Clinical Toxicology	1969-
Medical Advisor: La Leche League International	1965-
Medical Advisor: Iowa Childbirth Education Assoc.	1969-
Medical Director: Proscribed Activity Center for Children	1976-83
Medical Advisor: Emergency Medical Services (EMS/Iowa)	1978-
Member: Board of Directors - Des Moines Child Guidance Center	1984-86
Member: Board of Directors - Polk County Public Health Nursing Association	1969-75
Member: Des Moines Speech & Hearing Center	1969-75
Medical Advisor: West Suburban Substance Abuse Center	1981-
Coordinator: American Academy of Clinical Toxicology Annual Meetings	1975-80
Coordinator: AACT 25th Anniversary Meeting, N.Y., N.Y.	1992
Coordinator: University of Missouri Medical Center 25th Anniversary Meeting (M.D. Class of 1962)	1987
Medical Consultant: Iowa Convalescent Home for Children	1969-72
Member: Board of Governors, University of Missouri Medical Center (Alumni)	1989-
Member: Mid-Iowa Drug Abuse Council	1970-75
Chairman: Iowa Right-to-Life Committee	1970-73
Chairman: Pro-Life Pediatricians (Iowa)	1982-

FEDERAL APPOINTMENTS/ASSIGNMENTS:

Senior (ATP) Aviation Medical Examiner, Department of Transportation, FAA	1977-
Accident Investigator, Department of Transportation, FAA	1977-
Clinical Toxicology Lecturer, Department of Transportation, FAA	1978-
Clinical Toxicology Consultant: National Oceanic & Atmospheric Administration, Hazardous Materials Response Branch	1983-85
Commissioned Officer, United States Public Health Service (Inactive Reserve)	1967-88
Commissioned Officer, United States Navy(R) Active Reserve - U.S. Naval Fleet Hospital(500) Combat Zone 23, Detachment D - OIC	1988-
Health Advisory Committee - The Honorable Senator Thomas Harkin, Iowa	1988-

PUBLICATION CONSULTANT/REVIEW:

Veterinary & Human Toxicology (Associate Editor)	1975-90
MUTation - University of Missouri Medical School Yearbook Editor	1960-63
Review Consultant for: (date indicates first request)	
Family Physician (formerly GP Magazine)	1967-
Clinical Toxicology	1972-
Consumer's Report	1976-
The Medical Letter	1978-
Bulletin de Medicin 'Legale (French)	1978-
Journal of the American Medical Association	1978-
Journal of Adolescent Health Care	1984-
Pediatrics	1984-
AAP Adolescent Newsletter	1988-

SOCIETY MEMBERSHIPS:

American Medical Association	1962-
Iowa State Medical Association	1963-
Polk County Medical Society	1963-
American Association of Poison Control Centers	1963-
World Medical Association	1964-
American Academy of Pediatrics	1967-
American Academy of Clinical Toxicology (Charter)	1968-
Society for Adolescent Medicine (Charter member)	1969-
Flying Physicians Association	1972-
Aircraft Owners & Pilot's Association	1972-
American Institute of Clinical Toxicology	1974-
American Board of Medical Toxicology	1975-
National Writers Association	1977-
Civil Aviation Medical Association	1978-

International Society of Pediatrics	1976-
Aerospace Medical Association	1981-
American Reserve Officer's Association	1987-
American Public Health Association	1986-
United States Naval Institute	1988-
Navy Reserve Association	1988-
Experimental Aircraft Association	1990-
American Military Surgeons of the United States	1990-

FACULTY ASSIGNMENTS:

Regular Basis:

University of Missouri School of Medicine, Columbia, MO, (Assistant Instructor in Pediatrics)	1962-63
Iowa Methodist Medical Center (includes Raymond Blank Childrens Hospital, Des Moines, IA	1965-
University of Osteopathic Medicine & Health Sciences, Des Moines, IA (Preceptor/lecturer)	1969-
Broadlawns Medical Center (Polk County), Des Moines, IA	1969-
Iowa Lutheran Hospital, Des Moines, IA	1969-
Mercy Medical Center, Des Moines, IA	1969-
University of Iowa School of Medicine, Iowa City, IA (Preceptor)	1972-
Des Moines Regional Police Academy (Certified professional faculty, Iowa Police Academy, 1988)	1969-
Des Moines City Police Department	1969-
Hawkeye Institute, Waterloo, IA	1974-
American Red Cross, Hawkeye Chapter	1987-
Drake University, Des Moines, IA Chemistry/Philosophy/Pharmacology	1988-

Not on a Regular Basis: (One or more lectures - guest faculty)

Graceland College, Lamoni, IA	1969-
Drake University, Des Moines, IA Pharmacology/Toxicology/Philosophy	1971-
Iowa State University, Maternal & Child Health, Ames, IA	1972-
University of Washington, Seattle, WA	1972-
Des Moines Area Community College	1973-
Creighton University, Omaha, NE	1973-
University of Kansas, Wichita, KS	1973-
University of Texas, Houston	1974-
University of Nebraska, Omaha	1974-
University of Oklahoma, Tulsa	1974-
Purdue University, West Lafayette, Indiana	1975-
University of Illinois	1976-

University of Arkansas, Little Rock	1976-
Iowa Academy of Family Physicians	1978-
American Academy of Pediatrics	1978-
American College of Obstetricians & Gynecologists, (Nurses Association)	1979-
Emergency Medical Service Section, Iowa State Department of Health	1980-
Iowa Physicians Assistant Society	1981-

SPECIAL RESEARCH PROJECTS:

Psychological Impact of Color and Packaging on Consumer Products; Color Research Institute of America, Chicago, Illinois (Field Study)	1956-58
NIH GRANT: "Hyperkalemia: enteral vs. parenteral routes of administration" University of Missouri/ Department of Pediatrics (Animal study)	1960
Clinical Investigator: Use of N-acetylcysteine in the treatment of Acetaminophen overdose; Directed by the Rocky Mountain Poison and Drug Center, Denver, Colorado	1977-84
Clinical Investigator: Hydroxocobalamin/Sodium Thiosulfate Cyanide Antidote Study, Directed by Rocky Mountain Poison and Drug Center, Denver, Colorado.	1987
Boston University Fever Study: An assessment of the safety of Pediatric Ibuprofen, Slone Epidemiology Unit, Boston University School of Medicine - Principal Investigator: Allen A. Mitchell, M.D.	1991

SPECIAL AWARDS:

Graceland College Gold Seal Award - For special recognition as president of the student body	1956
American Psychiatric Thesis Award - "The Graduate Student Syndrome" (See Bibliography)	1962
North Dakota Governor's Award - For developing statewide handicapped services	1968
Dictionary of International Biography	1970
Cystic Fibrosis Foundation Award - For starting the first CF clinic in Central Iowa	1972
Who's Who in the Midwest	1974-
National Pilot's Association/Safe Pilot	1976
Cystic Fibrosis Foundation Award - For 10 years as CF Clinic Director	1982
Who's Who in the World	1984-
AMA Recognition Award	1987
Who's Who in America	1990-
AACT President's Plaque - <u>AACT</u> ion - Editor 15 Years	1990-

From :  
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AERONAUTICAL EXPERIENCE:

Private Pilot License	1972
Commercial Pilot License	1973
Instrument Rating/Commercial	1974
Multi-engine Rating Commercial/Instrument	1975
Aviation Medical Examiner	1975
Senior Aviation Medical Examiner	1980
Certified Flight Instructor (dual completed, writtens passed)	1980

BIBLIOGRAPHY:

MARK THOMAN, M.D.

The Graduate Student Syndrome, MISSOURI MEDICINE, 60:440-444, May 1963.  
(Received American Psychiatric Thesis Award, 1962)

Poison Information Center Digital Computer Gives Physician Another  
Diagnostic Tool-TOXICOMPUTER, NARD JOURNAL, 1965 ed.  
(Presented at VIIIth International Pediatric Congress, Tokyo,  
Japan, November 1965.)

Diets & Phenylketonuria, GP MAGAZINE, February 1965

et Verhulst, H.L., Ipecac Syrup in Antiemetic Ingestion, JOURNAL OF  
THE AMERICAN MEDICAL ASSOCIATION, 196:5, pp 433-434, May 2, 1966.

If You Want a Home of your own, MEDICAL ECONOMICS, pp 124-27, Mar 1969

Sewer Gas: Hydrogen Sulfide Intoxication, CLINICAL TOXICOLOGY, 2:4,  
pp383-389, March 1969.

