SB

286

Alaska Public Health Association

P.O. Box 9-1825 • Anchorage, Alaska 99509

March 9, 1992

Ms. Arliss Sturgulewski, Chairman
Senate Health, Education and Social Services Committee
Senate
State Capitol, Juneau, AK 99801-1182

Dear Senator Sturgulewski:

I understand that the Senate Health Education and Social Services Committee is currently considering the following Bills which are of great interest to the Alaska Public Health Association (ALPHA):

Senate Bill 286, Immunization, Minors
Senate Bill 290, Access, Children, Preventive Health

The membership would greatly appreciate your consideration of ALPHA's position on the Bills as your committee does its work.

SENATE BILL 286 IMMUNIZATION, MINORS

ALPHA opposes enactment of Senate Bill 286, "an Act relating to the immunization of minors". Many people believe that the vaccine-preventable diseases of childhood, measles, mumps, rubella, diphtheria, pertussis, and polio are a thing of the past, and some might even believe that they no longer exist. Except for smallpox, which was eradicated from the world in 1977, those diseases do still exist, but in relatively smaller numbers than in the past. The decline in the incidence rates of childhood diseases is largely attributable to the development of effective vaccines. Twenty-one thousand cases of paralytic polio were reported in the USA in 1952; now, fewer than 10 cases are reported each year. Cases of diphtheria peaked at 207,000 in 1921; four cases were reported last year. During 1990, nearly 28,000 cases of measles were reported in the United States, 18 times the number reported in 1983, and at least 89 people died of measles.

Alaska's current Immunization Program traces its roots to the epidemics of diphtheria and measles in Alaska in 1975 and 1977. Investigation of the measles epidemic in 1977 showed that it occurred because Alaska's school immunization law was not being enforced and children were not being vaccinated. A massive, state-wide vaccination program was effective in stopping the epidemic. Since March 1, 1977, the day care and school immunization regulations have been enforced with great success.

Senate Bill 286 (SB-286) would amend Alaska's school immunization law to allow parents and guardians to exempt their children from all childhood vaccinations merely by stating in writing that their personal beliefs are contrary to immunization. In addition, subsection (c) places decisions about when and how long to exclude unimmunized children from schools during outbreaks of vaccine preventable diseases, in the hands of school administrators and private physicians rather than in the hands of experienced public health authorities. The Alaska Public Health Association is strongly opposed to the adoption of SB-286 because it proposes to weaken a law which, diligently enforced since 1977, has been extraordinarily effective in making Alaska schools safe from vaccine-preventable diseases.

In early 1990 Alaska experienced its largest measles outbreak in 20 years. The epidemic originated in Ketchikan and spread within three weeks to Barrow. Eighty children and adults were affected; one infant died. A remarkable fact about this epidemic is that there was absolutely no evidence of measles transmission within schools, even in Ketchikan where 42 cases occurred. In contrast, in May 1973, before the school immunization law was stringently enforced, Ketchikan recorded an outbreak of 64 measles cases, all of whom were school aged children. It is only because of the high levels of compliance with the state immunization law and the resulting low levels of preventable diseases, that anyone can even <u>consider</u> allowing a personal beliefs exemption to mandated childhood immunizations.

The success of an immunization program depends upon what is known as "herd immunity": the more people in a community who are immune to a disease, the more difficult it is to introduce that disease into the community. If a group of people who have <u>all</u> been vaccinated against a disease such as measles are exposed to a person who has measles, few or none of those people would contract the disease. In such a situation, a substantial disease outbreak, or epidemic, cannot occur. However, if immunization levels in a community drop, then there are more people susceptible to the disease, and the disease again becomes a potential threat to the community.

It is important to understand also that vaccines are not perfectly protective; not every child who is fully vaccinated against a disease becomes immune to it. Sometimes the vaccine doesn't "take." The percentage of people who are fully protected by administration of a vaccine differs for each vaccine. It is estimated, for example, that between 80% and 90% of persons who receive the full series of diphtheria-tetanus-pertussis (DPT) shots are adequately protected from these diseases. This means that 10-20% of people who have been vaccinated are still susceptible to these diseases.

Parents who elect not to have their children vaccinated put their own children at risk of acquiring such diseases as diphtheria, pertussis, and measles. This would remain a private, personal choice if it had no potential effect on other members of the community. However, because vaccines do not perfectly protect all children who are vaccinated, children who are not vaccinated and who become ill with a vaccine-preventable disease do pose a threat to other members of the community. For this reason, the personal beliefs exemption becomes a significant public concern and not simply an issue of personal choice.

In order for a vaccine to be useful, its benefits must outweigh its risks. Although vaccines are extremely effective in preventing certain diseases and their complications, they are not without side-effects. The side-effects, or adverse effects, associated with vaccine administration may be mild or severe. However, permanent, serious adverse effects associated with vaccines are rare. DPT vaccine, particularly the pertussis component, has for years been attacked as an unsafe vaccine. Massive research activities have been conducted world-wide, predominantly in the United States and Great Britain, to determine the nature and frequency of side-effects associated with DPT vaccination. The National Childhood Vaccine Injury Act (Public Law 99-660), passed by the U.S. Congress in 1986, called for a review of possible adverse consequences of pertussis and rubella; this led to the establishment in 1989 of the Committee to Review the Adverse Consequences of Pertussis and Rubella Vaccines. The results of the committee's review and analysis of all available, pertinent medical and scientific literature were published this year (Adverse Effects of Pertussis and Rubella Vaccines, National Academy Press, Washington, DC, 1991). They concluded, in part, that (1) there is insufficient evidence to indicate any causal relation between DPT vaccine and permanent neurologic damage, and (2) available scientific evidence is consistent with a causal relation between DPT vaccine and acute encephalopathy (an inflammatory brain condition), with an estimated range of risk between 0.0 and 10.5 occurrences per million immunizations. In contrast, natural pertussis disease is complicated by encephalopathy once in every 250 cases. The use of DPT vaccine has resulted in a 93% decline in the number of cases of this potentially fatal disease during the past 50 years. The vast majority of scientists, physicians, and public health officials believe that the benefits of immunization far outweigh the risks.

The Alaska Public Health Association opposes SB-286 because it seeks, without substantial medical justification, to weaken our state's effective school immunization law, a law whose diligent enforcement has minimized transmission of serious illnesses in Alaska's schools for the past 15 years. ALPHA urges you and other committee members to vote against passage of SB-286.

SENATE BILL 290, ACCESS, CHILDREN, PREVENTIVE HEALTH

ALPHA opposes Senate Bill 290, "an Act relating to access for children to preventive health services; and providing for an effective date". ALPHA does not support this Bill for the following reasons:

1.) The intention of this Bill is to create a nonprofit public corporation within the Department of Health and Social Services to "facilitate a program to bring preventive health care services to children" by cooperating "with existing preventive service programs funded by the public or the private sector". The vague notion of coordinating existing programs hardly seems to warrant the establishment of a new state bureaucracy.

2.) The newly established corporation would be seriously handicapped in its mission since it provides no new services for children, nor dies it expand or improve upon any existing services. It has no cost containment features, no focus on the improvement of rural services, and intends to fully utilize the extremely inefficient services of the private health insurance industry.

In summary ALPHA opposes Senate Bill 286 and Senate Bill 290 and urges you and your committee members to vote against enactment of these Bills. Thank you for consideration of this matter.

Sincerely yours,

Debra Caldera for

Bill Dann, President
Alaska Public Health Association

Lavare Moffit (801) 944-9861
9344 So. Sunset Ridge Circle
Sandy, Utah 84092

please notify if immunization bill surfaces again.

let him know no action was taken at 11:55 mtg. & that most of the testimony was in opposition to the personal exemption

3:05
8/15

Linda Snow 465-3997

Leg. Research

4AAC 06.055

Sections 2 & 3

allows exemptions in regul.

not philosophical, just medical & religious

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would you like her to focus just on philosophical since the others are already there?

Alaska State Legislature

Legislative Research Agency

P.O. Box Y
Juneau, AK 99811-3100
Phone: (907) 465-3991
Fax: (907) 463-3351

August 26, 1991

MEMORANDUM

TO: Senator Arliss Sturgulewski

FROM: Linda J. Snow
Legislative Analyst

RE: **Recent Developments in Laws Affecting Immunizations of Minors**
Research Request 92.021

You asked for information about recent developments in other states concerning mandatory immunization of minors attending public schools, and exemptions from those requirements. You were particularly interested in developments in philosophical or personal belief exemptions from mandatory immunization of school children.

According to a recent survey of the 50 states' mandatory childhood immunization laws prepared by the Centers for Disease Control (CDC), U.S. Public Health Service, all 50 states allow medical exemptions from mandatory immunization, with the exception of Mississippi and West Virginia all allow exemptions for religious reasons, and 20 states allow exemptions for philosophical or personal reasons.[1] We interviewed public health officials in six of the 20 states which allow exemptions on the grounds of philosophical or personal beliefs, as well as officials in those two states which recently eliminated philosophical exemptions from their laws. Relevant statutes of the six states contacted (Arizona, California, Colorado, Minnesota, Utah and Washington) which currently allow philosophical exemptions are included as Attachment A. Montana and Delaware recently eliminated philosophical reasons as allowable exemptions to childhood immunization requirements in public schools.

Common Elements of State Laws

State mandatory childhood immunization laws are structured similarly in the states our research encompassed. In general, state laws applied to public school enrollment, though many also applied to private schools, day care

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[1]The 20 states which currently allow exemptions from mandatory childhood immunizations for philosophical or personal reasons are Arizona, California, Colorado, Idaho, Indiana, Louisiana, Maine, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, Utah, Vermont, Washington and Wisconsin.

centers, and postsecondary education facilities. Three elements are common to these state laws: 1) admission to educational institutions is conditional upon compliance with mandatory immunization laws; 2) allowable exemptions from mandatory immunization are defined; and 3) reasons for exclusion from attendance are delineated.

In most cases, a child's admission to an institution is conditional upon presenting either a medical record of immunization, medical proof of immunity from specified diseases, or an authorized exemption form. Reasons for exemption from immunization may include physical or medical circumstances, religious beliefs, philosophical or personal beliefs, and provisional exemptions which allow a period of time for compliance when a child is new to a school system. Exclusion from school attendance may occur because the requirements of conditional admission to the facility have not been met and/or when children who have been exempted from immunization are subject to infection due to an outbreak of a communicable disease. Although not always codified in state law, this last condition for exclusion from school attendance generally exists in state public health policy.

Policy of National Organizations

Mr. Bob Snyder, public health advisor with the Vaccination Project, CDC in Atlanta, Georgia, stated that the CDC opposes philosophical exemptions to mandatory immunization requirements in public schools because the exemptions are believed to be open-ended and vulnerable to abuse. Because exclusion from school attendance or quarantine may result in several months of missed school for unvaccinated children during an outbreak of infectious disease, the CDC supports a model law for mandatory childhood immunizations which does not include an exemption for philosophical or personal beliefs.

According to Dr. John Middaugh, chief of Epidemiology in the Alaska Department of Health and Social Services, the American Association of Pediatrics has recommended that states eliminate not only philosophical belief exemptions to mandatory immunization, but religious belief exemptions as well.

States Which Allow Philosophical Belief Exemptions

Arizona. Arizona state law allows exemptions from mandatory immunization for medical, religious, philosophical and provisional reasons. The law requires exclusion from school attendance for noncompliance but does not codify exclusion or quarantine during infectious disease outbreaks. However, an Arizona attorney general's opinion states that children with a religious exemption may be excluded from attendance in the case of an outbreak of measles. According to Dr. Sands of the Arizona Department of Health Services, the state recently changed the law to state that admission to public school is conditional to compliance with state immunization laws. The department requested the change because the old law was considered unenforceable and

inadequate to protect school-aged children. Dr. Sands stated that Arizona courts have upheld the legality of exclusion practices during the outbreak of infectious diseases.

California. State law in California allows medical exemptions, personal exemptions (which incorporate both religious and philosophical reasons), and provisional exemptions to mandatory immunization. The law also establishes authority to exclude children for noncompliance and to exclude exempted children during infectious outbreaks. Marcy Jones, health promotion consultant for the California Department of Health Services, stated that philosophical exemptions to mandatory school immunizations are not abused in that state. Of 500,000 California children enrolling in kindergarten this year in California, 439 children (.088 percent) had medical exemptions and 2,700 children (0.54 percent) had personal belief exemptions.

Colorado. Colorado state law allows medical, religious and philosophical exemptions to the mandatory immunization law, but does not codify provisional exemptions. However, provisional exemptions are allowed without statutory authority. Exclusion from attendance is allowed for noncompliance and during infectious outbreaks. Ms. Judy Conner, director of Immunization in the Colorado Department of Health stated that 97 percent of children enrolling in that state's public school system are immunized. Of those not immunized, 0.1 percent have medical exemptions, 0.2 percent have religious exemptions, 1.1 percent have personal belief exemptions, and 1.6 percent are provisionally exempt because they are newly enrolled in Colorado public schools and have 60 days to comply with immunization requirements. Ms. Conner did not believe that any of the exemptions were being abused.

Minnesota. State law in Minnesota allows exemption from mandatory immunization for medical reasons and personal reasons (which include both religious and philosophical reasons). The law does not authorize provisional exemptions, nor does it allow for exclusion from attendance for noncompliance or during infectious outbreaks. That state has an unwritten policy to exclude unvaccinated children from attending classes during an infectious disease outbreak, and no court cases in Minnesota have challenged that policy to date. According to Cheryl Norton, immunization program representative for the Minnesota Department of Health, there is no abuse of the personal belief exemption from mandatory vaccination in Minnesota public schools.

Utah. Utah state law allows medical exemptions, personal belief exemptions (which incorporate both religious and philosophical reasons), and provisional exemptions to mandatory immunization. The law allows exclusion from classes for noncompliance. According to Mr. Rick Crankshaw, immunization program director with the Utah Department of Health, the state legislature is currently attempting to eliminate existing personal belief exemptions (while still allowing religious belief exemptions) to mandatory public school immunization laws. The pending legislation was prompted by an outbreak of measles in a Utah community in 1990 in which 67 of the 125 recorded cases could be traced directly to children with personal belief exemptions from mandatory

immunization. While not in statute, state regulations call for exclusion and quarantine of unvaccinated children. However, it is Mr. Crankshaw's belief that by the time exempted children are excluded, they have already been exposed to the infectious disease.

Mr. Crankshaw believes that the mandatory immunization law would not have passed in Utah without the personal belief exemption and that eliminating that exemption from the law will be difficult. However, it is his opinion that the personal belief exemption is a handicap to the mandatory immunization law. Mr. Crankshaw stated that 1.9 percent of students entering public school in Utah have exemptions from mandatory immunization, and 75 percent of those exemptions are for personal beliefs. State law requires either a record of immunization, medical proof of immunity or a valid exemption form for enrollment in public school. Mr. Crankshaw feels that the personal belief exemption may be abused in that often parents will sign a personal beliefs exemption form if they cannot immediately locate immunization records. Although these children have been protected by vaccination, they may unnecessarily be excluded from attendance to school.

Washington. Washington state law allows medical, religious belief, and personal belief exemptions to mandatory vaccination. State statutes allow exclusion only for noncompliance with the law, but state policy advocates exclusion in the case of an outbreak of infectious disease. Walt Lasota, senior health advisor in the Washington Department of Health, stated that Washington has experienced outbreaks of measles among groups of people who philosophically object to mandatory immunization of children. He feels that exclusion from classes is the price one pays for not vaccinating.

States Which Have Eliminated Philosophical Belief Exemptions

Delaware. In 1984, the Delaware state legislature eliminated philosophical beliefs as a basis for exemption from mandatory immunization of public school children. According to Edith Vincent, state supervisor of Health Services and Health Education in the State Department of Public Instruction, that department had recommended allowing only medical exemptions. The recommendation was based on a study of costs to educate children who had been handicapped or severely debilitated by infectious disease conducted by the Delaware Department of Public Instruction. However, an organized religious group in that state supported the exemption on religious grounds, and it was kept in the law. The state's current religious exemption is broader than most, and nearly encompasses philosophical beliefs by stating that children may be exempt if their parents' or guardians' "individual religious beliefs reject the concept of immunization," thereby eliminating the need for belief in an "organized" religion with established tenets.

Montana. According to Dick Paulsen, program manager for the Montana Immunization Program in the Montana Health and Environmental Services Department, that state eliminated the philosophical exemption from mandatory

immunization of public school children in 1988. There was no opposition in the legislature to this change. Large outbreaks of measles in the state directly related to children with personal beliefs exemptions in the prior year prompted the legislation. Whole communities protested the exemptions and supported the change.

Mr. Paulsen stated that he believes 95 percent immunization (the rate prior to the change in Montana law) is not enough to stop the spread of measles.[2] He believes that the personal beliefs exemptions were abused because many times when children with personal exemptions were excluded from school during infectious disease outbreaks, the parents would immunize and return the children to classes. The 1988 legislation allows for exemptions on religious grounds; however, an affidavit must be signed each year for the exemption to be valid. Mr. Paulsen stated that his department rarely receives calls (about one call per year) from parents complaining about the lack of a personal belief exemption.

The Alaska Experience

Dr. John Middaugh, chief of Epidemiology in Alaska's Department of Health and Social Services stated that Alaska's childhood immunization program is one of the most successful in the country. We now immunize 99 percent of school-aged children and have had no infectious disease outbreaks since 1976. There were recently two cases of measles in the Fairbanks area, which were brought in from out of state by adults. After intensive surveillance, it was determined that the infection had not spread to any other residents of the state. Dr. Middaugh attributes this to Alaska's immunization program.

A Legal Perspective

Attachment B contains a May 1991 article from the *National Law Journal* entitled "Rights of State and Family Clash In Forced-Immunization Cases." The article mainly addresses court cases involving absence of immunization or other medical care for children because of the parents' religious beliefs. Although all states but two allow exemptions from mandatory immunization on a religious beliefs basis, that basis has not held up well in state or federal courts.[3] The court cases pit the first amendment clause of free exercise of religion and the 14th amendment due process clause (which provides parental rights to raise

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[2]The vaccine for measles is only 95 percent effective. If only 95 percent of the school children are immunized, this effectively means only 90 percent of the children are immune.

[3]It could be argued that religious grounds are stronger than philosophical grounds. Personal belief exemptions would likely fare worse in the courts if challenged.

their children without state intervention) against the state's power to protect a child's interests (*parens patriae*). In *Prince v. Massachusetts*, the U.S. Supreme Court stated *in dicta* (not binding in subsequent cases) "[t]he right to practice religion freely does not include liberty to expose the community or the child to communicable disease or the latter to ill health or death." According to the article, state courts have consistently held that intervention to protect the health of a child is justified. The U.S. Supreme Court recognized the states' power to require vaccinations in *Jacobson v. Massachusetts*, stating that mandatory vaccinations did not interfere with personal liberty. Maryland state law allows that the Secretary of Health may declare an emergency or epidemic, and under these conditions, children may be immunized over the objections of their parents.

Synopsis

Twenty states allow philosophical or personal belief exemptions to mandatory childhood immunizations. Both the Centers for Disease Control and the American Association of Pediatrics are opposed to philosophical belief exemptions, and court cases on both the state and national level seem to indicate that the courts do not believe religious or philosophical reasons are adequate to warrant endangering a child's health by refusing to immunize.

Of the six states contacted which allow philosophical or personal belief exemptions to mandatory childhood immunization, only one (Utah) believed the exemptions were being abused. Montana public health officials cited abuse as one reason for eliminating the personal belief exemption from Montana law in 1988. All states interviewed practice exclusion of unvaccinated children from classes during outbreaks of communicable diseases with authority from either state laws or public health policy. Thus, it appears that children who are not immunized are subject to the risk of contracting infectious disease and the risk of being excluded from classes during outbreaks.

Included as Attachment C is the CDC report entitled "State Immunization Requirements 1989 - 1990." I hope this information is helpful to you. If you need further assistance, feel free to call this office.

Attachments

DEPARTMENT OF
HEALTH AND ENVIRONMENTAL SCIENCES

STAN STEPHENS, GOVERNOR

COGSWELL BUILDING

STATE OF MONTANA

FAX # (406) 444-2606

HELENA, MONTANA 59620

August 21, 1991

Linda Snow
Legislative Research Agency
P.O. Box Y
Juneau AK, 99811

Dear Linda,

Enclosed is information relating to Montana's dropping the philosophical exemption from the Immunization Law in 1989.

As I mentioned on the phone, there was no opposition, written or verbal, to removing the personal exemption. There was strong support from schools, hospitals, physicians and health officials for the removal of the personal exemption. I think the bill passed unanimously with no opposing votes in both the Montana senate and house.

The only group which was concerned with the proposed changes was a religious group who wanted to make sure they were still allowed a religious exemption. The conditions of the religious exemption, which appear in the law, were developed by the spokesman for the Christian Scientists. Parents who claim religious exemptions must submit a new, notarized religious exemption each year.

To my knowledge, there have been no problems faced by Montana school or health official in enforcing this law. I know of no phone calls or inquiries to our office this year from people who are upset with the immunization requirements.

Montana has not had a measles outbreak since the law was changed. This means that no one has imported measles to Montana residents and Montana has not exported measles cases to other states (including Alaska!).

I hope this information is useful. If you need more information, please call me at (406) 444-5580.

Sincerely,

Dick Paulsen, Manager
Montana Immunization Program

Enclosure

March 1989

MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES
FOR THE SENATE EDUCATION AND CULTURAL RESOURCES COMMITTEE

MONTANA IMMUNIZATION LAW TESTIMONY
HB 364

Chairman Hammond and Committee members, I am Dick Paulsen and I submit this testimony, as the manager of the Montana Immunization program, on behalf of the Montana Department of Health and Environmental Sciences.

The Montana Immunization Law has proven effective in reducing illness due to vaccine-preventable diseases in Montana School children. These proposed legislative changes are intended to reduce the potential for disease introduction into the school system and allow the county health officer the ability to determine appropriate control measures, including length of exclusion, during an outbreak. These changes are based upon our recent experiences with disease introduction and the continuation of outbreaks that have occurred in Montana since the enactment of the Montana Immunization Law in 1980. Proposed changes in the law include; 1) broadening of the application of immunization law from only K-12 schools to other educational settings that play an important part in disease transmission, 2) it defines "pre-school" for use in the law, 3) it includes mumps as a necessary vaccine, 4) it removes the personal exemption, 5) it removes the 30-day exclusion period for those excluded during outbreaks. The length of exclusion would then be determined by the county health officer who is responsible to determine what is necessary to control communicable disease outbreaks.

The bill was amended in the House to reinstate the religious exemption which the Department originally wanted to remove. The Glacier County measles outbreak in 1985 (137 cases) was started due to a religious exemption. The Department is willing to accept the amendment that puts the religious exemption back into the law as found in this bill. However, we will reassess our position with the next, legislature if if it is found that the religious exemption leads to future disease outbreaks in Montana.

The Department also favors the House amendment that removes the 30 day transfer period for immunization records which was, in part, responsible for the recent measles outbreak in Flathead County. This amendment was recommended by a school superintendent in Kalispell. The schools will now copy the immunization record and give the copy to the student. Allowing a 30 day period for the original copy of the record to be transferred is a sensible approach for both getting the record to the school and helping keep disease out of the school.

The personal exemption played an important part in starting the 1987 statewide measles where 127 measles cases occurred. It started in Great Falls and was initiated by a student with a personal exemption. Following the 1987 outbreak, a "measles critique" was sponsored by the Department which included six major health departments (Cascade, Missoula, Flathead, Lewis and Clark, Yellowstone, and Silver Bow Counties) and representatives from the Indian Health Service and the Centers for Disease Control in Atlanta, Georgia. From that critique came a strong recommendation to remove the personal and religious exemptions from the Immunization Law. The Department has also received communication from the County Health Departments and Montana Medical Association supporting a removal of the exemptions. Montana is in the minority of states that do allow philosophical (personal) exemptions. Presently, 28 states do not allow philosophical exemptions for school entry.

What actually happens during an outbreak demonstrates how the exemptions are being abused. During the recent outbreak in Flathead County, there were 15 Flathead County High School students that had claimed personal exemptions and two that had claimed religious exemptions for measles for school entry. Upon exclusion from school, due to the outbreak, all students had returned to school as immunized except for one student who stayed out for the entire period due to a religious exemption. In the Great Falls outbreak in 1987, there were 21 personal and 13 religious exemptions in the junior high and high schools in Great Falls. Once those students were excluded due to the outbreak, all except for three students returned to school immunized. It is easier for the parents to sign an exemption rather than to take action to immunize their child. This puts the rest of the school system and communities at unnecessary risk to vaccine-preventable diseases.

There have been ten measles or rubella outbreaks on college campuses in Montana since 1976. This includes outbreaks, since 1987, effecting with both universities at Bozeman and Missoula, Rocky Mountain College, Eastern Montana College, and Flathead Valley Community College. Remember, measles is most serious in adults. At Principia College (a Christian Science college) in Illinois, in 1985, there were three deaths in students due to measles. Since rubella has its most serious consequence related to pregnancy, it's very important to ensure that the college age group is well immunized against rubella. It has been extremely frustrating and difficult to stop measles outbreaks on college campuses when there is no required documentation of immunization for students.

College immunization requirements have been recommended by the Advisory Committee on Immunization Practices* (ACIP) since 1980 and the American College Health Association since 1983. The Board of Regents has recently developed a policy for implementing a measles and rubella immunization requirement for all students in the university system. The Department has met with the Commissioner of Higher Education several times and have agreed that the primary focus for the law, on prevention of vaccine preventable diseases in this population, is measles and rubella. Both of the Montana universities have already adopted similar requirements for entry. The proposed change in the law is intended to cover all post-secondary schools including those not in the university system. Post-secondary facilities have played an important part in measles outbreaks, not only in the United States but in Montana.

Mumps was not included in the original draft of the immunization law primarily due to the fact that the immunization program was not able to provide mumps vaccine to all school-aged children due to cost. The program now provides mumps vaccine in the combined MMR vaccine. MMR is the vaccine of choice and is received by all children when they receive measles and rubella vaccination. Including mumps in the law would not be difficult for schools as they already have information on mumps vaccine included on the immunization records.

*Note: The ACIP is the group which sets the standard for public health practices related to immunization in the U.S.

Pre-school and head start are also not included presently in the requirements for immunization laws and rules. There are some schools which have a pre-school within the school facility as listed in the Directory of Montana Schools published by the Office of Public Instruction. This is a dangerous mixture of potentially un-immunized children in a school setting.

Exclusion period being limited to 30 days in the law is contrary to what is recommended for outbreak control by the Centers for Disease Control. Un-immunized students should not be allowed into a school even if an outbreak continues past 30 days. During the recent outbreak in Kalispell, the situation arose where a student wanted to return to school after the 30-day period but still had not been immunized. The county health officer had to apply to the parent for the parent to decide not to send the children on their own accord. Local Health officers have the authority, by the Administrative Rules of Montana, to do what is necessary to control communicable disease in their county. The determination, on when the return should occur, should be made by a County Health Officers. Should the child return to school and develop measles because the law says they can return, the following could happen: 1) the child would be unnecessarily exposed to a dangerous disease, 2) the outbreak would continue with possible spread of the disease to others (especially other un-immunized siblings), and 3) the parents may have legal recourse against the state of Montana should the child get measles due to their return to school as presently allowed by the Montana Immunization Law.

In closing, Montana has experienced some serious problems related to vaccine-preventable diseases. We, in Montana, have been very lucky in that we have not had anybody die during our measles outbreaks. Texas is not so fortunate. In the current outbreak in Texas, there have been as many as five deaths that may be directly related to measles. This included a 21 year old who was 21 weeks pregnant. There was a child that died due to pertussis in Ravalli county in 1986. The Montana Immunization Law has played an important part in reducing the occurrence and subsequently the consequence of vaccine-preventable diseases. Apparently maintaining high immunization levels alone is not good enough. We have to keep these diseases from being seeded in our schools. Once a disease

like measles gets into a school, it can spread very quickly as was seen again this year in the Flathead measles outbreak. The Montana School Immunization Law needs to be strengthened so that the potential for disease introduction into our population can be reduced. If these prooosed changes are acted upon favorably, it would be a major step in ensuring the health and safety of Montanans. Your consideration is appreciated.

REP/vg-106d

Removing the Personal and Religious Exemptions

1. Number of persons with religious and personal exemptions in Montana (Based upon 1986-87 school year data):

   *Personal -- 2,270
   *Religious -- 350

   Note: Schools that failed to report are not included in this data.

2. It is anticipated that use of personal and religious exemptions will increase due to information received in the Park County outbreak that occurred in the summer of 1988. Of the 24 cases of measles that occurred in Park County, all had refused immunization. There is an increase of people in Park County that are now using personal and/or religious exemptions.

3. Religious and personal exemptions played an important part in starting measles outbreaks that occurred in Glacier and Cascade Counties.

   a. Glacier County -- 137 cases; occurred in 1985; was initiated by a student who claimed a religious exemption, visited out-of-state and brought measles back into Montana.

   b. Statewide outbreak -- started in Great Falls in 1987; 127 measles cases were reported statewide; was initiated by a student with a personal exemption who had <u>not</u> traveled outside of Montana.

4. Following the 1987 measles outbreak a "measles critique" was sponsored by the Department which included six major health departments (Cascade, Missoula, Flathead, Lewis and Clark, Yellowstone and Silver Bow Counties) and representatives from the Indian Health Service and the Centers for Disease Control (Atlanta, GA). From that critique came a strong recommendation to remove the religious and personal exemptions in Montana as they have played a major role in starting disease outbreaks.

5. The Montana Medical Association has sent written communication to the Department supporting a removal of the religious and medical exemptions.

6. Montana is in the minority of states that do allow philosophical (personal) exemptions. Presently 28 states do not allow personal exemptions for school entry.

7. Other states that do not allow religious exemptions include Mississippi and West Virginia.

8. Is it constitutional to not allow for religious exemptions? -- Mississippi law was challenged in 1979 in a suit entitled "Brown v. Stone" -- it was determined that excluding the religious exemption from the law was constitutional and the Mississippi Supreme Court said that allowing a religious exemption would not be in the best interest o the health and welfare of the state.

9. The use of exemptions has been abused and recent outbreaks provide examples of what happens when an outbreak occurs and school exclusion follows:

   a. Great Falls 1987 -- There were 21 personal and 13 religious exemptions in junior and high school students in Great Falls. Once those students were excluded due to the outbreak, all except three students returned to school immunized.

   b. Flathead County outbreak 1988 -- There were 15 Flathead County High School students that claimed personal exemptions and two that had claimed religious exemptions for measles for school entry. Upon exclusion from school all students with exemptions returned to school immunized, except for one student who stayed out for the entire outbreak.

10. Personal and religious exemptions have put the entire school system and communities at risk to vaccine-preventable diseases.