The Use of Emetics in Poison Ingestion, CLINICAL TOXICOLOGY, 3:2,  
pp185-188, December 1970

Emergency Room Supplies and Equipment/Formulary for Treating  
Poisoning, HOSPITAL PHARMACY, 9:12, pp 6-11, 1971.

The Hyperkinetic Child: Practical Aspects of Management,  
Scientific Exhibit presented at the American Psychiatric  
Association Annual Meeting, Bal Harbour, Florida, Dec 1973.

et Hudson, F.M.; Holmes, G.H.; Diagnosis of Brain Abscess by  
Computerized Tomography, JOURNAL OF THE IOWA MEDICAL SOCIETY,  
57:14-16, 1977.

Polychlorinated Biphenyls (PCB) in Human Breast Milk, VETERINARY &  
HUMAN TOXICOLOGY, 19:3, pp193-4, 1977.

(Presented to United States Senate Subcommittee chaired by  
Senator Edward Kennedy and Philip Schweikert, Washington,  
D.C., June 1976.)

PCB and Breast Feeding, AMERICAN BABY, February 1977

Breast Feeding Lauded by Pediatricians, JOURNAL OF THE AMERICAN  
MEDICAL ASSOCIATION, 240:24, Dec 1978.

(Presented as a workshop sponsored by the American Academy Of  
Pediatrics, Chicago, IL, October 1978.)

- Breast Feeding, PEDIATRIC NEWS, 12:12, pp1,21, December 1978.
- Open Face on Rye (anecdote), MEDICAL ECONOMICS, April 17, 1978.
- Fetal-Maternal Axis, BETH ISRAEL MEDICAL CENTER,  
Presented at Newark, N.J., 1982.
- Drugs in Human Breast Milk (Ed.) VETERINARY & HUMAN TOXICOLOGY,  
Vol 26, Special Supplement, 1984.
- Convention and Meeting Guidelines, American Academy of Clinical  
Toxicology, KANSAS STATE UNIVERSITY PRESS, 1980.
- Adolescents and Accidents: A Present Day Look, IOWA DEPT. OF HEALTH  
SERVICES NEWSLETTER, September 1981.
- All in a Day's Work, READER'S DIGEST, 120:718, p 128, Feb 1982.
- Antidotes in the Treatment of Poisoning, VETERINARY & HUMAN  
TOXICOLOGY, 24:6, pp446-448, December 1982.
- Poisoning Antidotes, EMERGENCY MEDICINE MANUAL, 2nd Edition,  
C.V. Mosby Co., 1984.
- Korte, D., Scaer, R.; A Good Birth A Safe Birth, (Ed.) Bantam Books,  
1984.
- et al; Intussusception as a Possible Complication of  
Organophosphate Overdose and/or Treatment, CLINICAL PEDIATRICS,  
24:3, p140, March 1985.
- Farming Injuries and Rural Accidents, ACCIDENT PREVENTION  
NEWSLETTER, American Academy of Pediatrics, 9:3, 1983. (Presented  
at a special workshop to the American Academy of Pediatric  
Accident Prevention Committee, Washington, D.C., October 1983.)
- DPT or Not DT: That is the Question, VETERINARY & HUMAN TOXICOLOGY,  
26:4, p. 341, August 1984. (Featured on an ABC News Special  
Edition of "20/20", February 5, 1985.)
- Clinical Toxicologist/Pediatricians Guide to Administration of DPT  
and or DT: Indications & Contraindications, VETERINARY & HUMAN  
TOXICOLOGY, 27:2, April 1985.
- Toxicokinetics of Pertussis Component of DPT Vaccine, VETERINARY &  
HUMAN TOXICOLOGY, August 1985. (Presented at the XVIIth Annual  
Meeting of the American Academy of Clinical Toxicology,  
Kansas City, MO, August, 1985.)

Definitions and Roles of Poison Control Center in a Poison Control Program, WHO Bulletin, November 1985. (Presented to the World Federation of Associations of Clinical Toxicology Centers and Poison Control Centers, World Health Organization, Geneva, Switzerland, October 7, 1985.)

"Early Warning" (anecdote), MEDICAL ECONOMICS, June, 1985.

"The Toxic Shot Syndrome"-Pertussis Vaccine Update, VETERINARY AND HUMAN TOXICOLOGY, 28:2, April, 1986, pp 163-166. (Reprinted in NURSING TODAY, Revised/updated form, November, 1986.)

Pertussis Vaccine Encephalopathy, an Update, Beth Israel Medical Center, Newark, N.J., June 21, 1988. (Given as first presentation for 5th anniversary of the Beth Israel Medical Center Poison Center Conference)

Handbook of Practical Pediatrics for the Panicky Parent, In preparation for publication.

Drugs in Human Breast Milk, Co-author William Tveite, R.Ph., In publication. (Tentative publication date, late 1990) -  
-Presented April 6, 1989 - Mercy Hospital Medical Center, Des Moines, IA.  
-Condensed form, in preparation for Pediatric Basics, Spring 1991.

Poison Control Handbook and Procedure Manual, In preparation for publication.

et al; Your Baby, Healthy Eating, Birth-3 Years, Better Homes and Gardens Supplement, First Edition, 1988.

et al; Your Baby, Questions Parents Ask, Birth-6 Years, Better Homes and Gardens Supplement, First Edition, 1988.

Aviation Toxicology, the Aviation Medical Examiner's Guide, Presented at the request of the Federal Aviation Administration at the AME Seminar, August 28, 1988, Kansas City, MO; Denver, CO, April 2, 1989; Minneapolis, MN June 22, 1990.

Relation of Poison Control Centers to Industry, presented at the World Health Organization, November 2, 1988, Geneva, Switzerland.

Intoxication des Pilotes Dans L'Aviation, presented at the Voyages et Pathologies Symposium International, Lyon, France, March 2, 1989.

A SYNOPSIS OF MAJOR POINTS CONCERNING MANDATORY VACCINATIONS  
by Sandy Mintz

The purpose of this synopsis is to outline the major points made in my position paper. The points outlined here are substantiated in that paper.

- A. Allowing philosophical exemptions does not threaten the public health.
  1. Anyone wishing to be vaccinated is protected to whatever degree the vaccines confer protection.
  2. Vaccine failures and waning immunity (primary and secondary vaccine failure) insure that the diseases continue to circulate. (According to the CDC and other reports, in some measles outbreaks the population had been 100% vaccinated! Year totals compiled by the CDC have shown that as many as 79% of those contracting the measles were vaccinated.)
  3. Very few people elect to take this exemption, even according to the CDC. In California, which has allowed philosophical exemptions since 1961, and where one might expect many people to take the exemption, fewer than 1% do so.
- B. This is not a radical notion. Approximately 20 U.S. states allow for philosophical exemptions, as does most of the world. Other than the U.S.S.R., the former Eastern-bloc nations, and a handful of additional countries, the entire world allows them.
- C. There is increasing concern that what are usually relatively mild childhood diseases are being traded for more serious adult and/or childhood diseases.
  1. The red measles (rubeola) is now showing up among college-age adults, and is known to be a dangerous disease at that time. Instead of reexamining the overall vaccination policy and increasing the amount of research being conducted, efforts are underway to revaccinate people, when nothing is known about the ramifications of adult rubeola vaccination - other than that some vaccines are in general thought to be problematic for adults, and the growing body of evidence that another measles vaccine (the one for rubella, or German measles), is harmful for a significant proportion of the population. (See 20/20 transcript.) In other words, adults who were not allowed to acquire life-long natural immunity to measles are faced with the prospect of either getting a serious case of adult-onset measles or receiving a potentially dangerous vaccine as an adult.
  2. Chronic illness is on the rise among children. There is increasing concern that the small risk from infectious childhood diseases has been traded for a larger risk of chronic disease. (One example is cited in "The New York Times", HEALTH, December 1, 1988.)

D. Even if current research on vaccine safety was as good as it is purported to be, medicine is not an exact science. Nor do medical professionals all agree on the issue of mandatory vaccinations. (See letters.) It is wrong morally, politically, and scientifically to use coercion, particularly in light of the changing nature of medical opinion, and the fact that not all medical people agree, even today.

E. The germ theory alone does not explain illness and death. Environmental, genetic and psychological factors, as well as lifestyle choices, all play a role. Mandatory vaccination acts as if the only viable theory is the germ-theory. This is unscientific. Government should not be in the business of tilting toward one questionable medical approach and forcing compliance to it.

F. The benefits of the vaccines are overstated. The risks are, in general, either underestimated or unknown.

1. Substantial declines in both the incidence and severity of "vaccine preventable diseases" occurred before the vaccines were manufactured and distributed. These declines continued after widespread use of vaccines, but the actual contribution of vaccines to declines is unknown. (See graphs.)