HOUSE BILL NO. 364

INTRODUCED BY R. NELSON, CONNELLY,

SQUIRES, B. BROWN, HARP

BY REQUEST OF THE DEPARTMENT OF HEALTH

AND ENVIRONMENTAL SCIENCES

A BILL FOR AN ACT ENTITLED: "AN ACT TO REQUIRE IMMUNIZATION OF STUDENTS ATTENDING PRESCHOOLS, VOCATIONAL-TECHNICAL CENTERS, COLLEGES, AND UNIVERSITIES; TO INCLUDE MUMPS IN THOSE DISEASES THAT REQUIRE IMMUNIZATION PRIOR TO A STUDENT'S ATTENDANCE IN A SCHOOL OTHER THAN A POSTSECONDARY SCHOOL; TO ELIMINATE THE RIGHT OF A STUDENT TO BE EXEMPT FROM IMMUNIZATION ON PERSONAL OR ~~RELIGIOUS~~ GROUNDS; TO REQUIRE THAT A RELIGIOUS EXEMPTION BE REASSERTED ANNUALLY BY AFFIDAVIT, SUBJECT TO A PENALTY FOR PERJURY FALSE SWEARING; TO REMOVE THE LIMIT ON THE LENGTH OF TIME THAT A STUDENT MAY BE EXCLUDED FROM SCHOOL DURING A DISEASE OUTBREAK IF THE STUDENT IS EXEMPT FROM IMMUNIZATION REQUIREMENTS; TO DELETE THE 30-DAY GRACE PERIOD FOR TRANSFER PUPILS; TO REQUIRE A SCHOOL TO RELEASE IMMUNIZATION RECORDS OF A TRANSFERRING PUPIL; AMENDING SECTIONS 20-5-402 THROUGH 20-5-405, AND 20-5-408, MCA; AND PROVIDING AN EFFECTIVE DATE."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MONTANA:

Section 1. Section 20-5-402, MCA, is amended to read:

"20-5-402. Definitions. For the purposes of this part, the following definitions apply:

(1) "Department" means the department of health and environmental sciences provided for in Title 2, chapter 15, part 21.

(2) "Governing authority" means the board of trustees of a school district or the administrator of a private school, preschool, ~~vocational-technical center, college, or university~~ OR POSTSECONDARY SCHOOL.

(3) "Immunization" means induction of a state of resistance to a disease through administration of an immunizing agent.

(4) "Local health officer or department" means a city, city-county, county, or district health officer or department.

(5) "Local health department" means a city, city-county, county, or district health department.

(6) "POSTSECONDARY SCHOOL" MEANS A VOCATIONAL-TECHNICAL CENTER, A COMMUNITY COLLEGE, A UNIT OF THE MONTANA UNIVERSITY SYSTEM, OR A PRIVATE UNIVERSITY OR COLLEGE.

~~(6)~~(7) "Preschool" means a place or facility that provides, on a regular basis and as its primary purpose, educational instruction designed for children 5 years of age or younger and that:

(a) serves no child under 5 years of age for more than 3 hours a day; and

(b) serves no child 5 years of age for more than 6 hours a day.

~~(5)~~(7)(8) "School" means an a place or institution for the teaching of individuals, ~~including a preschool, any establishment~~ the curriculum of which is comprised of the work of:

(A) any combination of kindergarten through grade 12, a vocational-technical center, a college, or a university;

(B) A POSTSECONDARY SCHOOL; OR

(C) A PRESCHOOL."

Section 2. Section 20-5-403, MCA, is amended to read:

"20-5-403. Immunization required -- ~~grace period for transfers~~ RELEASE AND ACCEPTANCE OF IMMUNIZATION RECORDS. (1) The governing authority of any school OTHER THAN A POSTSECONDARY SCHOOL may not allow any person to commence attendance as a pupil unless the person:

(a) has been immunized against diphtheria, pertussis, tetanus, poliomyelitis, rubella, mumps, and measles (rubeola) in the manner and with immunizing agents approved by the department, except that pertussis vaccination is not required for a person 7 years of age or older;

(b) qualifies for conditional attendance; OR

(c) files for an exemption; ~~or~~

~~(d) is a pupil transferring from another school district, in which case the provisions of subsection (2) apply:~~

~~(2) A person who transfers from one school district to another has 30 calendar days after commencement of attendance at the school to which he or she transfers to either complete immunization as specified in subsection (1)(a), commence immunization in the manner required by 20-5-404, or file for an exemption. If none of the foregoing actions is taken within 30 days, the transfer pupil is prohibited from further attendance until such an action is taken.~~

(2) (A) THE GOVERNING AUTHORITY OF A POSTSECONDAY SCHOOL MAY NOT ALLOW ANY PERSON TO COMMENCE ATTENDANCE AS A PUPIL UNLESS THE PERSON:

(I) HAS BEEN IMMUNIZED AGAINST RUBELLA AND MEASLES (RUBEOLA) IN THE MANNER AND WITH IMMUNIZING AGENTS APPROVED BY THE DEPARTMENT; OR

(II) FILES FOR AN EXEMPTION.

(B) THE GOVERNING AUTHORITY OF A POSTSECONDARY SCHOOL MAY IMPOSE IMMUNIZATION REQUIREMENTS AS A CONDITION OF ATTENDANCE THAT ARE MORE STRINGENT THAN THOSE REQUIRED BY [THIS ACT].

(3) A PUPIL WHO TRANSFERS FROM ONE SCHOOL DISTRICT TO ANOTHER MAY PHOTOCOPY IMMUNIZATION RECORDS IN THE POSSESSION

OF THE SCHOOL OF ORIGIN. THE SCHOOL DISTRICT TO WHICH A PUPIL TRANSFERS SHALL ACCEPT THE PHOTOCOPY AS EVIDENCE OF IMMUNIZATION. WITHIN 30 DAYS AFTER A TRANSFERRING PUPIL CEASES ATTENDANCE AT THE SCHOOL OF ORIGIN, THE SCHOOL SHALL SEND THE ORIGINAL IMMUNIZATION RECORDS FOR THE PUPIL TO THE SCHOOL DISTRICT TO WHICH THE PUPIL TRANSFERS."

Section 3. Section 20-5-404, MCA, is amended to read:

"20-5-404. Conditional attendance. The governing authority of a school OTHER THAN A POSTSECONDARY SCHOOL may allow the commencement of attendance in school by a person who has not been immunized against each disease listed in 20-5-403 if that person has received one or more doses of polio, measles (rubeola), mumps, rubella, diphtheria, pertussis, and tetanus vaccine, except that pertussis vaccine is not required for a person 7 year of age or older."

Section 4. Section 20-5-405, MCA, is amended to read:

"20-5-405. Personal;-religious;-or-medical Medical OR RELIGIOUS exemption. ~~(1) When a parent, guardian, or adult who has the responsibility for the care and custody of a minor seeking to attend school, or the person seeking to attend school, if an adult, signs and files with the governing authority a written statement on a form prescribed by the department stating that immunization is contrary to the personal or religious beliefs of the signer,~~

~~immunization of the person seeking to attend school may not be required prior to commencement of attendance in any school. The statement must be maintained as part of the person's immunization records.~~

(1) WHEN A PARENT, GUARDIAN, OR ADULT WHO HAS THE RESPONSIBILITY FOR THE CARE AND CUSTODY OF A MINOR SEEKING TO ATTEND SCHOOL OR THE PERSON SEEKING TO ATTEND SCHOOL, IF AN ADULT, SIGNS AND FILES WITH THE GOVERNING AUTHORITY, PRIOR TO THE COMMENCEMENT OF ATTENDANCE EACH SCHOOL YEAR, A NOTARIZED AFFIDAVIT ON A FORM PRESCRIBED BY THE DEPARTMENT STATING THAT IMMUNIZATION IS CONTRARY TO THE RELIGIOUS TENETS AND PRACTICES OF THE SIGNER, IMMUNIZATION OF THE PERSON SEEKING TO ATTEND THE SCHOOL MAY NOT BE REQUIRED PRIOR TO ATTENDANCE AT THE SCHOOL. THE STATEMENT MUST BE MAINTAINED AS PART OF THE PERSON'S IMMUNIZATION RECORDS. A PERSON WHO FALSELY CLAIMS A RELIGIOUS EXEMPTION IS SUBJECT TO THE PENALTY FOR PERJURY FALSE SWEARING PROVIDED IN 45-7-291 45-7-202.

~~(2)~~(1)(2) When a parent, guardian, or adult who has the responsibility for the care and custody of a minor seeking to attend school, or the person seeking to attend school, if an adult, files with the governing authority a written statement signed by a physician licensed to practice medicine in any jurisdiction of the United States or Canada stating that the physical condition of the person seeking to

attend school or medical circumstances relating to him indicate that some or all of the required immunizations are not considered safe and indicating the specific nature and probable duration of the medical condition or circumstances which contraindicate immunization, he is exempt from the requirements of this part to the extent indicated by the physician's statement. The statement must be maintained as part of the person's immunization records.

~~(3)~~(2)(3) Whenever there is good cause to believe that a person for whom an exemption has been filed under this section has a disease or has been exposed to a disease listed in 20-5-403 or will as the result of school attendance be exposed to such disease, the person may be excluded from the school by the local health officer or the ~~local health~~ department until the excluding authority is satisfied that the person no longer risks contracting or transmitting that disease. ~~The--exclusion--period--may--not exceed-30-calendar-days.~~"

SECTION 5. SECTION 20-5-408, MCA, IS AMENDED TO READ:

"20-5-408. Enforcement. (1) The governing authority of any school other than a postsecondary school shall prohibit from further attendance any pupil allowed to attend conditionally who has failed to obtain the immunizations required by 20-5-403(1) within time periods established by the department until that pupil has been immunized as

required by the department or unless that pupil has been exempted under 20-5-405.

(2) Each governing authority shall file a written report on the immunization status of all pupils under its jurisdiction with the department and the local health department at times and on forms prescribed by the department.

(3) The local and state health departments shall have access to all information relating to immunization of any pupil in any school."

NEW SECTION. Section 6. Extension of authority. Any existing authority to make rules on the subject of the provisions of [this act] is extended to the provisions of [this act].

NEW SECTION. Section 7. Severability. If a part of [this act] is invalid, all valid parts that are severable from the invalid part remain in effect. If a part of [this act] is invalid in one or more of its applications, the part remains in effect in all valid applications that are severable from the invalid applications.

NEW SECTION. Section 8. Effective date. [This act] is effective July 1, 1989.

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Op.Atty.Gen. No. I82–139.

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juvenile institution after committing burglary to obtain money for drugs was not entitled to additional year of eligibility to play high school basketball. Clay v. Arizona Interscholastic Ass'n, Inc. (App.1988) 157 Ariz. 350, 757 P.2d 1059.

§ 15–803. Immunizations for school attendance; rules and regulations; record; exclusion of children; violation; classification; definitions

A. The department of health services shall adopt rules and regulations prescribing immunizations for school attendance and pertaining to the approved means of immunization and indicated reinforcing immunization for such diseases, including recommended optimum ages for administration of such immunizations.

B. Beginning with the 1981–1982 school year, prior to attending school in this state, the parent or guardian or person in loco parentis of a child shall submit to the school administrator an immunization record of such child if such a record has not previously been submitted to the school. Such record shall contain one of the following statements signed by such parent or guardian or person in loco parentis:

1. That the child has received the immunizations prescribed by the department of health services pursuant to this section.

2. That the physical condition of the child is such that such immunizations would seriously endanger the child's health.

3. That the child has not received such immunizations because the child is being reared as an adherent to a religion the teachings of which are opposed to such immunizations.

4. That the child has not received the necessary immunizations because the parent, guardian or person in loco parentis does not consent to the immunization of the child.

5. That the child's necessary immunizations will be initiated within fifteen days of the first day of school attendance and completed in accordance with this section.

C. A parent, guardian or person in loco parentis submitting a statement pursuant to subsection B, paragraph 5 shall within fifteen days of the child's first day of school attendance and thereafter submit records of the necessary immunizations prescribed by the department of health services pursuant to subsection A of this section.

D. A child is not entitled to attend school unless the parent, guardian or person in loco parentis has submitted one of the statements required pursuant to subsection B of this section.

E. The governing board may, after notice and hearing as provided in § 15–843, suspend or expel a child from school attendance if the parent, guardian or person in loco parentis has failed to submit one of the statements required pursuant to subsection B of this section.

F. In the section, unless the context otherwise requires:

1. "School" means any public school or any public preschool, headstart school or other public institution providing instructional or custodial care to children.

2. "School administrator" means the principal or person having general control and supervision of the school or his designee.

Added by Laws 1981, Ch. 1, § 2, eff. Jan. 23, 1981. Amended by Laws 1981, Ch. 283, § 1, eff. April 30, 1981.

Repeal

This section is repealed by Laws 1990, Ch. 208, § 1, effective January 1, 1992

Historical and Statutory Notes

Source:
Laws 1912, Ch. 77, §§ 72, 85.
Civ. Code 1913, §§ 2768, 2798.
Laws 1925, Ch. 71, § 1.
Rev. Code 1928, § 1030.
Laws 1933, Ch. 65, § 2.
Code 1939, § 54-502.
A.R.S. former §§ 15-302, 15-341, 15-342, 15-343.
Laws 1958, Ch. 21, § 1.
Laws 1960, Ch. 127, § 17.
Laws 1961, Ch. 14, § 1.
Laws 1976, Ch. 127, § 1.
Laws 1978, Ch. 93, § 1.
Laws 1978, Ch. 178, § 1.
Laws 1979, Ch. 3, § 2.
Laws 1979, Ch. 83, §§ 1 to 3.
Laws 1980, Ch. 195, § 1.

The 1981 amendment inserted "Beginning with the 1981-1982 school year," in the first sentence of subsec. B; inserted a new par. 4, renumbered former par. 4 as par. 5; substituted "within fifteen days of" for "within sixty days of" in par. 5 of subsec. B; rewrote subsec. C. which had read:

"C. The governing board shall establish, with the advice of the county health department, a policy to provide for the exclusion from school of children having or suspected of having a communicable disease.";

inserted new subsecs. D and E; and relettered former subsec. D as subsec. F.

Laws 1989, Ch. 258, § 1, effective June 21, 1989, relating to a review of issues related to the immunization of children as a condition of enrollment in school, was repealed on January 1, 1990, by § 2 of that act.

Administrative Code References

Department of health services, see A.C.R.R. R9-6-501.

Library References

Schools ⇐158(1).
WESTLAW Topic No. 345.
C.J.S. Schools and School Districts § 453.

United States Supreme Court

School desegregation. Annual readjustment of attendance zones, see Pasadena City Bd. of Ed. v. Spangler, 1976, 96 S.Ct. 2697, 427 U.S. 424, 49 L.Ed.2d 599, on remand 549 F.2d 733.

Notes of Decisions

1. Immunization histories

Director of department of health services has adequate statutory authority to require by reg-

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ulation that immunization histories be submitted to the county health officer. Op.Atty. Gen. No. 78–141.

2. Sanctions, In general

Sanction available to governing board is suspension or expulsion of child from school attendance, after notice and hearing, if the parent, guardian or person in loco parentis has failed to submit one of the statements required by this section relating to immunization records. Op.Atty.Gen. No. I87–041.

School administrator, to whom statements as to school child's immunizations were to be submitted under § 15–342 [repealed; see now, this section] relating to conditions of school attendance, was responsible for determining whether there had been compliance with a statement that a school child's immunizations would be completed within 60 days of the first day of school attendance in accordance with former section, but school administrator could not impose sanctions for failure to child's parent, guardian, or person in loco parentis to comply. Op.Atty.Gen. No. I80–131.

Former § 15–342 (see, now this section), stating, as a condition of school attendance, that parent, guardian, or person in loco parentis of a child shall submit an immunization record of the child, did not authorize school districts to expel students on basis of the failure of their parents, guardians, or persons in loco parentis to comply with the requirements for providing the school with immunization records of their children. Op.Atty.Gen. No. I79–254.

The absence of clear statutory sanctions precluded a school district from refusing to enroll a child for noncompliance with § 15–342 [repealed; now, this section] relating to conditions of school attendance. Id.

3. Exclusion of children

A school district may not exclude students who do not have proper immunization records pursuant to this section. Op.Atty.Gen. No. I87–041.

4. Religious objections to immunization

Parents may refuse, for religious reasons, to immunize their children against measles; however, under Arizona law, such unimmunized children may be excluded from school attendance during measles outbreaks. Op.Atty.Gen. No. I89–081.

§ 15–804. Attendance officer; appointment; salary

A. The governing board of a school district may appoint an attendance officer for the school district. The salary of the attendance officer shall be fixed by the governing board and paid from the funds of the school district.