2. Serious side effects to vaccination are known to occur to some children. Because of serious flaws in research designed to determine vaccine safety, as well as built-in bias, however, the total number of adverse effects, as well as their variety, is unknown.

a. Much of the statistical information made available on the adverse-effects of vaccinations is extrapolated from reports made by doctors. This is a totally unscientific method. Both known and unknown adverse effects go unreported. There are a number of reasons for this. Doctors, in fact, do not always report effects, even those they know about. (See NVIC report on noncompliance and local DPT chapter statistics.) Because of inadequate drug-testing, possible adverse effects are not being reported simply because it is the opinion of the doctor that they are unrelated to the vaccine. Adverse effects which need to be discovered will most likely not be reported because no connection between the adverse effect and the vaccine will be made. This is because it will not have been systematically investigated and determined to be a problem.

b. The only way to determine the totality of vaccine-associated risks is to study matched groups of vaccinated vs. unvaccinated children, and to do so for many years - upwards of 20 or more. This, quite simply, has never been done. Actual research, in one way or another, usually compares vaccinated children, who recently had a vaccine, to other vaccinated children, who also received the vaccine, but not so recently. It is always assumed that a given amount of time separates those for whom an occurrence is vaccine-related and those for whom it is not. This is an unfounded assumption as it has never been studied. There are, also, good reasons to question that assumption. Given that a vaccine, and the protection a vaccine confers, is supposed to remain in a person's body for years, reactions could take

years to show up. As already stated, the only way to ascertain what are vaccine-related events is to compare vaccinated children with unvaccinated children, assuming no time frame (which will require many years of investigation). Again, THIS HAS NEVER BEEN DONE.

c. Another significant design flaw involves using the number of effects seen in a certain number of administered doses of vaccine, and then comparing this to the number of children having a similar disease-related problem. It can be made to appear that significantly more problems result from a disease than from the vaccine designed to prevent it, when it is, in fact, not true. This happens when more than one dose is routinely administered. Take as an example figures released by the CDC on the number of convulsions experienced by children as a result of the DPT vaccine (the "P" is for the pertussis component) as compared to whooping cough. In this report the CDC indicates that 1/50 children get convulsions from whooping cough, but 1/1750 doses of pertussis vaccine result in convulsions. I don't know whether the statistics on dose were based on children receiving 4 or 5 doses, but either way, it results in between 1/350 and 1/438 CHILDREN having convulsions, not nearly as dramatic a difference. Further making these comparisons suspect is the fact that they were extrapolated from reports from doctors, or other questionable research methods, thus could easily have been skewed. As Dr. Menkes said in his letter to me, "...there is a tendency for physicians and scientists to overemphasize the risks of diseases such as whooping cough, and understate the risks of vaccination." Most statistics used to promote the safety of vaccines make this misleading "dose" vs. "children" comparison.

d. The very drug companies which profit from the sale of vaccines are the architects of most, if not all, research meant to determine vaccine safety. (See Menkes letter and articles exposing failure to disclose drug ties by one researcher and another editorial writer, for examples.)

e. So far, there have been about 3000 injury claims against the government for permanent injury which resulted from vaccines mandated before October 1, 1988. Because of an arbitrary cut-off date, we may never know how many children have been injured or killed by these vaccines. We will also never know how many children were injured but didn't file a claim, or how many were injured but didn't realize the vaccination was to blame, or how many were injured but didn't realize the claim process was available.

QUOTES FROM THE CDC MORBIDITY AND MORTALITY WEEKLY REPORT (MMWR)

1. "Erythromycin, recommended for patients with clinical pertussis and for selected contacts of pertussis patients, decreases infectivity and may limit secondary spread." (February 2, 1990; Vol. 39/No.4;p.64)
2. "The risk of death [from measles] is greater for infants and adults than for children and adolescents.....Persons vaccinated before the first birthday need(ed) to be revaccinated"... [Maternal antibodies from naturally acquired -and to a lesser extent, vaccine induced- immunity, interfere with vaccination if given to children under 1. These antibodies will protect the child from measles, during much - if naturally acquired- and some -if vaccine-induced, of that first year, if no vaccine is given.] "From 1984 to 1988, 58% of reported cases affected children >9 years of age, compared with 10% during the period 1960-1964.... The goal of eliminating measles in the United States has not been reached primarily because of 1) failure to implement the current vaccination strategy, resulting in large numbers of unvaccinated preschool-age children in some areas, and 2) VACCINE FAILURE (my emphasis).... Appropriately vaccinated persons accounted for 42% (of the 16,819 measles cases for whom vaccination information was collected from 1985 through 1988)....Some persons who received inactivated vaccine (available in the U.S. between 1963 and 1967) are at risk of developing severe atypical measles syndrome when exposed to the natural virus....A wide range (4-55%) of recipients of inactivated measles vaccine who were later revaccinated with live measles vaccine have had reactions to the live vaccine." [At the time, doctors were just as sure about the safety of the killed-cell vaccine as they now are about current vaccines.]...."However, recipients of inactivated measles are more likely to have serious illness when exposed to natural measles than when given live measles virus vaccine." [Now they really have something to worry about. If originally allowed to get measles naturally, they would have faced a small risk of serious disease. Now, they face a large risk of adverse reactions to the current vaccination, and an even larger risk of serious illness from the disease.] (December 29, 1989; Vol. 38/No.S-9)
3. "From 1986 to 1987, the absolute number and proportion of cases that were preventable through vaccination decreased in all age groups except those >24 years of age....Most cases reported in 1987, however, were classified as nonpreventable and occurred in school-aged children who had been vaccinated on or after the first birthday. Most of these cases probably result from primary vaccine failure....The approximate primary vaccine failure rate of 5% (range 2%-10%) may provide enough susceptibles to sustain an outbreak among highly vaccinated populations in some settings." [A table in this report shows that only 108 of the 3652 reported cases of measles in the United States in 1987 had a philosophical objection!] (September 2, 1988; Vol. 37/No. 34; pages 528-530)
4. "In the first 26 weeks of 1989, 8553 cases (of measles) were reported....More than 90 outbreaks have been reported; most have occurred in secondary schools and colleges." [Measles is a much more serious disease for adults. Now, vaccinations mandated for children, when measles is considered less serious, combined with

vaccine failure and/or waning immunity, mean a higher proportion of people will now get measles as adults.] (September 9, 1989; Vol. 38/No. 35; p. 604)

5. "Investigation of this epidemic has prompted concern about the roles of primary vaccine failure (unsuccessful initial vaccination) and secondary vaccine failure (loss of immunity after successful vaccination). The 1988-1989 epidemic mainly affected persons 17-21 years of age, who had been targeted to receive vaccine during mass campaigns in the first years of the vaccination program in Hungary. The high age-specific attack rates in this age group, in which vaccine coverage WAS AT LEAST 93% (emphasis mine), suggest that vaccine failure played a major role in this epidemic." [Adults vaccinated as children now face the unpleasant prospect of possibly contracting measles as an adult or having to be revaccinated as an adult, either with unknown but possibly serious consequences.] (October 6, 1989; Vol. 38/No. 39; p. 667)
6. In a small outbreak of measles, in which 100% of the children had been appropriately vaccinated, it was found that "the attack rate was 21% for students whom Student A identified as 'close friends'" [A 21% vaccine failure rate among highly exposed students!]. . . . "If waning immunity is not a problem, this outbreak suggests that measles transmission can occur within the 2%-10% of expected vaccine failures." (June 22, 1984; Vol. 33/No. 24; pages 349-351)
7. "Many outbreaks have occurred among school-aged children in schools with vaccination levels above 98%. These outbreaks have occurred in all parts of the country. Attack rates in individual schools have been low (1%-5%), and the calculated vaccine efficacy has been high. Primary vaccine failures (i.e., the approximately 2%-10% of vaccinees fail to seroconvert after measles vaccination) have played a SUBSTANTIAL ROLE (emphasis mine) in transmission. . . . In a few outbreaks, persons vaccinated in the more distant past, independent of age at vaccination, have been at increased risk for disease." (January 13, 1989; Vol. 38/No. 1; pages 11-12)

Percent of Total Measles Cases Contributed  
By Appropriately\* Vaccinated Children\*\*

Time Period	% of total	% of school-age children
1987, U.S.	48%	72%
1988, U.S.	45%	69%
1989, U.S.	49%	79%
1990, U.S., 1st 20 weeks	29%	?