B. If in the opinion of the governing boards of two or more school districts one officer will adequately serve such districts, such officer may be appointed by the districts jointly. His salary may be apportioned as the governing boards provide and shall be paid from the funds of the school districts.

Added by Laws 1981, Ch. 1, § 2, eff. Jan. 23, 1981.

Historical and Statutory Notes

Source:
Laws 1921, Ch. 143, § 1.
Rev. Code 1928, § 1035.
Laws 1933, Ch. 65, § 3.
Code 1939, § 54–507.
A.R.S. former § 15–324.

Library References

Schools ⇐161.
WESTLAW Topic No. 345.
C.J.S. Schools and School Districts §§ 471 to 474.

§ 15–805. Attendance officer; powers and duties

A. The attendance officer shall enforce the law relating to:

1. School attendance of children between the ages of eight and sixteen years.

CALIFORNIA

NOTES OF DECISIONS

The statutory scheme requiring immunization for all school-age children (Health & Saf. Code, §§ 3380-3390) does not extend a grant of immunity to vaccine manufacturers for products liability including strict liability in tort. Although a serious dilemma is created by legislation requiring mass inoculations when vaccines are not completely safe, immunizing manufacturers from liability is not the only solution, since the market for vaccines can respond to liability by raising prices. There is nothing in the statutes, or in their legislative history, which can be read to require immunity for vaccine manufacturers. Flood v Wyeth Laboratories, Inc. (1986, 2d Dist) 183 Cal App 3d 1272, 228 Cal Rptr 700.

§ 3380. Legislative intent

In enacting this chapter, it is the intent of the Legislature to provide:

(a) A means for the eventual achievement of total immunization of appropriate age groups against diphtheria, pertussis, tetanus, poliomyelitis, measles, mumps, and rubella.

(b) That the persons required to be immunized be allowed to obtain immunizations from whatever medical source they so desire, subject only to the condition that the immunization be performed in accordance with the regulations of the State Department of Health Services and that a record of the immunization is made in accordance with such regulations.

(c) Exemptions from immunization for medical reasons or because of personal beliefs.

(d) For the keeping of adequate records of immunization so that health departments, schools, and other institutions, parents or guardians, and the persons immunized will be able to ascertain that a child is fully or only partially immunized, and so that appropriate public agencies will be able to ascertain the immunization needs of groups of children in schools or other institutions.

Added Stats 1977 ch 1176 § 2, effective September 30, 1977; Amended Stats 1978 ch 429 § 137.3, effective July 17, 1978, operative July 1, 1978; Stats 1979 ch 435 § 1.

Former Section: Former § 3380, similar to present §§ 3381, 3382, 3384 was added by Stats 1961 ch 837 § 1, amended by Stats 1st Ex Sess 1962 ch 26, Stats 1965 ch 86 § 1, ch 890 § 1, Stats 1968 ch 323 § 2, Stats 1971 ch 705 § 1, Stats 1973 ch 142 § 37, effective June 30, 1973, operative July 1, 1973, and repealed by Stats 1977 ch 1176 § 1, effective September 30, 1977.

Amendments:

1978 Amendment: Substituted "State Department of Health Services" for "State Department of Health" in subd (b).

1979 Amendment: Substituted "measles, mumps, and rubella" for "and measles" in subd (a).

Historical Derivation:

(a) Former § 3387, as added by Stats 1st Ex Sess 1962 ch 26 § 3, amended by Stats 1971 ch 1593 § 177.

(b) Former § 3407, as added by Stats 1967 ch 1021 § 1, amended by Stats 1971 ch 1593 § 179.

(c) Former § 3480, as added by Stats 1971 ch 833 § 1.

Collateral References:
Cal Jur 3d Health and Sanitation § 13.

§ 3381. "Governing authority"; Immunization required for admission as pupil

As used in this chapter, the term "governing authority" means the governing board of each school district or the authority of each other private or public institution responsible for the operation and control of the institution or the principal or administrator of each school or institution.

The governing authority shall not unconditionally admit any person as a pupil of any private or public elementary or secondary school, child care center, day nursery, nursery school, or development center, unless prior to his or her first admission to that institution he or she has been fully immunized against diphtheria, pertussis (whooping cough), tetanus, poliomyelitis, measles, mumps, and rubella in the manner and with immunizing agents approved by the state department, except that all students who have reached the age of seven shall not be required to be immunized against pertussis or mumps.

Persons already enrolled in California public or private schools at the kindergarten level or above as of January 1, 1980, shall be exempt from the rubella immunization requirement for school attendance until they transfer to, enter, or attend a school at the seventh and ninth grade levels. Students entering the ninth grade on or after February 1, 1985, need not be screened for rubella. Students entering the seventh grade on or after February 1, 1987, need not be screened for rubella.

Added Stats 1977 ch 1176 § 2, effective September 30, 1977. Amended Stats 1979 ch 435 § 2; Stats 1982 ch 472 § 1, effective July 10, 1982.

Former Section: Former § 3381, similar to present § 3387, was added by Stats 1961 ch 837 § 1, amended by Stats 1971 ch 705 § 2, and repealed by Stats 1977 ch 1176 § 1, effective September 30, 1977.

Amendments:

1979 Amendment: (1) Deleted "(a)" at the beginning of the section; (2) substituted "measles, mumps, and rubella" for "and measles" in the second paragraph; and (3) added the third paragraph.

1982 Amendment: (1) Added the exception in the second paragraph; and (2) amended the third paragraph by (a) substituting "immunization requirement for school attendance until they transfer to, enter, or attend a school at the seventh and ninth grade levels" for "and mumps immunization requirement for school entry"; and (b) adding the second and third sentences.

Historical Derivation:

(a) Former § 3380, as added by Stats 1961 ch 837 § 1, amended by Stats 1st Ex Sess ch 26, Stats 1965 ch 86 § 1, ch 890 § 1, Stats 1968 ch 323 § 2, Stats 1971 ch 705 § 1, Stats 1973 ch 142 § 37.

(b) Former § 3400, as added by Stats 1967 ch 1021 § 1, amended by Stats 1971 ch 705 § 6, Stats 1973 ch 142 § 38.

(c) Former § 3481, as added by Stats 1971 ch 833 § 1.

§ 3382. Conditional admittance of persons not fully immunized against listed diseases

A person who has not been fully immunized against one or more of the diseases listed in Section 3381 may be admitted by the governing authority on condition that within time periods designated by regulation of the state department he or she presents evidence that he or she has been fully immunized against all of these diseases.

Added Stats 1977 ch 1176 § 2, effective September 30, 1977.

Former Section: Former § 3382, similar to present §§ 3383, 3388, was added by Stats 1961 ch 827 § 1, amended by Stats 1971 ch 1593 § 176, operative July 1, 1973, and repealed by Stats 1977 ch 1176 § 1, effective September 30, 1977.

Historical Derivation:

(a) Former § 3380, as added by Stats 1961 ch 837 § 1, amended by Stats 1st Ex Sess 1962 ch 26, Stats 1965 ch 86 § 1, ch 890 § 1, Stats 1968 ch 323 § 2, Stats 1971 ch 705 § 1, Stats 1973 ch 142 § 37.

(b) Former § 3400, as added by Stats 1967 ch 1021 § 1, amended by Stats 1971 ch 705 § 6, Stats 1973 ch 142 § 38.

(c) Former § 3482, as added by Stats 1971 ch 833 § 1.

§ 3383. Sources of immunizations; Records

The immunizations required by this chapter may be obtained from any private or public source desired, providing that the immunization is administered and records are made in accordance with regulations of the state department.

Added Stats 1977 ch 1176 § 2, effective September 30, 1977.

Former Section: Former § 3383, similar to present § 3389, was added by Stats 1961 ch 837 § 1, amended by Stats 1971 ch 705 § 3, and repealed by Stats 1977 ch 1176 § 1, effective September 30, 1977.

Historical Derivation:

(a) Former § 3382, as added by Stats 1961 ch 827 § 1, amended by Stats 1971 ch 1593 § 176.

(b) Former § 3402, as added by Stats 1967 ch 1021 § 1, amended by Stats 1973 ch 142 § 38, Stats 1974 ch 545 § 47.

(c) Former § 3484, as added by Stats 1971 ch 833 § 1.

§ 3384. Exceptions

The requirements of this chapter shall not apply to any person 18 years of age or older, or to any person seeking admission to a community college.

Added Stats 1977 ch 1176 § 2, effective September 30, 1977.

Former Section: Former § 3384, similar to present § 3385, was added by Stats 1961 ch 837 § 1, amended by Stats 1 1st Ex Sess 1962 ch 26 § 2, Stats 1971 ch 705 § 4, and repealed by Stats 1977 ch 1176 § 1, effective September 30, 1977.

Historical Derivation:

(a) Former § 3380, as added by Stats 1961 ch 837 § 1, amended by Stats 1st Ex Sess 1962 ch 26, Stats 1965 ch 86 § 1, ch 890 § 1, Stats 1968 ch 323 § 2, Stats 1971 ch 705 § 1, Stats 1973 ch 142 § 37.

(b) Former § 3400, as added by Stats 1967 ch 1021 § 1, amended by Stats 1971 ch 705 § 6, Stats 1973 ch 142 § 38.

(c) Former § 3481, as added by Stats 1971 ch 833 § 1.

Collateral References:

Cal Jur 3d Health and Sanitation § 13.

Annotations:

Power of courts or other public agencies, in the absence of statutory authority, to order compulsory medical care for adult, 9 ALR3d 1391.

§ 3385. Letter or affidavit stating beliefs opposed to immunization; Temporary exclusion from school

Immunization of a person shall not be required for admission to a school or other institution listed in Section 3381 if the parent or guardian or adult who has assumed responsibility for his or her care and custody in the case of a minor, or the person seeking admission if an emancipated minor, files with the governing authority a letter or affidavit stating that such immunization is contrary to his or her beliefs. However, whenever there is good cause to believe that such person has been exposed to one of the communicable diseases listed in subdivision (a) of Section 3380, that person may be temporarily excluded from the school or institution until the local health officer is satisfied that the person is no longer at risk of developing the disease.

Added Stats 1977 ch 1176 § 2, effective September 30, 1977.

Former Section: Former § 3385, similar to present § 3386, was added by Stats 1961 ch 837 § 1, amended by Stats 1971 ch 705 § 5, and repealed by Stats 1977 ch 1176 § 1, effective September 30, 1977.

Historical Derivation:

(a) Former § 3384, as added by Stats 1961 ch 837 § 1, amended by Stats 1st Ex Sess 1962 ch 26 § 2, Stats 1971 ch 705 § 4.

(b) Former § 3404, as added by Stats 1967 ch 1021 § 1, amended by Stats 1971 ch 705 § 9.

(c) Former § 3486, as added by Stats 1971 ch 833 § 1.

Collateral References:

Annotations:

Power of court or other public agency to order medical treatment over parental religious objections for child whose life is not immediately endangered. 52 ALR3d 1118.

Power of court or other public agency to order medical treatment for child over parental objections not based on religious grounds. 97 ALR3d 421.

§ 3386. Statement by physicians contraindicating immunization

If the parent or guardian files with the governing authority a written statement by a licensed physician to the effect that the physical

condition of the child is such, or medical circumstances relating to the child are such, that immunization is not considered safe, indicating the specific nature and probable duration of the medical condition or circumstances which contraindicate immunization, such person shall be exempt from the requirements of this chapter to the extent indicated by the physician's statement.

Added Stats 1977 ch 1176 § 2, effective September 30, 1977.

Former Section: Former § 3386, similar to present § 3390, was added by Stats 1961 ch 837 § 1 and repealed by Stats 1977 ch 1176 § 1, effective September 30, 1977.

Historical Derivation:

(a) Former § 3385, as added by Stats 1961 ch 837 § 1, amended by Stats 1971 ch 705 § 5.

(b) Former § 3405, as added by Stats 1967 ch 1011 § 1, amended by Stats 1971 ch 705 § 10.

(c) Former § 3485, as added by Stats 1971 ch 833 § 1.

§ 3387. Record of immunization

Any person or organization administering immunizations shall furnish each person immunized, or his or her parent or guardian, with a written record of immunization given in a form prescribed by the state department.

Added Stats 1977 ch 1176 § 2, effective September 30, 1977.

Former Section: Former § 3387, similar to present § 3380, was added by Stats 1st Ex Sess 1962 ch 26 § 3, amended by Stats 1971 ch 1593 § 177, operative July 1, 1973, and repealed by Stats 1977 ch 1176 § 1, effective September 30, 1977.

Historical Derivation:

(a) Former § 3381, as added by Stats 1961 ch 837 § 1, amended by Stats 1971 ch 705 § 2.

(b) Former § 3401, as added by Stats 1967 ch 1021 § 1, amended by Stats 1971 ch 705 § 7.

(c) Former § 3483, as added by Stats 1971 ch 833 § 1.

§ 3388. County health officer's immunization program; Recovery of cost

The county health officer of each county shall organize and maintain a program to make immunizations available to all persons required by this chapter to be immunized. The county health officer shall also determine how the cost of such a program is to be recovered. To the extent that the cost to the county is in excess of that sum recovered from persons immunized, the cost shall be paid by the county in the same manner as other expenses of the county are paid.

Added Stats 1977 ch 1176 § 2, effective September 30, 1977.

Historical Derivation:

(a) Former § 3382, as added by Stats 1961 ch 827 § 1, amended by Stats 1971 ch 1593 § 176.

(b) Former § 3402, as added by Stats 1967 ch 1021 § 1, amended by Stats 1973 ch 142 § 38, Stats 1974 ch 545 § 47.

(c) Former § 3487, as added by Stats 1971 ch 833 § 1.

§ 3389. Documentary proof of entrant's immunization status; Periodic review of record of entrant admitted conditionally; Prohibition from further attendance; Cooperation with county health officer

(a) The governing authority of each school or institution included in Section 3381 shall require documentary proof of each entrant's immunization status. The governing authority shall record the immunizations of each new entrant in the entrant's permanent enrollment and scholarship record on a form provided by the state department. The immunization record of each new entrant admitted conditionally shall be reviewed periodically by the governing authority to ensure that within the time periods designated by regulation of the state department he or she has been fully immunized against all of the diseases listed in Section 3381, and such immunizations received subsequent to entry shall be added to the pupil's immunization record.

(b) The governing authority of each school or institution included in Section 3381 shall prohibit from further attendance any pupil admitted conditionally who failed to obtain the required immunizations within the time limits allowed in the regulations of the state department, unless the pupil is exempted under Section 3385 or 3386, until that pupil has been fully immunized against all of the diseases listed in Section 3381.

(c) The governing authority shall file a written report on the immunization status of new entrants to the school or institution under their jurisdiction with the state department and the local health department at times and on forms prescribed by the state department. As provided in paragraph (4) of subdivision (a) of Section 49076 of the Education Code, the local health department shall have access to the complete health information as it relates to immunization of each student in the schools or other institutions listed in Section 3381 in order to determine immunization deficiencies.

(d) The governing authority shall cooperate with the county health officer in carrying out programs for the immunization of persons applying for admission to any school or institution under its jurisdiction. The governing board of any school district may use funds, property, and personnel of the district for that purpose. The governing authority of any school or other institution may permit any licensed physician or any qualified registered nurse as provided in Section 2727.3 of the Business and Professions Code to administer immunizing agents to any person seeking admission to any school or institution under its jurisdiction.

Added Stats 1977 ch 1176 § 2, effective September 30, 1977.

Historical Derivation:

(a) Former § 3383, as added by Stats 1961 ch 837 § 1, amended by Stats 1971 ch 705 § 3.

(b) Former § 3403, as added by Stats 1967 ch 1021 § 1, amended by Stats 1971 ch 705 § 8.

(c) Former § 3488, as added by Stats 1971 ch 833 § 1.

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25-4-804. Exceptions. Nothing in the provisions of this part 8 shall be construed to require the testing or medical treatment for the minor child of any person who is a member of a well-recognized church or religious denomination and whose religious convictions in accordance with the tenets or principles of his church or religious denomination are against medical treatment for disease or physical defects.

Source: L. 65, p. 722, § 4; C.R.S. 1963, § 66-27-4.

Am. Jur.2d. See 39 Am. Jur.2d, Health, § 27.

PART 9

SCHOOL ENTRY IMMUNIZATION

Editor's note: The substantive provisions of this part 9 were repealed and reenacted in 1978, causing some addition, relocation, and elimination of sections as well as subject matter. (For an historical record of this article, check the cumulative table located in the front of this volume.)

25-4-901. Definitions. As used in this part 9, unless the context otherwise requires:

(1) "School" means a public, private, or parochial nursery school, day care center, child care facility, family care home, head start program, kindergarten, or elementary or secondary school through grade twelve.

Source: R & RE, L. 78, p. 427, § 1.

25-4-902. Immunization prior to attending school. Except as provided in section 25-4-903, no child shall attend any school in the state of Colorado on or after the dates specified in section 25-4-906 (4) unless such child can present to the appropriate official of the school a certificate of immunization from a licensed physician or authorized representative of the department of health or local health department stating that such child has received immunization against communicable diseases as specified by the state board of health or a written authorization signed by one parent or guardian or the emancipated child requesting that local health officials administer the immunizations or a plan signed by one parent or guardian or the emancipated child for receipt by the child of the required inoculation or the first or the next required of a series of inoculations within thirty days.

Source: R & RE, L. 78, p. 427, § 1.

Am. Jur.2d. See 68 Am. Jur.2d, Schools, § § 277, 309.

C.J.S. See 79 C.J.S., Schools and School Districts, § 453.

25-4-903. Exceptions from immunization. (1) A child who transfers into a school may enter school provisionally and shall have sixty days in which to submit a certificate of immunization. Any child for whom a certificate of immunization is not submitted within sixty days shall be suspended or expelled from school until a certificate of immunization is provided.

(2) A child shall be exempted from receiving the required immunizations:

(a) Upon submitting certification from a licensed physician that the physical condition of the child is such that one or more specified immunizations would endanger his life or health;

(b) Upon submitting a statement signed by one parent or guardian or the emancipated child that the parent, guardian, or child is an adherent to a religious belief whose teachings are opposed to immunizations or that the parent or guardian or the emancipated child has a personal belief that is opposed to immunizations.

(3) The state board of health may provide, by regulation, for further exemptions to immunization based upon sound medical practice.

Source: R & RE, L. 78, p. 428, § 1.

Am. Jur.2d. See 68 Am. Jur.2d, Schools, § 231.

C.J.S. See 79 C.J.S., Schools and School Districts, § 453.

25-4-904. Rules and regulations - immunization rules - rule-making authority of state board of health. (1) The state board of health shall establish rules and regulations for administering this part 9. Such rules and regulations shall establish which immunizations shall be required and the manner and frequency of their administration and shall conform to recognized standard medical practices. Such rules and regulations may also require the reporting of statistical information and names of noncompliers by the schools. The department of health shall administer and enforce the immunization requirements.

(2) All rule-making authority granted to the state board of health under the provisions of this article is granted on the condition that the general assembly reserves the power to delete or rescind any rule of the board. All rules promulgated pursuant to this subsection (2) shall be subject to sections 24-4-103 (8) (c) and (8) (d) and 24-4-108, C.R.S.

Source: R & RE, L. 78, p. 428, § 1; L. 80, p. 788, § 23.

25-4-905. Immunization of indigent children. The local health department, a public health or school nurse (under the supervision of a licensed physician), or the department of health in the absence of a local health department or public health nurse shall provide, at public expense to the extent that funds are available, immunizations required by this part 9 to each child whose parents or guardians cannot afford to have the child immunized or, if emancipated, who cannot himself afford immunization and who has not been exempted. The department of health shall provide all vaccines necessary to comply with this section as far as funds will permit. Nothing in this section shall preclude the department of health from distributing vaccines to physicians or others as required by law or the regulations of the department. No indigent child shall be excluded, suspended, or expelled from school unless the immunizations have been available and readily accessible to the child at public expense.

Source: R & RE, L. 78, p. 428, § 1.

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25-4-906. Certificate of immunization - forms. (1) The department of health shall provide official certificate of immunization forms to the schools, private physicians, and local health departments. Any immunization record provided by a licensed physician, registered nurse, or public health official may be accepted by the school official as certification of immunization if the information is transferred to the official certificate of immunization and verified by the school official.

(2) Each school shall maintain on file an official certificate of immunization for every child enrolled as a student. The certificate shall be returned to the parent or guardian or the emancipated child when a child withdraws, transfers, is promoted, or otherwise leaves the school, or the school shall transfer the certificate with the child's school record to the new school.

(3) The department of health may examine, audit, and verify the records of immunizations maintained by each school.

(4) All children enrolled in any school in Colorado on and after August 15, 1979, shall furnish the required certificate of immunization or shall be suspended or expelled from school. Children enrolling in school in Colorado for the first time on and after July 1, 1978, shall provide a certificate of immunization or shall be excluded from school except as provided in section 25-4-903.

Source: R & RE, L. 78, p. 429, § 1.

Am. Jur.2d. See 68 Am. Jur.2d, Schools, § 280.

C.J.S. See 79 C.J.S., Schools and School Districts, § 453.

25-4-907. Noncompliance. The board of education of each school district shall suspend or expel from school, pursuant to the provisions of section 22-33-105, C.R.S., any child enrolled as a student not otherwise exempted under this part 9 who fails to comply with the provisions of this part 9. No child shall be suspended or expelled for failure to comply with the provisions of this part 9 unless there has been a direct personal notification by the appropriate school authority to the child's parent or guardian or to the emancipated child of the noncompliance with this part 9 and of their rights under sections 25-4-902 and 25-4-903. In the event of suspension or expulsion, school officials shall notify the state or local department of health. An agent of the department shall then contact the parent or guardian or the emancipated child in an effort to secure compliance with this part 9 in order that the child may be reenrolled in school.

Source: R & RE, L. 78, p. 429, § 1.

25-4-908. When exemption from immunization not recognized. If at any time there is, in the opinion of the state or local department of health, danger of an epidemic from any of the communicable diseases for which an immunization is required pursuant to the rules and regulations promulgated pursuant to section 25-4-904, no exemption or exception from immunization against such disease shall be recognized. Quarantine by the state or local department of health is hereby authorized as a legal alternative to immunization.

Source: R & RE, L. 78, p. 429, § 1.

Am. Jur.2d. See 68 Am. Jur.2d, Schools, § 231.

C.J.S. See 79 C.J.S., Schools and School Districts, § 453.

25-4-909. Vaccine-related injury or death - limitations on liability. (1) The general assembly finds, determines, and declares that immunization of the population of this state is vital to the health of Colorado citizens and has demonstrated such finding by requiring such immunization pursuant to the provisions of sections 25-4-901 to 25-4-908.

(2) No person who administers a vaccine which is required under the provisions of this part 9 to an infant or child whose age is greater than twenty days shall be held liable for injuries sustained pursuant to such vaccine if:

(a) The vaccine was administered using generally accepted clinical methods;

(b) The vaccine was administered according to the schedule of immunization as published by the communicable disease control administration of the federal government; and

(c) There were no clinical symptoms nor clinical history present under which prudent health care professionals would not have administered such vaccine.

(3) An action shall not be maintained for a vaccine-related injury or death until action for compensation for such alleged injury has been exhausted under the terms of the "National Childhood Vaccine Injury Act of 1986", 42 U.S.C. section 300aa-10 to 300aa-33, as such law is from time to time amended.

(4) If the injury or death which is sustained does not fall within the parameters of the vaccine injury table as defined in 42 U.S.C. section 300aa-14, as enacted on November 14, 1986, a rebuttable presumption is established that the injury sustained or the death was not due to the administration of vaccine. Such presumption shall be overcome by a preponderance of the evidence.

Source: L. 88, p. 624, § 3.

Am. Jur.2d. See 39 Am. Jur.2d, Health, § 27; 68 Am. Jur.2d, Schools, § § 277-280.

Law reviews. For article, "1988 Update on Colorado Tort Reform Legislation — Part I", see 17 Colo. Law. 1790 (1988).

PART 10

NEWBORN SCREENING AND GENETIC COUNSELING AND EDUCATION ACT

25-4-1001. Short title. This part 10 shall be known and may be cited as the "Newborn Screening and Genetic Counseling and Education Act".

Source: L. 81, p. 1300, § 1.

25-4-1002. Legislative declaration. (1) The general assembly hereby finds and declares that:

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as provided for acquiring schoolhouse sites in the name and in behalf of such district, a suitable tract of land either within or without the limits of such district to be used for the purpose of instruction, experimentation, and demonstration in agriculture. The provisions of this section shall apply as well to districts organized under special acts as under the general laws, notwithstanding any provisions or restrictions in the laws under which the same are organized.

History: *Ex1959 c 71 art 4 s 30*

123.65 [Repealed, 1980 c 609 art 6 s 48]

123.66 RECORDS AS EVIDENCE.

The records of all districts and boards and all transcripts thereof, or any part thereof, certified by the clerk or other officer having custody thereof, shall be prima facie evidence of the facts therein stated and all records, books, and papers of such district or board shall be subject to the inspection of any voter of the district.

History: *Ex1959 c 71 art 4 s 32*

123.67 COUNTY ATTORNEY, DUTIES.

When the boundaries of any district are coterminous with the boundaries of a county unless the board retains separate counsel, the county attorney may serve as attorney for the board without additional compensation from the district, but the board of county commissioners of such county may allow such additional compensation for legal services rendered to the board as the board of county commissioners deem proper.

History: *Ex1959 c 71 art 4 s 33*

123.68 [Repealed, 1989 c 329 art 9 s 34]

123.681 SALE AT AUCTION.

Notwithstanding sections 123.37, subdivision 1, 471.345 or any other law, the board of a school district or of a cooperative center for vocational education may, in lieu of advertising for bids, sell at public auction to the highest responsible bidder a building constructed or to be constructed by a secondary or post-secondary school student or class as a school assignment. A board shall publish notice of a sale at least two weeks before the sale in the official newspaper of the district, or in the case of a cooperative center, in the official newspapers of each of the member districts, and may, at its discretion, publish additional notice in the official paper or elsewhere. A building may be withdrawn from sale prior to the completion of the sale unless the auction has been announced to be without reserve. If the sale is made at public auction, a duly licensed auctioneer shall be retained to conduct the sale. The auctioneer shall be paid from the proceeds of the sale or from any funds available to the board which are not otherwise restricted or encumbered.

History: *1979 c 110 s 1*

123.69 [Expired]

NOTE: See also section 144.45.

NOTE: See Laws 1979, chapter 292, section 2.

123.70 HEALTH STANDARDS; SCHOOL CHILDREN.

Subdivision 1. Except as provided in subdivisions 3 and 4, no person over two months old may be allowed to enroll or remain enrolled in any elementary or secondary school or day care facility in this state until the person has submitted to the administrator or other person having general control and supervision of the school or day care facility, one of the following statements:

(1) a statement from a physician or a public clinic which provides immunizations stating that the person has received immunization, consistent with medically accept-

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(2) a statement from a physician or a public clinic which provides immunizations stating that the person has received immunizations against red measles after having attained the age of 12 months, rubella, and mumps and that the person has commenced a schedule of immunizations for diphtheria, tetanus, pertussis, and polio and which indicates the month and year of each immunization received.

Subd. 2. No person who has commenced a treatment schedule of immunization pursuant to subdivision 1, clause (2), may remain enrolled in any day care facility, elementary, or secondary school in this state after 18 months of enrollment unless there is submitted to the administrator, or other person having general control and supervision of the school or day care facility, a statement from a physician or a public clinic which provides immunizations that the person has completed the primary schedule of immunizations for diphtheria, tetanus, pertussis, and polio and in which the month and year of each additional immunization received is included. For a child less than seven years of age, a primary schedule of immunizations shall consist of four doses of vaccine for diphtheria, tetanus, and pertussis and three doses of vaccine for poliomyelitis. For a child seven years of age or older, a primary schedule of immunizations shall consist of three doses of vaccine for diphtheria, tetanus, and polio.

Subd. 3. (a) If a person is at least seven years old and has not been immunized against pertussis, the person must not be required to be immunized against pertussis.

(b) If a person is at least 18 years old and has not completed a series of immunizations against poliomyelitis, the person must not be required to be immunized against poliomyelitis.

(c) If a statement, signed by a physician, is submitted to the administrator or other person having general control and supervision of the school or day care facility stating that an immunization is contraindicated for medical reasons or that laboratory confirmation of the presence of adequate immunity exists, the immunization specified in the statement need not be required.

(d) If a notarized statement signed by the minor child's parent or guardian or by the emancipated person is submitted to the administrator or other person having general control and supervision of the school or day care facility stating that the person has not been immunized as prescribed in subdivision 1 because of the conscientiously held beliefs of the parent or guardian of the minor child or of the emancipated person, the immunizations specified in the statement shall not be required. This statement must also be forwarded to the commissioner of the department of health.

(e) If the person is under 15 months, the person is not required to be immunized against red measles, rubella, or mumps.

Subd. 4. A person who is enrolling or enrolled in an elementary or secondary school or day care facility may substitute a statement from the emancipated person or a parent or guardian if the person is a minor child in lieu of the statement from a physician or public clinic which provides immunizations. If the statement is from a parent or guardian or emancipated person, the statement shall indicate the month and year of each immunization given. In order for the statement to be acceptable for a person who is six years of age or younger, enrolling in an elementary school or day care facility, it must indicate that the following was given: no less than one dose of vaccine each for measles, mumps, and rubella given separately or in combination, and no less than four doses of vaccine for poliomyelitis, unless the third dose was given after the fourth birthday, then three doses are minimum, and no less than five doses of vaccine for diphtheria, tetanus, and pertussis, unless the fourth dose was given after the fourth birthday, then four are minimum. In order for the statement to be acceptable for a person who is seven years of age or older, enrolling in an elementary or secondary school, the statement must indicate no less than one dose of vaccine each for measles, mumps, and rubella given separately or in combination, and no less than three doses of vaccine for poliomyelitis, diphtheria, and tetanus. The commissioner of health, on finding that any of the above requirements are not necessary to protect the public's health, may suspend for one year that requirement.

Subd. 5. If a person transfers from one elementary or secondary school to another, the person shall be allowed 30 days to submit one or more of the statements as specified in subdivision 1 or 3, during which time the person may enroll in and attend the school.

Subd. 6. The commissioner of health, on finding that an immunization required pursuant to this section is not necessary to protect the public's health, may suspend for one year the requirement that children receive that immunization.

Subd. 7. Each school or day care facility shall maintain on file immunization records for all persons in attendance that contain the information required by subdivisions 1, 2, and 3. The department of health and the board of health, as defined in section 145A.02, subdivision 2, in whose jurisdiction the school or day care facility is located, shall have access to the files maintained pursuant to this subdivision. When a person transfers to another elementary or secondary school or day care facility, the administrator or other person having general control and supervision of the school or day care facility shall assist the person's parent or guardian in the transfer of the immunization file to the person's new school or day care facility within 30 days of the transfer. Upon the request of a public or private post-secondary educational institution, as defined in section 135A.14, the administrator or other person having general control or supervision of a school shall assist in the transfer of a student's immunization file to the post-secondary institution.