\*vaccinated on or after their first birthday

\*\*according to the CDC

ALASKA STATE LEGISLATURE  
HOUSE OF REPRESENTATIVES  
RESEARCH AGENCY

P.O. Box 1 State Capitol  
Juneau, Alaska 99811-1100  
Juneau 99801  
907/586-1001

January 13, 1987

MEMORANDUM

TO: Representative Mike Navarre

ATTN: Pat Malone

FROM: Mary Jennings  
Legislative Analyst

RE: Laws Concerning Mandatory Immunization  
Research Request 87-065

*File with  
bill*

You requested information on laws in Alaska and other states concerning mandatory immunization, specifically, allowable exemptions from immunizations, reporting of adverse events, and penalties enforced against children who have not been immunized. You also requested us to gather: 1) statistics on adverse events; and 2) any data showing a correlation between states that allow philosophical exemptions and higher rates of disease.

Exemptions

All 50 states and the District of Columbia allow children to be exempt from immunization regulations for medical reasons. Generally, the parent must acquire an affidavit signed by a physician affirming the opinion that the immunization would be injurious to the child's health. Forty-eight states and the District of Columbia allow children to be exempt from immunization requirements for religious reasons. In many states, the parents must present an affidavit signed by the parent affirming that immunization conflicts with the practices of the religious denomination of the child. Twenty-two states allow children to be exempt from immunization requirements for philosophical reasons. Typically, the parent must present an affidavit affirming that immunization conflicts with the family's philosophical beliefs. Attachment A, prepared by the Center for Disease Control (CDC) presents the exemptions from immunization requirements in the 50 states and the District of Columbia.

According to the CDC, children who are exempt from immunization for philosophical reasons comprise less than 1 percent of all school age children. No studies have been done to draw correlations between use of

*Attachment 1*

this exemption and greater rates of disease. The CDC stated that due to the small numbers that invoke this exemption, it would be difficult to make meaningful comparisons.

#### Enforcement of Immunization Requirements

Twenty-seven states have a penalty clause for noncompliance with immunization laws for children in grades kindergarten through 12. Thirty states and the District of Columbia impose a penalty for children in day care and two states have a penalty for college students. Depending upon state law, the parents or the school official may be found to have violated the immunization requirements. Generally, noncompliance is a misdemeanor.

Forty-four states and the District of Columbia have an exclusion clause in their immunization requirements which prevent children who are not in compliance with state immunization laws from entering school (kindergarten through grade 12). Thirty-one states and the District of Columbia have exclusion clauses pertaining to children in day care and five states and the District of Columbia have an exclusion clause pertaining to college students. Attachment B, prepared by the CDC, shows which states have penalty and exclusion clauses.

In some states, children are allowed a grace period, ranging from 30 to 60 days, in which they may attend school while coming into compliance with immunization regulations. An official in California stated that the grace period in California was recently repealed because it became difficult to remove children from school for noncompliance once they had entered the system. The official added that when a disease outbreak occurs in a school, all children who are exempt from immunizations are sent home and not allowed back into school until 14 days after the last occurrence of a case.

#### Reporting of Adverse Events

In forty-seven states, reporting in the private sector of adverse events from immunization is passive (the private sector is not required to report adverse events). In all states, publicly funded immunization programs must report adverse events to the CDC. Under federal law, vaccine manufacturers and pharmacists are required to report adverse events to the U.S. Food and Drug Administration.

IMMUNIZATION ASSESSMENT OF KINDERGARTEN STUDENTS - 1989  
 FINAL RESULTS

01/22/90

TABLE 2 NUMBER AND PERCENT OF STUDENTS ADEQUATELY IMMUNIZED

COUNTY	NUMBER OF STUDENTS	POLIO		DTG		MEASLES		MUMPS		TOTAL	
		NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
TOTAL	467113	425674	91.5	429102	91.9	458906	98.2	458057	98.2	458035	98.2
ALAMEDA	17531	17001	97.0	17411	99.3	14252	81.3	18259	98.5	19257	98.5
ALPINE	19	19	94.7	17	88.9	19	100.0	19	100.0	19	100.0
AMADOR	371	354	95.4	344	92.7	354	95.4	354	95.4	354	95.4
Butte	2195	1957	89.2	2145	97.7	2120	96.6	3120	67.9	3120	67.9
CALAVASAS	435	427	98.2	433	99.3	433	99.3	453	103.0	453	103.0
COLUSA	231	227	98.3	275	119.0	231	100.0	244	105.6	244	105.6
CONTRA COSTA	12423	11417	91.9	11755	94.6	12243	98.5	12253	98.7	12253	98.7
DEL NORTE	474	449	94.7	429	90.5	459	96.8	459	96.8	459	96.8
EL DORADO	2105	1931	91.7	1920	91.2	2034	96.6	2039	96.8	2039	96.8
FRESNO	13250	12153	91.7	11734	88.6	12937	97.6	12939	97.6	12937	97.6
GLENN	523	497	95.0	487	93.1	515	98.5	515	98.5	515	98.5
HUMBOLDT	2070	1945	93.9	1907	92.1	2011	97.1	2011	97.1	2011	97.1
IMPERIAL	2319	2173	93.7	2127	91.7	2305	99.4	2300	99.2	2300	99.2
INYO	302	285	94.4	283	93.7	299	99.0	299	99.0	299	99.0
KERN	12236	12351	100.9	10947	89.5	10907	89.1	10808	88.3	10807	88.3
KINGS	2234	2115	94.7	2033	91.0	2230	99.8	2230	99.8	2230	99.8
LAMAR	752	697	92.7	692	92.0	723	96.1	723	96.1	723	96.1
LASSEN	429	417	97.2	434	101.1	459	107.0	459	107.0	459	107.0
LOS ANGELES	122267	115735	94.7	115275	94.3	127269	104.1	127252	104.1	127244	104.1
MADERA	1722	1629	94.6	1520	88.3	1705	99.0	1705	99.0	1705	99.0
MARIN	2051	2455	119.7	2436	118.8	2559	124.7	2567	125.1	2567	125.1
MATILDE	150	177	118.0	170	113.3	190	126.7	180	120.0	180	120.0
MERCED	1222	1226	100.3	1205	98.6	1225	100.2	1226	100.3	1226	100.3
MERCED	3244	3222	99.3	3217	99.2	3227	99.5	3227	99.5	3227	99.5
MODOC	129	124	96.1	120	93.1	177	137.2	177	137.2	177	137.2
MONTECALVO	154	151	98.1	155	100.6	154	100.0	154	100.0	154	100.0
MONTESANO	637	625	98.1	625	98.1	635	99.7	635	99.7	635	99.7
MONTGOMERY	1551	1500	96.7	1475	95.1	1552	100.0	1557	100.3	1557	100.3
MORO	1280	124	9.7	124	9.7	127	9.9	127	9.9	127	9.9
NEVADA	3224	3224	100.0	3224	100.0	3224	100.0	3224	100.0	3224	100.0
ORANGE	3224	3224	100.0	3224	100.0	3224	100.0	3224	100.0	3224	100.0
PLACER	3224	3224	100.0	3224	100.0	3224	100.0	3224	100.0	3224	100.0
PLUMAS	3224	3224	100.0	3224	100.0	3224	100.0	3224	100.0	3224	100.0
RIVERSIDE	12224	12224	100.0	12224	100.0	12224	100.0	12224	100.0	12224	100.0
SACRAMENTO	17224	17224	100.0	17224	100.0	17224	100.0	17224	100.0	17224	100.0
SAN BENITO	3224	3224	100.0	3224	100.0	3224	100.0	3224	100.0	3224	100.0
SAN BERNARDINO	2224	2224	100.0	2224	100.0	2224	100.0	2224	100.0	2224	100.0
SAN DIEGO	3224	3224	100.0	3224	100.0	3224	100.0	3224	100.0	3224	100.0
SAN FRANCISCO	7444	6922	93.0	6922	93.0	7301	98.1	7305	98.1	7305	98.1
SAN JUAN BAPTISTE	2124	2124	100.0	2124	100.0	2124	100.0	2124	100.0	2124	100.0
SAN LUIS OBISPO	2124	2124	100.0	2124	100.0	2124	100.0	2124	100.0	2124	100.0
SAN MATEO	2124	2124	100.0	2124	100.0	2124	100.0	2124	100.0	2124	100.0
SANTA BARBARA	2124	2124	100.0	2124	100.0	2124	100.0	2124	100.0	2124	100.0
SANTA CLARA	2124	2124	100.0	2124	100.0	2124	100.0	2124	100.0	2124	100.0
SANTA CRUZ	2124	2124	100.0	2124	100.0	2124	100.0	2124	100.0	2124	100.0