Subd. 8. The administrator or other person having general control and supervision of the elementary or secondary school shall file a report with the commissioner of education on all persons enrolled in the school, except that the superintendent of each school district shall file a report with the commissioner of education for all persons within the district receiving instruction in a home school in compliance with sections 120.101 and 120.102. The parent of persons receiving instruction in a home school shall submit the statements as required by subdivisions 1, 2, and 4 to the superintendent of the school district in which the person resides by October 1 of each school year. The school report shall be prepared on forms developed jointly by the commissioner of health and the commissioner of education and be distributed to the local school districts by the commissioner of health and shall state the number of persons attending the school, the number of persons who have not been immunized according to subdivision 1 or 2, and the number of persons who received an exemption under subdivision 3, clause (c) or (d). The school report shall be filed with the commissioner of education within 60 days of the commencement of each new school term. The commissioner of education shall forward the report, or a copy thereof, to the commissioner of health who shall provide summary reports to boards of health as defined in section 145A.02, subdivision 2. The administrator or other person having general control and supervision of the day care facility shall file a report with the commissioner of human services on all persons enrolled in the day care facility. The day care facility report must be prepared on forms developed jointly by the commissioner of health and the commissioner of human services and be distributed to day care facilities by the commissioner of health and must state the number of persons enrolled in the facility, the number of persons with no immunizations, the number of persons who received an exemption under subdivision 3, clause (c) or (d), and the number of persons with partial or full immunization histories. The day care facility report shall be filed with the commissioner of human services by November 1 of each year. The commissioner of human services shall forward the report, or a copy thereof, to the commissioner of health who shall provide summary reports to boards of health as defined in section 145A.02, subdivision 2. The report required by this subdivision is not required of a family day care or group family day care facility.

Subd. 9. As used in this section the following terms have the meanings given them.

(a) "Elementary or secondary school" includes any public school as defined in section 120.05, or nonpublic school, church, or religious organization, or home school in which a child is provided instruction in compliance with sections 120.101 and 120.102.

(b) "Person enrolled in any elementary or secondary school" means a person enrolled in grades kindergarten through 12 and a handicapped child receiving special

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(c) "Family day care" means day care for no more than ten children at one time of which no more than six are under school age. The licensed capacity must include all children of any caregiver when the children are present in the residence.

(d) "Group family day care" means day care for no more than 14 children at any one time. The total number of children includes all children of any caregiver when the children are present in the residence.

Subd. 10. A statement required to be submitted under subdivisions 1, 2, and 4 to document evidence of immunization shall include month, day, and year for immunizations administered after January 1, 1990.

History: *1967 c 858 s 1,2; 1973 c 137 s 1-3; 1977 c 305 s 45; 1978 c 758 s 1; 1980 c 504 s 1; 1986 c 444; 1987 c 309 s 24; 1988 c 430 s 1-8; 1989 c 215 s 1-7*

EARLY CHILDHOOD HEALTH AND DEVELOPMENTAL SCREENING

123.701 PURPOSE.

The legislature finds that early detection of children's health and developmental problems can reduce their later need for costly care, minimize their physical and educational handicaps, and aid in their rehabilitation. The purpose of sections 123.701 to 123.705 is to assist parents and communities in improving the health of Minnesota children and in planning educational and health programs.

History: *1977 c 437 s 1*

123.702 SCHOOL BOARD RESPONSIBILITIES.

Subdivision 1. Every school board shall provide for a voluntary program of early childhood health and developmental screening for children once before entering kindergarten. This screening program shall be established either by one board, by two or more boards acting in cooperation, by educational cooperative service units, by early childhood family education programs, or by other existing programs. No school board may make this screening examination a mandatory prerequisite to enroll a student. The school districts are encouraged to reduce the costs of preschool health screening programs by utilizing volunteers in implementing the program.

Subd. 1a. **Components.** A screening program shall include at least the following components to the extent the school board determines they are financially feasible: developmental assessments, hearing and vision screening, review of health history and immunization status, and assessments of height and weight. All screening components shall be consistent with the standards of the state commissioner of health for early and periodic screening programs. No child shall be required to submit to any component of this screening program to be eligible for any other component. No screening program shall provide laboratory tests, a health history or a physical examination to any child who has been provided with those laboratory tests or a health history or physical examination within the previous 12 months. The school district shall request the results of any laboratory test, health history or physical examination within the 12 months preceding a scheduled screening clinic. A school board may offer additional components such as nutritional, physical and dental assessments, blood pressure, and laboratory tests. State aid shall not be paid for additional components.

Subd. 2. If any child's screening indicates a condition which requires diagnosis or treatment, the child's parents shall be notified of the condition and the school board shall ensure that an appropriate follow-up and referral process is available, in accordance with procedures established pursuant to section 123.703, subdivision 1.

Subd. 3. The school board shall actively encourage participation in the screening program.

Subd. 4. Every school board shall contract with or purchase service from an approved early and periodic screening program in the area wherever possible.

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pia or other visual defects. As used in this section, "division" means the Division of Services for the Visually Handicapped, State Office of Education; or

(b) a written statement signed by at least one parent or legal guardian of the child that the screening violates the personal beliefs of the parent or legal guardian.

(2) The division shall provide vision screening report forms to persons approved by the division to conduct the screening.

(3) Each school district may conduct free vision screening clinics for children aged 3½ to seven.

(4) The division shall maintain a central register of children, aged 3½ to seven, who fail vision screening and who are referred for follow-up treatment. The register shall include the name of the child, age or birthdate, address, cause for referral, and follow-up results. Each school district shall report referral follow-up results to the division.

(5) The division shall coordinate and supervise the training of persons who serve as vision screeners.

(6) A licensed health professional providing vision care to private patients may not participate as a screener in free vision screening programs provided by school districts.

(7) The Department of Health shall, by rule, set standards and procedures for vision screening required by this chapter, and shall provide the division with copies of rules, standards, instructions, and test charts necessary for conducting vision screening.

(8) The division shall supervise screening, referral, and follow-up required by this chapter.

History: C. 1953, 53A-11-203, enacted by L. 1988, ch. 2, § 153.

Effective Dates. — Laws 1988, ch. 2, § 347 makes the act effective on February 2, 1988.

Cross-References. — Utah Division of Services for the Visually Handicapped, § 53A-26-101.

PART 3

IMMUNIZATION OF STUDENTS

53A-11-301. Certificate of immunization required.

Unless exempted for personal, medical, or religious objections as provided in Section 53A-11-302, a student may not attend a public, private, or parochial kindergarten, elementary, or secondary school through grade 12, nursery school, licensed day care center, child care facility, family care home, or headstart program in this state unless there is presented to the appropriate official of the school a certificate of immunization from a licensed physician or authorized representative of the state or local health department stating that the student has received immunization against communicable diseases as required by rules adopted under Section 53A-11-303.

History: C. 1953, 53A-11-301, enacted by L. 1988, ch. 2, § 154.

Effective Dates. — Laws 1988, ch. 2, § 347 makes the act effective on February 2, 1988.

Cross-References. — Powers and duties of local health department as to schools, § 26-24-24.

State Department of Health, Chapter 1 of Title 26.

53A-11-302. Conditional enrollment of move-ins and transfers — Grounds for exemption from required immunizations.

(1) A student may enter school without a certificate of immunization under a conditional enrollment if the student moves to Utah or transfers within the state within 30 days prior to entry into a school, but may not continue to attend unless a certificate of immunization is presented within 30 days after entry.

(2) A student who, at the time of school enrollment, has not been completely immunized against each specified disease may attend school under a conditional enrollment provided the student has received one dose of each specified vaccine prior to enrollment.

(3) A student is exempt from receiving the required immunizations if there is presented to the appropriate official of the school one or more of the following:

(a) a certificate from a licensed physician that the physical condition of the student is such that one or more specified immunizations would endanger the student's life or health;

(b) a statement signed by one of the following persons that the individual has a personal belief opposed to immunizations; or that the person is a bona fide member of a specified, recognized religious organization whose teachings are contrary to immunizations:

(i) one of the student's parents;

(ii) the student's guardian;

(iii) a legal age brother or sister of a student who has no parent or guardian; or

(iv) the student, if of legal age.

History: C. 1953, 53A-11-302, enacted by L. 1988, ch. 2, § 155.

Effective Dates. — Laws 1988, ch. 2, § 347 makes the act effective on February 2, 1988.

Cross-References. — Period of minority, § 15-2-1.

COLLATERAL REFERENCES

Am. Jur. 2d. — 39 Am. Jur. 2d Health § 27.

C.J.S. — 39A C.J.S. Health and Environment § 22.

Key Numbers. — Health and Environment ⇐ 25.

53A-11-303. Regulations of department.

(1) The Department of Health shall adopt rules to establish which immunizations are required and the manner and frequency of their administration.

(2) The rules adopted shall conform to recognized standard medical practices.

(3) The rules shall require the reporting of statistical information and names of noncompliers by the schools.

History: C. 1953, 53A-11-303, enacted by L. 1988, ch. 2, § 156.

Effective Dates. — Laws 1988, ch. 2, § 347 makes the act effective on February 2, 1988.

53A-11-304. Certificate part of student's record — Forms for certificates — Transfer of immunization record to official certificate.

(1) Each school shall retain official certificates of immunization for every enrolled student. The certificate becomes a part of the individual student's permanent school record and follows the student through his or her public or private school career.

(2) The Department of Health shall provide official certificate of immunization forms to public and private schools, physicians, and local health departments. The forms referred to in this subsection shall include a clear statement of the student's rights under Section 53A-11-302.

(3) Any immunization record provided by a licensed physician, registered nurse, or public health official may be accepted by a school official as a certificate of immunization if the type of immunization given and the dates given are specified and the information is transferred to an official certificate of immunization and verified by the school district in which the public or private school is located.

History: C. 1953, 53A-11-304, enacted by L. 1988, ch. 2, § 157.

Effective Dates. — Laws 1988, ch. 2, § 347 makes the act effective on February 2, 1988.

53A-11-305. Immunization by local health departments — Fees.

(1) If a student has not been immunized against a disease specified by the Department of Health, he may be immunized by the local health department upon the request of his parent or guardian, or upon the student's request if he is of legal age. The local health department may charge a fee to cover the cost of administration of the vaccine.

(2) The vaccine necessary for immunizations required under Sections 53A-11-301 and 53A-11-303 shall be furnished to local departments of health by the Department of Health. The Department of Health may recover all or part of the cost of vaccines purchased with state funds by charging local health departments a fee for those vaccines. Local health departments may pass the cost of the vaccine on to the student, his parent or guardian, or other responsible party. However, a child may not be refused immunizations by the local health department in his area of residence because of inability to pay.

(3) The Department of Health shall establish the fee for administration of vaccines, as provided by Subsection (1), and shall establish fees for vaccines.

History: C. 1953, 53A-11-305, enacted by L. 1988, ch. 2, § 158; 1988, ch. 202, § 1.

Amendment Notes. — The 1988 amendment, effective April 25, 1988, deleted "without cost for the vaccine" following "immunized" in the first sentence of Subsection (1); substituted "vaccine" for "biologicals" in the first sentence of Subsection (2); and added the second, third, and fourth sentences in Subsection (2) and Subsection (3).

Effective Dates. — Laws 1988, ch. 2, § 347 makes the act effective on February 2, 1988.

Cross-References. — Local health departments, Chapter 24 of Title 26.

53A-11-306. Conditional enrollment — Suspension for noncompliance — Procedure.

(1) Conditional enrollment time periods may be modified by the department by legally adopted rules.

(2) The requirements for conditional enrollment shall apply to each student unless that student is exempted under Section 53A-11-302.

(3) After five days written notice of a pending suspension and of the student's rights under Section 53A-11-302 shall be mailed to the last-known address of a parent, guardian, or legal age brother or sister of a student who is without parent or guardian, the governing authority of any school shall prohibit further attendance by a student under a conditional enrollment who has failed to obtain the immunization required within time period set forth in Section 53A-11-302 or otherwise established by rule.

(4) Parents or guardians of children who are prohibited from attending school for failure to comply with the provisions of this part shall be referred to the juvenile court.

History: C. 1953, 53A-11-306, enacted by L. 1988, ch. 2, § 159.

Effective Dates. — Laws 1988, ch. 2, § 347 makes the act effective on February 2, 1988.

Cross-References. — Juvenile courts, Chapter 3a of Title 78.

Period of minority, § 15-2-1.

PART 4

REPORTING OF PROHIBITED ACTS

53A-11-401. Definitions.

For purposes of Sections 53A-11-301 through 53A-11-304 [53A-11-402 through 53A-11-404]:

(1) "Educator" means a person employed by a public school, but excludes those employed by institutions of higher education.

(2) "Prohibited act" means an act prohibited by Section 53A-3-501, relating to alcohol; Section 58-37-8, relating to controlled substances; or Section 58-37a-5, relating to drug paraphernalia.

History: C. 1953, 53A-11-401, enacted by L. 1988, ch. 2, § 160.

Effective Dates. — Laws 1988, ch. 2, § 347 makes the act effective on February 2, 1988.

Compiler's Notes. — The reference to §§ 53A-11-301 to 53A-11-304 in the introductory language seems incorrect. Those sections deal with immunization of students. Sections 53A-11-402 to 53A-11-404 deal with reporting of prohibited acts.

53A-11-402. Mandatory reporting of prohibited acts.

If an educator has reasonable cause to believe that a student at the public school where the educator is employed has committed a prohibited act, he shall immediately report that to the school's designated educator.

History: C. 1953, 53A-11-402, enacted by L. 1988, ch. 2, § 161.

Effective Dates. — Laws 1988, ch. 2, § 347 makes the act effective on February 2, 1988.

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(3) "Local health department" shall mean the city, town, county, district or combined city-county health department, board of health, or health officer which provides public health services.

(4) "School" shall mean and include each building, facility, and location at or within which any or all portions of a preschool, kindergarten and grades one through twelve program of education and related activities are conducted for two or more children by or in behalf of any public school district and by or in behalf of any private school or private institution subject to approval by the state board of education pursuant to RCW 28A.305.130(6), 28A.195.010 through 28A.195.050, and 28A.410.120.

(5) "Day care center" shall mean an agency which regularly provides care for a group of thirteen or more children for periods of less than twenty-four hours and is licensed pursuant to chapter 74.15 RCW.

(6) "Child" shall mean any person, regardless of age, in attendance at a public or private school or a licensed day care center.

Formerly § 28A.31.102, enacted by Laws 1979, Ex.Sess., ch. 118, § 2, eff. Sept. 1, 1979. Amended by Laws 1984, ch. 40, § 4; Laws 1985, ch. 49, § 2, eff. April 17, 1985. Recodified as § 28A.210.070 and amended by Laws 1990, ch. 33, §§ 4, 191.

Historical and Statutory Notes

1984 Amendment. In the introductory phrase and in subsec. (1), substituted "through 28A.31.120" for "through 28A.31.122".

1985 Amendment. Added subsec. (6) defining "Child".

1990 Legislation

Laws 1990, ch. 33, § 191, changed internal references to correspond with recodification.

Severability—Laws 1984, ch. 40: See Historical Note following § 28A.195.050.

28A.210.080. Immunization program—Attendance of child conditioned upon presentation of alternative proofs

The attendance of every child at every public and private school in the state and licensed day care center shall be conditioned upon the presentation before or on each child's first day of attendance at a particular school or center, of proof of either (1) full immunization, (2) the initiation of and compliance with a schedule of immunization, as required by rules of the state board of health, or (3) a certificate of exemption as provided for in RCW 28A.210.090. The attendance at the school or the day care center during any subsequent school year of a child who has initiated a schedule of immunization shall be conditioned upon the presentation of proof of compliance with the schedule on the child's first day of attendance during the subsequent school year. Once proof of full immunization or proof of completion of an approved schedule has been presented, no further proof shall be required as a condition to attendance at the particular school or center.

Formerly § 28A.31.104, enacted by Laws 1979, Ex.Sess., ch. 118, § 3, eff. Sept. 1, 1979. Amended by Laws 1985, ch. 49, § 1, eff. April 17, 1985. Recodified as § 28A.210.080 and amended by Laws 1990, ch. 33, §§ 4, 192.

Historical and Statutory Notes

1985 Amendment. In the first sentence, following "shall be conditioned upon the presentation" substituted "before or on" for "within forty-five days of".

1990 Legislation

Laws 1990, ch. 33, § 192, changed internal references to correspond with recodification.

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6) Severability—Laws 1984, ch. 40: See Historical Note following § 28A.195.050.