IMMUNIZATION ASSESSMENT OF KINDERGARTEN STUDENTS - 1933  
FINAL RESULTS

01/22/33

TABLE I. TOTAL ENROLLMENT AND ADMISSION STATUS

COUNTY	NUMBER OF STUDENTS	CONDITIONAL ADMISSIONS NEED ONE OR MORE IMMUNIZATIONS		ALL RECEIVED IMMUNIZATIONS		UNCOMMITTEED ADMISSIONS EXEMPTION MEDICAL		EXEMPTION PERSONAL	
		NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
TOTAL	467113	33516	7.2	424815	90.9	573	.11	3270	.70
ALAMEDA	13331	1137	8.5	17310	73.4	15	.03	56	.36
ALPINE	17	3	17.6	16	94.2	0	.00	0	.00
AMADOR	371	21	5.7	344	92.7	0	.00	6	1.62
BUTTE	3253	180	5.5	3032	73.1	7	.25	37	1.14
CALAVASAS	436	47	9.7	430	88.5	0	.00	9	1.35
COLUSA	211	15	7.2	274	96.2	1	.34	1	.34
CONTRA COSTA	17423	575	3.4	11694	74.1	3	.05	45	.36
DEL NORTE	674	57	8.5	429	70.3	0	.00	4	.64
EL DORADO	2104	151	7.4	1710	90.7	1	.05	37	1.51
FRESNO	13250	1311	11.4	11777	93.0	12	.09	65	.57
GLENN	523	32	6.1	435	92.7	1	.17	5	.95
HUMBOLDT	2170	162	7.5	1994	91.9	1	.05	33	1.49
IMPERIAL	2319	205	8.9	2106	92.3	7	.09	8	.34
INYO	302	20	6.6	280	92.7	0	.00	2	.66
KERN	10936	875	8.0	9983	91.3	14	.13	64	.59
KINGS	2239	174	7.8	2053	92.1	0	.00	2	.09
LAKE	752	53	7.0	681	91.5	3	.40	15	1.99
LASSEN	467	36	7.7	430	91.7	2	.43	1	.21
LOS ANGELES	127567	14325	11.3	114583	90.4	103	.08	551	.43
MADERA	1722	124	7.2	1583	91.9	0	.00	15	.87
MARIN	2441	193	7.9	2415	91.1	2	.07	40	1.51
MARIPOSA	170	10	5.9	170	97.5	1	.51	7	4.71
MENDOCINO	1757	173	9.8	1188	87.4	3	.22	35	2.53
MERCED	3944	277	7.0	3655	92.7	4	.10	2	.05
MODOC	179	20	11.2	153	85.3	0	.00	1	.56
MINO	177	12	7.1	177	92.3	0	.00	1	.56
MONTGOMERY	5377	351	6.5	6004	93.9	4	.06	25	.44
NAPA	1531	80	5.1	1477	94.1	5	.33	8	.51
NEVADA	1042	44	4.1	947	89.2	4	.38	57	5.31
ORANGE	35154	2946	8.4	31957	90.9	38	.11	213	.61
PLACER	2995	172	5.7	2752	92.2	2	.07	59	1.97
PLUMAS	320	9	2.8	304	95.0	0	.00	7	2.19
RIVERSIDE	17193	1647	9.6	15055	90.0	31	.18	157	.92
SACRAMENTO	17327	1231	7.1	15415	91.3	17	.10	115	.67
SAN BENITO	647	33	5.1	647	94.2	1	.15	1	.15
SAN BERNARDINO	25174	2090	8.3	23575	90.4	47	.19	370	1.42
SAN DIEGO	37553	2730	7.3	34407	91.6	31	.08	363	.97
SAN FRANCISCO	7444	472	6.3	6977	93.8	3	.04	42	.56
SAN JOAQUIN	9175	565	6.1	8543	93.1	13	.14	54	.59
SAN LUIS OBISPO	3010	183	6.1	2777	92.3	5	.17	38	1.26
SAN MATEO	2196	559	25.4	7771	92.3	2	.02	24	.29
SANTA BARBARA	5352	300	5.6	4922	93.5	2	.04	34	.71

# CHILD CARE FACILITY IMMUNIZATION ASSESSMENT ALL FACILITIES

CALIFORNIA, FALL 1989

COUNTY	TOTAL FACILS	FACILS REPTING	REPORTING PERCENTS		ENROL <2		ENROL 2-5		POLIO 3 <sup>o</sup>		DTP 3 <sup>o</sup>		DTP 4 <sup>o</sup>		MEASLES		RUDELLA		MUMPS		FOLL-UP NEEDED		NO FOLL-UP NEEDED		MEDICAL EX.		PERSONAL EX.	
			No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
<b>TOTAL All</b>	<b>7,279</b>	<b>7,191</b>	<b>98.8</b>	<b>11,650</b>	<b>343,701</b>	<b>332,464</b>	<b>96.7</b>	<b>335,156</b>	<b>97.5</b>	<b>317,311</b>	<b>92.3</b>	<b>336,785</b>	<b>98.0</b>	<b>336,705</b>	<b>98.0</b>	<b>336,658</b>	<b>98.0</b>	<b>25,723</b>	<b>7.5</b>	<b>318,039</b>	<b>92.5</b>	<b>355</b>	<b>0.10</b>	<b>1,214</b>	<b>0.35</b>			
Alameda	276	274	99.3	484	13,806	13,296	96.3	13,378	96.9	12,628	91.5	13,730	99.4	13,730	99.4	13,730	99.4	1,139	8.3	12,667	91.7	6	0.04	19	0.14			
Bakersfield	55	55	100.0	144	2,055	1,997	97.2	2,013	98.0	1,906	92.7	2,008	97.7	2,006	97.6	2,005	97.6	165	8.0	1,926	93.7	1	0.05	13	0.63			
Albany	3	3	100.0	0	46	30	82.6	43	93.5	34	73.9	42	91.3	42	91.3	42	91.3	11	23.9	35	76.1	0	0.30	1	2.17			
Amador	7	7	100.0	0	185	174	94.1	180	97.3	170	91.9	179	96.8	179	96.8	179	96.8	14	7.6	171	92.4	1	0.54	2	1.08			
Butte	48	48	100.0	10	1,539	1,497	97.3	1,502	97.6	1,428	92.8	1,485	96.5	1,485	96.5	1,485	96.5	93	6.0	1,446	94.0	4	0.26	15	0.97			
Calaveras	12	12	100.0	30	314	307	97.8	309	98.4	288	91.7	310	98.7	310	98.7	310	98.7	23	7.3	291	92.7	1	0.32	3	0.96			
Colusa	7	7	100.0	21	161	160	99.4	160	99.4	153	95.0	159	98.8	159	98.8	159	98.8	8	5.0	153	95.0	0	0.00	0	0.00			
Contra Costa	273	273	100.0	536	13,299	13,033	98.0	13,116	98.6	12,514	94.1	13,185	99.1	13,179	99.1	13,179	99.1	762	5.7	12,537	94.3	7	0.05	44	0.33			
El Dorado	30	30	100.0	17	892	795	89.1	808	90.6	746	83.6	817	91.6	817	91.6	817	91.6	134	15.0	758	85.0	1	0.11	7	0.78			
Fresno	168	168	100.0	156	6,963	6,697	96.1	6,762	97.0	6,341	91.0	6,846	98.2	6,846	98.2	6,846	98.2	692	9.9	6,376	91.5	13	0.19	7	0.10			
Gleason	16	16	100.0	2	296	292	98.6	292	98.6	287	97.0	295	99.7	295	99.7	295	99.7	8	2.7	288	97.3	2	0.68	0	0.00			
Humboldt/N	52	52	100.0	0	1,447	1,356	93.7	1,384	95.6	1,283	89.1	1,367	94.5	1,367	94.5	1,367	94.5	136	9.4	1,311	90.6	2	0.14	40	2.76			
Imperial	51	51	100.0	72	1,179	1,164	98.7	1,163	98.6	1,071	90.8	1,165	98.8	1,165	98.8	1,165	98.8	89	7.5	1,090	92.5	0	0.00	1	0.08			
Inyo	9	9	100.0	0	240	231	96.3	239	99.6	230	95.8	236	98.3	236	98.3	236	98.3	15	6.3	225	93.8	0	0.00	0	0.00			
Kern	113	113	100.0	36	5,988	5,817	97.1	5,862	97.9	5,456	91.1	5,915	98.8	5,915	98.8	5,915	98.8	536	9.0	5,452	91.0	11	0.18	10	0.17			
Kings	14	14	100.0	0	476	472	99.2	473	99.4	455	95.6	476	100.0	476	100.0	476	100.0	21	4.4	455	95.6	0	0.00	0	0.00			
Lake	11	11	100.0	16	256	234	91.4	238	93.0	223	87.1	236	92.2	236	92.2	236	92.2	31	12.1	225	87.9	1	0.39	2	0.78			
Lassen	16	16	100.0	0	292	284	97.3	284	97.3	264	90.4	287	98.3	287	98.3	287	98.3	29	9.9	263	90.1	0	0.00	1	0.34			
Los Angeles	1,873	1,873	100.0	3,165	94,216	90,969	96.6	91,584	97.2	85,906	91.2	92,406	98.1	92,376	98.0	92,365	98.0	8,589	9.1	85,627	90.9	63	0.07	262	0.28			
Madera	15	15	100.0	0	393	381	96.9	382	97.2	352	89.6	388	98.7	388	98.7	388	98.7	40	10.2	353	89.8	0	0.00	2	0.51			
Marin	91	84	92.3	168	4,208	3,976	94.5	4,018	95.5	3,447	81.9	4,024	95.6	4,024	95.6	4,024	95.6	311	7.4	3,697	92.6	7	0.17	29	0.69			
Mariposa	4	4	100.0	0	63	63	100.0	63	100.0	60	95.2	63	100.0	63	100.0	63	100.0	2	3.2	61	96.8	0	0.00	1	1.59			
Mendocino	30	30	100.0	32	856	800	93.5	814	95.1	738	86.2	820	95.8	820	95.8	820	95.8	110	12.9	746	87.1	1	0.12	14	1.64			
Merced	42	42	100.0	0	1,728	1,682	97.3	1,694	98.0	1,581	91.5	1,686	97.6	1,686	97.6	1,686	97.6	160	9.3	1,568	90.7	0	0.00	1	0.06			
Modoc	5	5	100.0	0	97	87	89.7	91	93.8	83	85.6	94	96.9	94	96.9	94	96.9	15	15.5	82	84.5	0	0.00	0	0.00			
Mono	5	5	100.0	0	165	157	95.2	165	100.0	155	93.9	158	95.8	158	95.8	158	95.8	14	8.5	151	91.5	1	0.61	0	0.00			
Monterey	107	105	98.1	338	4,100	4,008	97.8	4,028	98.2	3,919	95.6	4,053	98.9	4,053	98.9	4,053	98.9	194	4.7	3,906	95.3	4	0.10	20	0.49			
Napa	55	55	100.0	10	1,892	1,825	96.5	1,831	96.8	1,748	92.4	1,844	97.5	1,844	97.5	1,844	97.5	138	7.3	1,754	92.7	7	0.37	8	0.42			
Navada	23	23	100.0	0	874	852	97.5	860	98.4	835	95.5	861	98.5	861	98.5	861	98.5	26	3.0	848	97.0	2	0.23	15	1.72			
Orange	538	538	100.0	537	33,030	32,236	97.6	32,309	97.8	31,440	95.2	32,521	98.5	32,515	98.4	32,511	98.4	1,683	5.1	31,347	94.9	22	0.07	32	0.10			
Placer	60	60	100.0	3	2,120	2,049	96.7	2,061	97.2	1,980	93.4	2,063	97.3	2,063	97.3	2,063	97.3	138	6.5	1,982	93.5	3	0.14	8	0.36			
Plumas	13	13	100.0	0	241	231	95.9	230	95.4	210	87.1	232	96.3	232	96.3	232	96.3	31	12.9	210	87.1	0	0.00	1	0.41			
Riverside	230	226	98.3	195	11,455	11,312	98.8	11,338	99.0	11,016	96.2	11,398	99.5	11,398	99.5	11,398	99.5	370	3.2	11,085	96.8	13	0.11	27	0.24			
Sacramento	340	340	100.0	641	12,028	11,639	96.8	11,743	97.6	11,216	93.2	11,730	97.5	11,729	97.5	11,728	97.5	792	6.6	11,236	93.4	14	0.12	40	0.33			
San Benito	10	10	100.0	0	428	403	94.2	419	97.9	384	89.7	413	96.5	413	96.5	413	96.5	48	11.2	380	88.8	1	0.23	2	0.47			
San Bernardino	249	179	71.9	441	10,732	10,316	96.1	10,435	97.2	9,651	89.9	10,431	97.2	10,428	97.2	10,427	97.2	1,162	10.8	9,570	89.2	13	0.12	27	0.25			
San Diego	572	572	100.0	948	29,870	29,092	97.4	29,249	97.9	28,134	94.2	29,299	98.1	29,288	98.1	29,286	98.0	1,664	5.6	28,206	94.4	27	0.09	134	0.45			
San Francisco	203	202	99.5	281	9,093	8,950	98.4	8,993	98.9	8,797	96.7	8,936	99.4	8,936	99.4	8,936	99.4	344	3.8	8,763	96.4	10	0.11	44	0.48			
San Joaquin	159	159	100.0	40	5,219	4,919	94.3	5,008	96.0	4,567	87.5	5,022	96.2	5,022	96.2	5,022	96.2	661	12.7	4,558	87.3	7	0.13	7	0.13			
San Luis Obispo	62	62	100.0	0	2,263	2,165	95.7	2,197	97.1	2,051	90.6	2,218	98.0	2,218	98.0	2,218	98.0	198	8.7	2,065	91.3	6	0.27	19	0.84			
San Mateo	201	201	100.0	521	9,131	8,951	98.0	8,979	98.3	8,697	95.2	9,002	98.6	9,002	98.6	9,002	98.6	415	4.5	8,716	95.5	9	0.10	25	0.27			
Santa Barbara	113	113	100.0	179	5,311	5,105	96.1	5,142	96.8	4,882	91.9	5,093	96.0	5,098	96.0	5,098	96.0	425	8.0	4,886	92.0	15	0.28	48	0.90			
Santa Clara	380	380	100.0	1,597	20,645	19,589	94.9	19,959	96.7	18,477	89.5	19,842	96.1	19,835	96.1	19,830	96.1	2,220	10.8	18,426	89.2	37	0.18	65	0.31			
Santa Cruz	83	83	100.0	177	2,975	2,871	96.5	2,897	97.4	2,776	93.3	2,878	96.7	2,878	96.7	2,878	96.7	137	4.6	2,804	94.3	6	0.20	60	2.02			
Shasta	42	42	100.0	77	1,458	1,388	95.2	1,397	95.8	1,300	89.2	1,429	98.0															

WISCONSIN  
Wisconsin Student Immunization Law Results - Kindergarten

Percent of Kindergartners	School Year											
	77-78	78-79	79-80	80-81	81-82	82-83	83-84	84-85	85-86	86-87	87-88	88-89
1. With form on file -	95%	96%	96%	98%	98%	99%	99%	99%	99%	98%	99%	98%
2. Complete (MMR*, 3+DTP, 3+ polio) -	78%	84%	87%	94%	95%	98%	98%	95%	94%	95%	95%	94%
3. Behind Schedule <sup>†</sup> -	NA	NA	NA	0.5%	1.3%	0.8%	0.6%	1.0%	2.3%	1.0%	0.9%	0.9%
4. In Process <sup>‡</sup> -	NA	NA	NA	2.9%	2.7%	0.7%	0.3%	1.8%	1.8%	2.0%	1.8%	2.3%
5. With Medical Exemptions -	0.5%	0.3%	0.2%	0.4%	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%	0.2%	0.1%
6. With Religious Exemptions -	0.3%	0.3%	0.2%	0.3%	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
7. With Personal Exemptions <sup>**</sup> -	NA	NA	NA	0.2%	0.1%	0.5%	0.4%	0.3%	0.4%	0.5%	0.6%	0.6%
8. Immunization Against -												
Measles	88%	92%	93%	97%	97%	99%	98%	98%	97%	97%	97%	97%
Rubella	88%	92%	93%	96%	97%	99%	98%	98%	97%	97%	97%	96%
Mumps*	NA	NA	NA	NA	NA	NA	98%	98%	97%	97%	97%	97%
Polio(3+doses)	80%	86%	87%	95%	96%	98%	98%	97%	97%	97%	97%	96%
DTP(3+doses)	84%	89%	90%	95%	96%	99%	98%	98%	97%	97%	97%	96%

*8 percent before personal beliefs*

*8 percent right up to 3 years after*

† Indicates the percent of children who have not received at least the first dose of required vaccine for their age.  
 ‡ Indicates the percent of students who are "on schedule" for DTP/Td and/or polio and will be required to receive one or two doses at a later date.  
 \* Mumps was added as a requirement for kindergartners beginning with the 1983-84 School Year.  
 \*\* Component of the Student Immunization Law passed in 1980. All other categories were components of the previous Checkpoint Law passed in 1975.