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1990 Legislation

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28A.210.090. Immunization program—Exemptions from on presentation of alternative certifications

Any child shall be exempt in whole or in part from the immunization measures required by RCW 28A.210.060 through 28A.210.170 upon the presentation of any one or more of the following, on a form prescribed by the department of social and health services:

(1) A written certification signed by any physician licensed to practice medicine pursuant to chapter 18.71 or 18.57 RCW that a particular vaccine required by rule of the state board of health is, in his or her judgment, not advisable for the child: *Provided,* That when it is determined that this particular vaccine is no longer contraindicated, the child will be required to have the vaccine;

(2) A written certification signed by any parent or legal guardian of the child or any adult in loco parentis to the child that the religious beliefs of the signator are contrary to the required immunization measures; and

(3) A written certification signed by any parent or legal guardian of the child or any adult in loco parentis to the child that the signator has either a philosophical or personal objection to the immunization of the child.

Formerly § 28A.31.106, enacted by Laws 1979, Ex.Sess., ch. 118, § 4, eff. Sept. 1, 1979. Amended by Laws 1984, ch. 40, § 5. Recodified as § 28A.210.090 and amended by Laws 1990, ch. 33, §§ 4, 193.

Historical and Statutory Notes

1984 Amendment. In the introductory paragraph, substituted "through 28A.31.120" for "through 28A.31.122".

1990 Legislation

Laws 1990, ch. 33, § 193, changed internal references to correspond with recodification.

Severability—Laws 1984, ch. 40: See Historical Note following § 28A.195.050.

28A.210.100. Immunization program—Source of immunizations—Written records

The immunizations required by RCW 28A.210.060 through 28A.210.170 may be obtained from any private or public source desired: *Provided,* That the immunization is administered and records are made in accordance with the regulations of the state board of health. Any person or organization administering immunizations shall furnish each person immunized, or his or her parent or legal guardian, or any adult in loco parentis to the child, with a written record of immunization given in a form prescribed by the state board of health.

Formerly § 28A.31.110, enacted by Laws 1979, Ex.Sess., ch. 118, § 6, eff. Sept. 1, 1979. Amended by Laws 1984, ch. 40, § 7. Recodified as § 28A.210.100 and amended by Laws 1990, ch. 33, §§ 4, 194.

Historical and Statutory Notes

1984 Amendment. Near the beginning of the first sentence, substituted "through 28A.31.120" for "through 28A.31.122".

1990 Legislation

Laws 1990, ch. 33, § 194, changed internal references to correspond with recodification.

Severability—Laws 1984, ch. 40: See Historical Note following § 28A.195.050.

28A.210.110. Immunization program—Administrator's duties upon receipt of proof of immunization or certification of exemption

A child's proof of immunization or certification of exemption shall be presented to the chief administrator of the public or private school or day care center or to his or her designee for that purpose. The chief administrator shall:

(1) Retain such records pertaining to each child at the school or day care center for at least the period the child is enrolled in the school or attends such center;

(2) Retain a record at the school or day care center of the name, address, and date of exclusion of each child excluded from school or the center pursuant to RCW 28A.210.120 for not less than three years following the date of a child's exclusion;

(3) File a written annual report with the department of social and health services on the immunization status of students or children attending the day care center at a time and on forms prescribed by the department of social and health services; and

(4) Allow agents of state and local health departments access to the records retained in accordance with this section during business hours for the purposes of inspection and copying.

Formerly § 28A.31.112, enacted by Laws 1979, Ex.Sess., ch. 118, § 7, eff. Sept. 1, 1979. Recodified as § 28A.210.110 and amended by Laws 1990, ch. 33, §§ 4, 195.

Historical and Statutory Notes

1990 Legislation

Laws 1990, ch. 33, § 195, changed internal references to correspond with recodification.

Notes of Decisions

For basic development, see Notes of Decisions under § 28A.31.112 in main volume

28A.210.120. Immunization program—Prohibiting child's presence, when—Notice to parent, guardian or adult in loco parentis, contents

It shall be the duty of the chief administrator of every public and private school and day care center to prohibit the further presence at the school or day care center for any and all purposes of each child for whom proof of immunization, certification of exemption, or proof of compliance with an approved schedule of immunization has not been provided in accordance with RCW 28A.210.080 and to continue to prohibit the child's presence until such proof of immunization, certification of exemption, or approved schedule has been provided. The exclusion of a child from a school shall be accomplished in accordance with rules of the state board of education. The exclusion of a child from a day care center shall be accomplished in accordance with rules of the department of social and health services. Prior to the exclusion of a child, each school or day care center shall provide written notice to the parent(s) or legal guardian(s) of each child or to the adult(s) in loco parentis to each child, who is not in compliance with the requirements of RCW 28A.210.080. The notice shall fully inform such person(s) of the following: (1) The requirements established by and pursuant to RCW 28A.210.060 through 28A.210.170; (2) the fact that the child will be prohibited from further attendance at the school unless RCW 28A.210.080 is complied with; (3) such procedural due process rights as are hereafter established pursuant to RCW 28A.210.160 and/or 28A.210.170, as

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28A.210.140. Immuniz
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Notes of Decisions

For basic development, see Notes of Decisions under § 28A.31.112 in main volume

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the chief administrator of every public and private ter to prohibit the further presence at the school or and all purposes of each child for whom proof of ion of exemption, or proof of compliance with an mmunization has not been provided in accordance and to continue to prohibit the child's presence until tion, certification of exemption, or approved sched-The exclusion of a child from a school shall be nce with rules of the state board of education. The rom a day care center shall be accomplished in of the department of social and health services. of a child, each school or day care center shall o the parent(s) or legal guardian(s) of each child or arentis to each child, who is not in compliance with W 28A.210.080. The notice shall fully inform such ng: (1) The requirements established by and pursu-0 through 28A.210.170; (2) the fact that the child n further attendance at the school unless RCW with; (3) such procedural due process rights as are rsuant to RCW 28A.210.160 and/or 28A.210.170, as

appropriate; and (4) the immunization services that are available from or through the local health department and other public agencies.

Formerly § 28A.31.114, enacted by Laws 1979, Ex.Sess., ch. 118, § 8, eff. Sept. 1, 1979. Amended by Laws 1984, ch. 40, § 8; Laws 1985, ch. 49, § 3, eff. April 17, 1985. Recodified as § 28A.210.120 and amended by Laws 1990, ch. 33, §§ 4, 196.

Historical and Statutory Notes

1984 Amendment. In subd. (1) of the last sentence, substituted "through 28A.31.120" for "through 28A.31.122".

1985 Amendment. At the beginning of the first sentence, deleted "Upon notification by the local health department,"; and, in the fourth sentence, following "Prior to the exclusion of a child" substituted ", each school or day care center shall provide" for "from a school or day care center each local health department shall provide".

1990 Legislation

Laws 1990, ch. 33, § 196, changed internal references to correspond with recodification.

Severability—Laws 1984, ch. 40: See Historical Note following § 28A.195.050.

Administrative Code References

In general, see WAC 248-100-163 et seq.

28A.210.130. Immunization program—Superintendent of public instruction to provide information

The superintendent of public instruction shall provide for information about the immunization program and requirements under RCW 28A.210.060 through 28A.210.170 to be widely available throughout the state in order to promote full use of the program.

Formerly § 28A.31.115, enacted by Laws 1985, ch. 49, § 4, eff. April 17, 1985. Recodified as § 28A.210.130 and amended by Laws 1990, ch. 33, §§ 4, 197.

Historical and Statutory Notes

1990 Legislation

Laws 1990, ch. 33, § 197, changed internal references to correspond with recodification.

28A.210.140. Immunization program—State board of health rules, contents

The state board of health shall adopt and is hereby empowered to adopt rules pursuant to chapter 34.05 RCW which establish the procedural and substantive requirements for full immunization and the form and substance of the proof thereof, to be required pursuant to RCW 28A.210.060 through 28A.210.170.

Formerly § 28A.31.116, enacted by Laws 1979, Ex.Sess., ch. 118, § 9, eff. Sept. 1, 1979. Amended by Laws 1984, ch. 40, § 9. Recodified as § 28A.210.140 and amended by Laws 1990, ch. 33, §§ 4, 198.

Historical and Statutory Notes

1984 Amendment. At the end of the section, substituted "through 28A.31.120" for "through 28A.31.122".

1990 Legislation

Laws 1990, ch. 33, § 198, changed internal references to correspond with recodification.

Severability—Laws 1984, ch. 40: See Historical Note following § 28A.195.050.

State Immunization Requirements

1989-1990

U.S. Department of Health and Human Services
Public Health Service
Centers for Disease Control
Center for Prevention Services
Division of Immunization

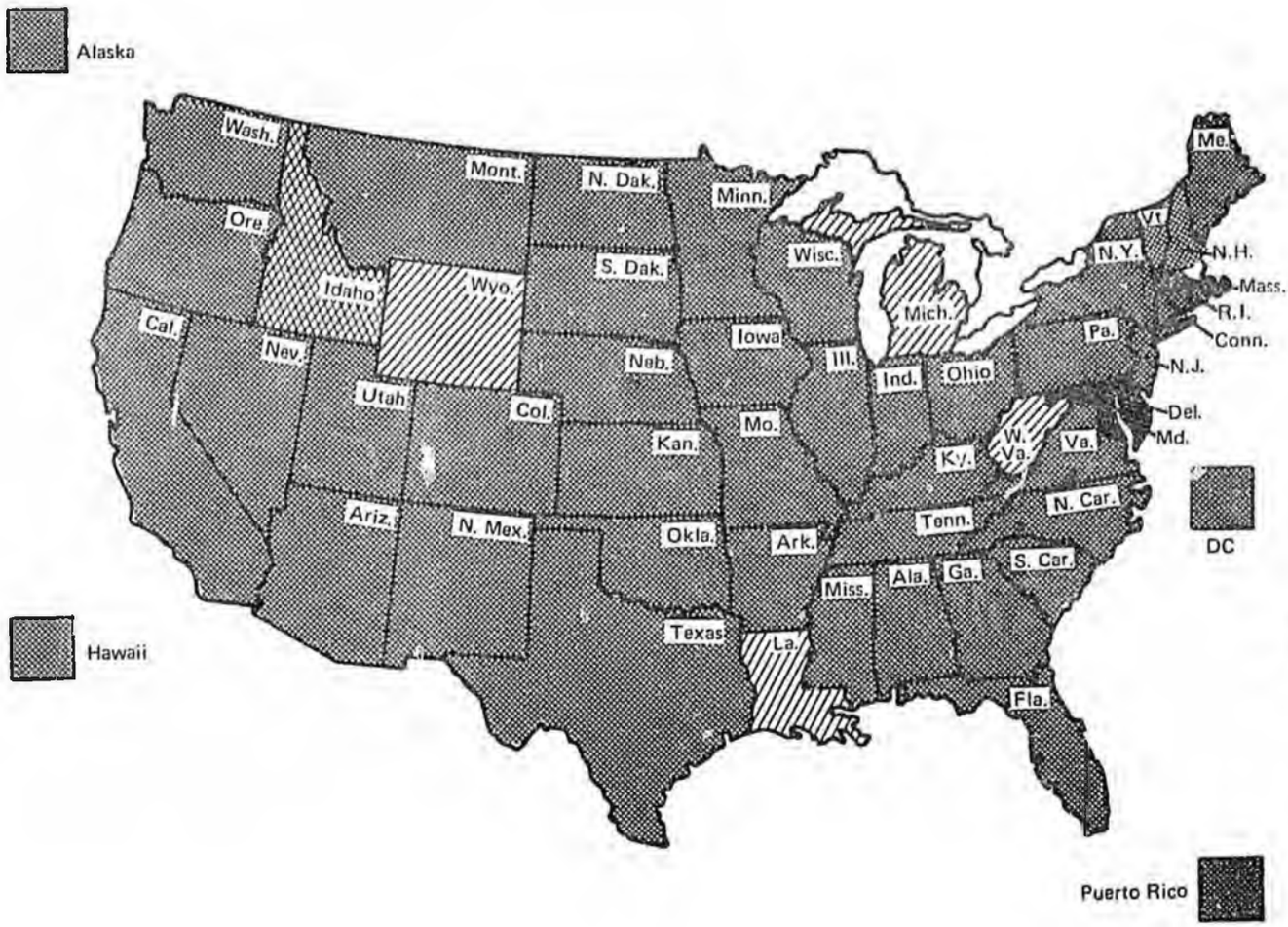
August 1989

CONTENTS

State Immunization Requirements
Applicable to Any or All of Grades K-12

State	Diphtheria	Tetanus	Pertussis	Measles	Mumps	Rubella	Polio
Alabama	K-12	K-12	K-6 yrs	K-12	K-12	K-12	K-12
Alaska	K-12	K-12	K-6 yrs	K-12	Not Required	K-11 yrs	K-12
Arizona	K-12	Not Required	Not Required	K-12	Not Required	K-12	K-12
Arkansas	K-12	K-12	K-6 yrs	K-12	Not Required	K-12	K-12
California	K-12	K-12	K-6 yrs	K-12	K-6 yrs	K-12	K-12
Colorado	K-12	K-12	K-6 yrs	K-12	K	K-6	K-12
Connecticut	K-12	K-12	K-6 yrs	K-12	K-12	K-12	K-12
Delaware	K-12	K-12	K-6 yrs	K-12	K-10	K-12	K-12
Dist. of Col.	K-12	K-12	K-6 yrs	K-12	K-12	K-12	K-12
Florida	K-12	K-12	K-6 yrs	K-12	K-12	K-12	K-12
Georgia	K-12	K-12	K-6 yrs	K-12	K-12	K-12	K-12
Hawaii	K-12	K-12	K-6 yrs	K-12	K-12	K-12	K-12
Idaho	K-5	K-5	Not Required	K-5	K-5	K-5	K-5
Illinois	K-12	K-12	K-5 yrs	K-12	K-12	K-12	K-12
Indiana	K-12	K-12	K-6 yrs	K-12	K-5	K-12	K-12
Iowa	K-12	K-12	K-6 yrs	K-12	Not Required	K-12	K-12
Kansas	K-12	K-12	K-6 yrs	K-12	K-12	K-12	K-12
Kentucky	K-12	K-12	New Enterers	K-12	Not Required	K-12	K-12
Louisiana	New Enterers	New Enterers	New Enterers	New Enterers	New Enterers	New Enterers	New Enterers
Maine	K-12	K-12	K-6 yrs	K-12	K-10	K-12	K-12
Maryland	K-12	K-12	K-6 yrs	K-12	Not Required	K-12	K-12
Massachusetts	K-12	K-12	K-6 yrs	K-12	K-12	K-12	K-12
Michigan	New Enterers	New Enterers	New Enterers	New Enterers	New Enterers	New Enterers	New Enterers
Minnesota	K-12	K-12	K-6 yrs	K-12	K-12	K-12	K-12
Mississippi	K-12	K-12	K-6 yrs	K-12	New Enterers	K-12	K-12
Missouri	K-12	Not Required	Not Required	K-12	Not Required	K-12	K-12
Montana	K-12	K-12	K-6 yrs	K-12	New Enterers	K-12	K-12
Nebraska	K-12	K-12	K-6 yrs	K-12	K-12	K-12	K-12
Nevada	K-12	K-12	K-6 yrs	K-12	New Enterers	K-12	K-12
New Hampshire	K-12	K-12	K-6 yrs	K-12	K-12	K-12	K-12
New Jersey	K-12	K-12	K-6 yrs	K-12	K-15 yrs	K-12	K-12
New Mexico	K-12	K-12	K-6 yrs	K-12	Not Required	K-12	K-12
New York	K-12	Not Required	Not Required	K-12	K-12	K-12	K-12
North Carolina	K-12	K-12	K-6 yrs	K-12	New Enterers	K-12	K-12
North Dakota	K-12	K-12	K-6 yrs	K-12	K-12	K-12	K-12
Ohio	K-12	K-12	K-6 yrs	K-12	K-12	K-12	K-12
Oklahoma	K-12	K-12	K-6 yrs	K-12	New Enterers	K-12	K-12
Oregon	K-12	K-12	Not Required	K-12	New Enterers	K-12	K-12
Pennsylvania	K-12	K-12	Not Required	K-12	K-12	K-12	K-12
Puerto Rico	K-12	K-12	K-6 yrs	K-12	K-12	K-12	K-12
Rhode Island	K-12	K-12	Not Required	K-12	K-6 yrs	K-12	K-12
South Carolina	K-12	K-12	K-5 yrs	K-12	Not Required	K-12	K-12
South Dakota	K-12	K-12	K-6 yrs	K-12	K-12	K-12	K-12
Tennessee	K-12	K-12	K-6 yrs	K-12	K-12	K-12	K-12
Texas	K-12	K-12	Not Required	K-12	K-17 yrs	K-11 yrs	K-12
Utah	K-12	K-12	K-6 yrs	K-12	K-12	K-12	K-12
Vermont	K-12	K-12	K-6 yrs	K-12	Not Required	K-12	K-12
Virginia	K-12	K-12	K-6 yrs	K-12	New Enterers	K-12	K-12
Washington	K-12	K-12	Not Required	K-12	K-1	K-12	K-12
West Virginia	New Enterers	New Enterers	New Enterers	New Enterers	Not Required	New Enterers	New Enterers
Wisconsin	K-12	K-12	K-6 yrs	K-12	K-12	K-12	K-12
Wyoming	New Enterers	New Enterers	K-6 yrs	New Enterers	New Enterers	New Enterers	New Enterers