January 26, 1990

**HUGH DOWNS:** Good evening. I'm Hugh Downs.**BARBARA WALTERS:** And I'm Barbara Walters. And this is 20/20.**ANNOUNCER:** From ABC News, around the world and into your home, the stories that touch your life. With Hugh Downs and Barbara Walters, this is 20/20. Tonight, police tactics in Florida.**ROBERT VOGEL, Sheriff, Volusia County, Florida:** We're dealing with a situation that is a drug war.**ANNOUNCER:** You could be stopped on a pretext, put at ease, then casually asked—**Sgt. DALE ANDERSON, Volusia County Sheriff's Department:** By the way, sir, you're not carrying any illegal narcotics or firearms or anything in the car, are you? Do you mind if I search?**ANNOUNCER:** All the while, you're being videotaped, bugged, tricked and outsmarted. Drug dealers are the target, but who's being stopped?**DAN R. WARREN, Defense Attorney:** So every Black that was driving down the highway was subject to being stopped if he was between the age of 20 and 50 and was wearing gold or cowboy shoes.**ANNOUNCER:** Tom Jarriel reports, tactics that work versus your basic rights. Should you "Beware of I-95"?

Out cruising, the cars, the kids, the scene. And the deafening roar. Superloud car stereos. Some people warn of hearing damage, others just plead for mercy.

**PEDESTRIAN:** At 12 o'clock at night, you can't even sleep.**ANNOUNCER:** What counts is—**BOOMER:** It's going to sound like a live concert right on your dash.**ANNOUNCER:** And that's what they want to hear. John Stossel, cruising for "Booms in the Night."

Also, a medical mystery.

**KAY FOX, former Nurse:** It's like going into a dark tunnel and you can't find your way out.**ANNOUNCER:** The victims can suffer fever, exhaustion, arthritis. What seemed like isolated cases became a pattern, reactions to a vital vaccine.**LYNN SHERR:** This FDA printout shows reactions occurring almost exclusively among women over 20.**ANNOUNCER:** A small group may be at risk, but has the risk been ignored? For some, this could answer the question, "Why Am I So Sick?" Those stories tonight, January 26, 1990.

## Why Am I So Sick?

**DOWNS:** We begin, facing a dilemma. We want to warn you about potential dangers from a vital vaccine, but at the same time, not trigger panic or fear. Now, what most of know as German Measles doctors call rubella. For children, it's a relatively mild disease. But as you'll see, when it strikes pregnant women, the effects can be tragic.**WALTERS:** Over the past 20 years, rubella vaccine has been a tremendous success. The problem with the vaccine does not affect children. They are not endangered. But Lynn Sherr shows us that among adult women who receive the

rubella vaccine, a small percentage may develop severe complications and that isn't widely known.

**LYNN SHERR:** *[voice-over]* Coeur d'Alene, Idaho. Imagine living in this rugged Northwest town and suddenly having to give up hiking the mountains because you are too weak to leave the house. Imagine living in a body that no longer obeys, all because of a vaccination against rubella. That's what Kay Fox says happened to her.**KAY FOX, former Nurse:** The whole thing's been a nightmare. It's like going into a dark tunnel and you can't find your way out.**SHERR:** *[voice-over]* York, Pennsylvania, different setting, same symptoms. Two women, one a doctor, one a nurse, claim the rubella vaccine gave them severe side effects from which they may never recover.**ANNA KLINEDINST, former Nurse:** It's like my life is on hold and how long is going to be on hold?**SHERR:** What do you think will happen?**Dr. JOANNE HATEM, Gastroenterologist:** My sense is that I will die from complications of the vaccine, either directly or indirectly. But I can't honestly say to you, as a physician, that that's a rational feeling. But in my heart, that's what I think will happen because the changes that I've been through have been that profound.**SHERR:** *[voice-over]* Vancouver, Canada. Medical researchers here conclude that adult women receiving the vaccine are not adequately informed about its risks.*[on camera]* For children, the rubella vaccine has been enormously safe and effective, but this report is not about children. This is about the potential dangers of the vaccine when used by some adults, specifically adult women. Ironically, they are the very group most in need of protection against rubella.*[voice-over]* Why? Because children of pregnant women who catch rubella can have catastrophic birth defects. Yolanda Shaw was born to a mother who contracted rubella during pregnancy. She is deaf and blind and has mental retardation, a victim of congenital rubella syndrome. Seventy percent of the women who get rubella while pregnant are at risk of having congenital rubella babies. Yolanda just turned 21, born a year before the vaccine against rubella became available.**GWENDA SHAW, Mother:** Every birthday was always held at the hospital. When Yolanda was between 10 and 12, she still wasn't toilet-trained and she was just like a little vegetable. So I never could see her in her pretty little Easter clothes and playing with dolls and those kind of things that little girls do. If there had been a rubella vaccine, I would have taken it.**SHERR:** *[voice-over]* Expectant mothers who have received the vaccine are no longer threatened with congenital rubella babies. The disease has declined 96 percent over the last decade, with only four cases reported to the Centers for Disease Control in 1988. And with mass inoculation protecting each new generation, rubella itself — German Measles — is on the verge of being wiped out.

Most states require rubella immunity for elementary admission, 13 states for a marriage license. Thirteen states require it for college admission. Yet even with these vaccination policies in force, an estimated one in five women of childbearing age is still not protected against rubella. To help close the gap, medical experts have been targeting health care workers. Many nurses and other hospital staffers are either encouraged or required to get rubella vaccinations.

But in these clusters of vaccinated adult women, you can also see the potentially dangerous downside of the vaccine. Dr. Joanne Hatem is a gastroenterologist whose rubella vaccination five years ago was mandatory.

**Dr. HATEM:** Two days later, I developed a fever of 102 and a week after that, arthritis. And about two weeks following that, profound fatigue. And then the symptoms have just continued since that time, which was July of '84.

**SHERR:** How frequently since then have you felt the symptoms?

**Dr. HATEM:** Every day. They do vary in intensity, but every day since then, my life has been different.

**SHERR:** [voice-over] Anna Klinedinst was a nurse at the hospital where Dr. Hatem now works. Since she got the vaccine in October of 1988, she's had the same long-term symptoms other women described to us: muscle ache, rash, exhaustion, severe joint pain. After five attempts to return to work, she had to give up and collect disability.

**Ms. KLINEDINST:** It's very frustrating to have joint pain all the time. I'm always in pain.

**SHERR:** I see a rash on your chest and throat right now. Is that the rubella rash?

**Ms. KLINEDINST:** Yes. I'm not feeling really well today. I have a low-grade fever and my joint pain has worsened and I do have a slight sore throat and my lymph nodes are up and then the rash will appear.

**SHERR:** [voice-over] At this hospital in Coeur d'Alene, Idaho, Kay Fox got the vaccine while a nurse here in 1983.

**Mrs. FOX:** I feel physical exhaustion with any activity, burning, aching muscle pain.

**SHERR:** [voice-over] Her condition got so bad, she, too, had to quit work. And as the bills mounted over five debilitating years, her family had to sell off most of their small cattle herd to make ends meet. But most frustrating and frightening for the Fox family was not knowing what was wrong.

**Mrs. FOX:** At first, there was anger, but then mostly frustration set in and desperation.

**SHERR:** For two years, Kay Fox was sent from doctor to doctor in a frustrating attempt to get an accurate diagnosis of what was going wrong inside her body. Then, in 1985, she was referred here to Vancouver. A prominent Canadian immunologist at the University of British Columbia had been studying just the same kinds of symptoms she'd gotten. He had seen many cases just like Kay Fox's before.

**Dr. AUBREY TINGLE, University of British Columbia:** We are following now somewhere around 120 adult females who have developed similar long-term joint and neurologic symptoms after the natural infection or the vaccine, and some of them as long as 15— and the longest we're following is now 19 years.

**SHERR:** [voice-over] Dr. Aubrey Tingle has been studying the effects of rubella and the vaccine for more than a decade and has published findings in numerous medical journals. A professor at the University of British Columbia, he is also director of the research center at BC's Children's Hospital. When Kay Fox's blood sample was sent here, Dr. Tingle's group, working with virologist Dr. Janet Chantler, recognized the problem immediately and were able to isolate the rubella virus.

**Dr. JANET CHANTLER, University of British Columbia:** What we think is going on is that women who become vaccinated against rubella, a proportion of them, develop chronic infections with the virus. So, following immuniza-

tion, the virus is not eliminated as it would normally be, but sets up a persistent infection.

**SHERR:** [voice-over] That condition is called "chronic rubella viremia" and research here suggests it can develop in a significant proportion of women receiving the vaccine.

**Dr. TINGLE:** In our studies, four to five percent have developed recurrent problems after the vaccine.

**SHERR:** [voice-over] The studies here in Vancouver are the longest done to date on the vaccines and long-term problems in adult women. But we found hints of similar problems in a number of key medical journals. For example,

[on camera] *Infection and Immunity*, May of 1982. "Important questions remained unanswered about the safety and efficacy of the vaccines."

[voice-over] As the research started to come in warnings packaged with the vaccine were changed to caution patients that arthritis-type reactions could last, on rare occasions, for years. But in 1983, when Kay Fox got her inoculation, the warnings predicted any arthritis reaction would be short-lived.

**Mrs. FOX:** From that, I assumed that I might have some achy joints — fingers, knees, whatever — for just a short time and then it would go away. I never dreamed that I could have the complications that I have now.

**SHERR:** [voice-over] After she and her family suffered for two years and after her diagnosis by Dr. Tingle, Kay Fox sued the vaccine's manufacturer, Merck, Sharp and Dohme. She claimed the real risk of the vaccine and the crippling of her lifestyle had not been correctly represented. Merck, Sharp and Dohme turned down repeated requests by 20/20 to discuss the vaccine on camera, but they say it's safe, tested and approved by the FDA, with no evidence of an alarming number of adverse reactions. Still, critics point out that many doctors aren't familiar enough with the symptoms to diagnose a reaction.

**Dr. HATEM:** The risks have been minimized for a number of reasons and one reason back to the fact that physicians don't believe this is an entity. So unless someone is very, very sick and debilitated, those cases are never reported. Lots of women develop chronic arthritis following the vaccine and their physicians tell them it's not related to it and that's that.

**SHERR:** And even the FDA admits that adverse reactions are rarely reported. This FDA brochure says, "Fewer than 10 percent of doctors report reactions they've observed and even these report only a fraction of what they've seen." As for the adverse reactions that are reported, they point to a definite pattern. page after page of this FDA printout shows reactions occurring almost exclusively among women over 20.

[voice-over] And that pattern has been clear to Merck. Concerns about reactions in women turn up repeatedly documents we've obtained about the original strain of the vaccine. Merck believed the adult women reaction would be minimized since public health policy was aiming the vaccine primarily at children. But women soon became an important secondary target and in 1979, Merck switched to a strain considered more effective and somewhat less reactive.

Still, of nearly 10,500 people tested for FDA licensure, only some 360 were adult women monitored for six weeks, enough to satisfy FDA requirements but, according to Kay Fox's attorneys, not enough to spot potential long-term reactions.

**MIKE VERBILLIS, Attorney:** How can you expect a company to detect

whether or not there are any chronic medical problems if their clinical trial protocol only tests women for 42 days? That's silly.

**SHERR:** *[voice-over]* Further, documents in trial testimony from a previous case against Merck in Alaska reveals several women were still suffering from joint problems when the studies were stopped. Another Kay Fox attorney, Allen McDowell, claims Merck didn't find long-term reactions because they didn't look for them.

**ALLEN McDOWELL, Attorney for Kay Fox:** They just stuck their heads in the sand and didn't pay any attention. And then they didn't do the follow-up. Merck never did do any follow-up with those women.

**SHERR:** *[voice-over]* In fact, a letter from Merck to an Australian doctor admits not all cases were followed up. "Our adverse experience files cannot be considered to be complete and it is possible that rare long-term reactions may not be reported to us." With the manufacturer itself ignorant of the consequences, little wonder most physicians may also be unaware of the vaccine's potential to cause long-term reactions.

*[interviewing]* Isn't that a dangerous situation? I mean, we're talking about a vaccine that is very widespread.

**Dr. TINGLE:** I believe more people in the medical community should know about it. I think it's very important that some long-term, careful follow-up studies have to be done on this patient population.

**SHERR:** *[voice-over]* Doctors at the Centers for Disease Control, the federal agency that monitors diseases and their prevention, say they're aware of very few serious reactions. They suspect Dr. Tingle's research, showing a four to five percent chronic reaction rate, overstates the danger.

**Dr. WALTER ORENSTEIN, Centers for Disease Control:** I have spoken with Dr. Tingle and I respect him very much as a very prominent researcher. I believe that rubella vaccine, on occasion, can be associated with chronic joint abnormalities, as reported. But in terms of significant problems, we would say it's rare. Our best assessment of the situation today is that the persistence and the problems are a rare event, but they are an event.

**SHERR:** *[voice-over]* It's important to point out that Dr. Tingle's findings suggest that chronic rubella viremia can also develop from rubella itself, with reactions even more numerous and severe than for women who get it from the vaccine. That puts women not yet immune in a Catch-22. The vaccine may be risky, but the risk is even higher if they catch rubella and no one wants to see the inoculations stopped.

**Dr. ORENSTEIN:** If immunization levels decrease, then I am very concerned that we're going to have babies born in this country with substantial birth defects: heart disease, mental retardation, blindness, deafness and a variety of other factors. I would hate to see that happen again.

**Dr. TINGLE:** I think all vaccines have to be evaluated on a risk-benefit balance and if the balance with the rubella vaccine currently is very clearly on the favorable side, that does not say that you can't improve the vaccine.

**SHERR:** *[voice-over]* Another milder strain of rubella vaccine does exist. It's available in Europe, but has yet to be marketed here.

**Dr. CHANTLER:** I would like to see a second vaccine brought in which had been tailored to the needs of that adult female population. I feel we've lost ten years already, but ten years ago, the vaccine companies knew that there was a problem in older women with the vaccines that were currently available.

**SHERR:** Do you think they've been ignoring the problem?

**Dr. CHANTLER:** Yes.

**SHERR:** *[voice-over]* Merck says there is no problem to ignore, that chronic symptoms may be due to factors other than the vaccine. And, they say, adverse reactions are rare and short-lived, far outweighed by the vaccine's benefits: protecting women from rubella, protecting their children from congenital rubella syndrome.

**Mrs. SHAW:** To have a vaccine to keep this from happening to someone is really, you know, is really a Godsend.

**Ms. KLINEDINST:** I do realize that it's important inoculate people and I would not want that to stop. But now, on a personal level, I know that my life has been disrupted very greatly.

**SHERR:** *[voice-over]* Exactly how many women have been adversely affected by the vaccine is a question in debate, both in medical research labs and now in the courts. The Kay Fox case in Idaho was settled without a trial last fall. Approximately a dozen similar cases are in various stages of litigation across the country.

**WALTERS:** Lynn, most women of childbearing age probably had the vaccine as children. Do they then need to have it again?

**SHERR:** Well, Barbara, rubella has been drastically reduced since the vaccine was first introduced. But it's still out there, so we do need protection. If you had the disease itself as a child or if you were immunized, you are probably immune for life. If you're not sure, you can be tested. It's a simple blood test.

If you don't have immunity, the CDC recommends that all women particularly who want to have a baby get themselves vaccinated with this.

**WALTERS:** Despite the potential consequences?

**SHERR:** Well, you know, so far the adverse reactions have been mostly in adult women and in older adult women. The idea is get the children vaccinated so there's no problem later and women should be vaccinated as early as possible.

**WALTERS:** What about coming up with a better vaccine that doesn't have consequences?

**SHERR:** Well, clearly, that's what a lot of medical people would like to see. The CDC, the federal agency, is going to be meeting next month — its regular review of rubella — and foremost on the agenda is adverse reactions in adult women.

**WALTERS:** But give it to the children and if you do get the reactions, at least now you will know what it is.

**SHERR:** Absolutely.

**WALTERS:** Thanks, Lynn.

**DOWNS:** Well, next, feel what it's like to be pulled over by a Florida sheriff. In lighting the drug war, this unit stops dozens of cars daily. What happens when they do is fascinating to some and frightening to others. Tom Jarriel puts you on I-95. Don't miss this.

*[Commercial break]*

## Beware of I-95

**WALTERS:** Have you ever been pulled over by a patrol car? It can be a scary feeling. Well, in a moment, you're going to see dramatic videotape of people being pulled off a stretch of Florida highway. What happens to them frames a hot issue. Are our police handcuffed in fighting the drug war? Do laws meant to protect our basic rights actually defeat effective law enforcement? Well, some people think so, President Bush among them. This week, he criticized what he