DIPHTHERIA
Immunization Requirements
(For Any or All of Grades K-12)



New Enterers

K-5th Grade

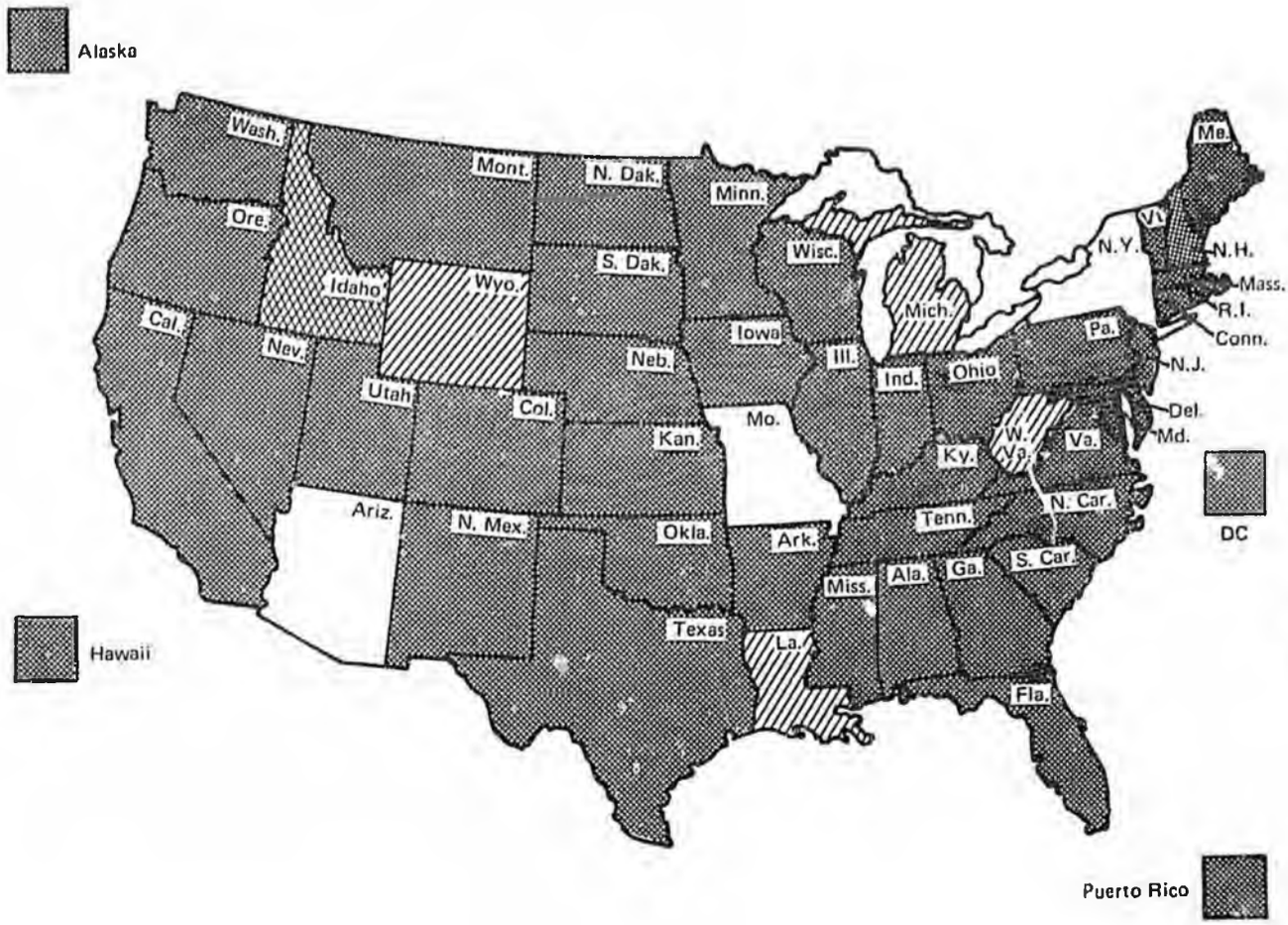
K-12th Grade

DIPHTHERIA

State Immunization Requirements
Applicable to Any or All of Grades K-12

State	Grade	Dosage Requirements and Additional Comments
Alabama	K-12	4 doses, last dose on or after 4th birthday
Alaska	K-12	5 doses unless 4th dose after 4th birthday, then 4; 3 doses if 7 years and older
Arizona	K-12	5 doses unless 4th dose after 4th birthday
Arkansas	K-12	3 doses; last must have been after 4th birthday
California	K-12	4 doses; 4th dose after 2nd birthday
Colorado	K-12	4 doses
Connecticut	K-12	3 doses
Delaware	K-12	4 doses; 5 if 4th is before 4th birthday
Dist. of Col.	K-12	3 doses plus booster if series started as infant; a 5th dose is recommended; also required of college students
Florida	K-12	5 doses unless 4th dose after 4th birthday, then 4; 3 doses if 7 yrs & older
Georgia	K-12	3 doses minimum; the last dose given after 4th birthday
Hawaii	K-12	As recommended by American Academy of Pediatrics
Idaho	K-5	4 doses
Illinois	K-12	4 doses; the last a booster on or after 4th birthday plus a 10 year booster
Indiana	K-12	4 doses for K-1, 3 doses for grades 2 and above
Iowa	K-12	3 doses, one must be after age 4 years
Kansas	K-12	4 doses if series is begun before age 7 years; 3 if begun after 6 years
Kentucky	K-12	3 to 5 doses—the last a booster on or after 4th birthday plus a 10 year booster
Louisiana	New Enterers	4 to 5 doses; at least 1 dose after age 4 years
Maine	K-12	3 doses
Maryland	K-12	4 doses if 6 yrs or younger; 3 doses if 7 yrs or older
Massachusetts	K-12	4 doses for K; 3 doses plus 10 year booster for 1-12
Michigan	New Enterers	4 doses, only 3 if series started after 6 yrs., plus booster every 10 years
Minnesota	K-12	5 doses unless 4th dose after 4th birthday, then 4; 3 doses if 7 yrs & older
Mississippi	K-12	4 doses if before 7 years; 3 if after 7 years; at least 1 booster dose after 4 years
Missouri	K-12	3 doses, at least 1 after age 3 years
Montana	K-12	4 doses if 6 years old or less; 3 if 7 years or older; last dose after 4th birthday
Nebraska	K-12	3 doses
Nevada	K-12	4 doses minimum, with at least 1 dose on or after 4th birthday
New Hampshire	K-12	3 doses minimum; provided the last dose is given on or after 4th birthday
New Jersey	K-12	4 doses including booster for ages 1-6; 3 doses for 7 years and older
New Mexico	K-12	4 doses if begun before age 7 years; 3 if after age 7 years; at least 1 dose after 4th birthday
New York	K-12	3 doses
North Carolina	K-12	5 doses; 3 doses by 1 yr of age, 1 booster dose in 2nd yr, 1 booster dose on or after 4th birthday; only 4 doses required if 4th dose on or after 4th birthday
North Dakota	K-12	4 doses
Ohio	K-12	4 doses; 3 if 3rd on or after 6th birthday
Oklahoma	K-12	3 doses
Oregon	K-12	4 doses; 5 if 4th was before age 4 years; 3 for grades 2-12 if in Oregon Schools on 3/14/82 unless 1 or more before 6 months, then 4 doses
Pennsylvania	K-12	3 doses
Puerto Rico	K-12	3+ doses, provided the 3rd is given after 4th birthday
Rhode Island	K-12	3 doses
South Carolina	K-12	3 doses, at least 1 must have been on or after 4th birthday
South Dakota	K-12	4 doses, at least 1 must have been after 4th birthday
Tennessee	K-12	4 doses
Texas	K-12	3 doses, 1 dose after 4th birthday plus 1 within 10 years
Utah	K-12	4 doses
Vermont	K-12	3 doses, with 6 months between 2nd dose and any thereafter
Virginia	K-12	3 doses, with 3rd after 4th birthday or 4th dose required
Washington	K-12	4 doses, last dose must be at or after age 4 years
West Virginia	New Enterers	3 doses minimum, with at least 1 after 4th birthday
Wisconsin	K-12	4 doses, only 3 if 3rd received after 4th birthday
Wyoming	New Enterers	4 doses, entering Wyoming schools

TETANUS
Immunization Requirements
(For Any or All of Grades K-12)



Not Required

New Enterers

K-5th Grade

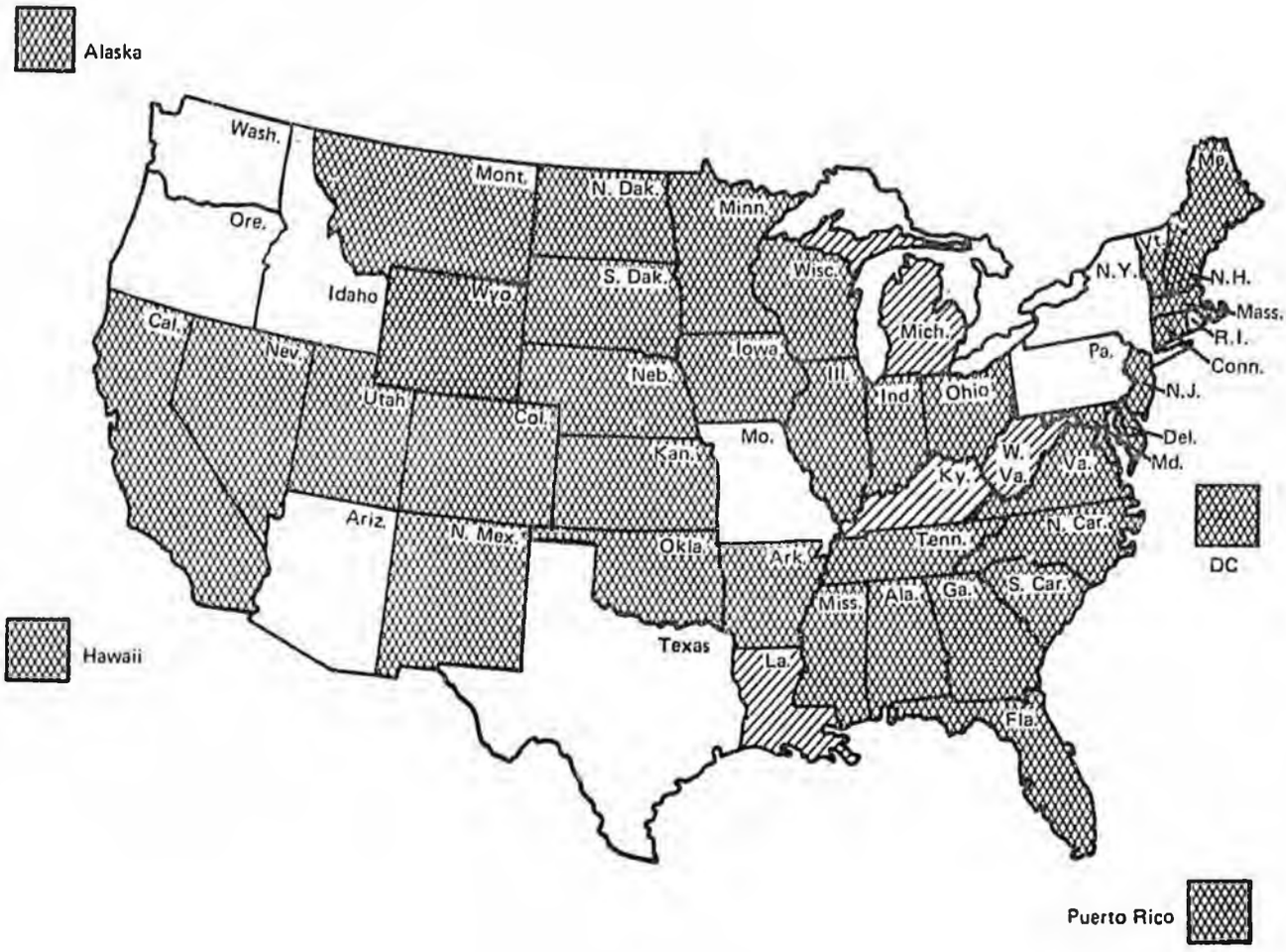
K-12th Grade

TETANUS

State Immunization Requirements
Applicable to Any or All of Grades K-12

State	Grade	Dosage Requirements and Additional Comments
Alabama	K-12	3 dose minimum required
Alaska	K-12	5 doses unless 4th dose after 4th birthday, then 4 doses; 3 doses if 7 years and older
Arizona	Not Required	Usually given with diphtheria
Arkansas	K-12	3 doses, but last must have been since 4th birthday
California	K-12	4 doses, 4th dose after 2nd birthday
Colorado	K-12	4 doses
Connecticut	K-12	3 doses
Delaware	K-12	4 doses; 5 if 4th was before 4th birthday
Dist. of Col.	K-12	3 doses plus booster if series started as infant; a 5th dose is recommended; also required of college students
Florida	K-12	5 doses unless 4th dose after 4th birthday, then 4; 3 doses if 7 yrs & older
Georgia	K-12	3 doses minimum, the last dose given after the 4th birthday
Hawaii	K-12	As recommended by American Academy of Pediatrics
Idaho	K-5	4 doses
Illinois	K-12	4 doses; the last a booster on or after 4th birthday plus a 10 year booster
Indiana	K-12	4 doses for K-1, 3 doses for grades 2 and above
Iowa	K-12	3 doses, 1 must be after age 4 years
Kansas	K-12	4 doses if started before age 7 years; 3 if begun after 7 years
Kentucky	K-12	3 to 5 doses—the last a booster on or after 4th birthday plus a 10 year booster
Louisiana	New Enterers	4 to 5 doses; at least 1 dose after age 4 years
Maine	K-12	3 doses
Maryland	K-12	4 doses if 6 yrs or younger; 3 doses if 7 yrs or older
Massachusetts	K-12	4 doses for K; 3 doses plus 10 year booster for 1-12
Michigan	New Enterers	4 doses, only 3 if series started after 6 years of age, plus booster every 10 years
Minnesota	K-12	5 doses unless 4th dose after 4th birthday, then 4; 3 doses if 7 yrs & older
Mississippi	K-12	4 doses if before 7 years; 3 if after 7 years; at least 1 booster dose after 4 years
Missouri	Not Required	3 doses, at least 1 after age 3 years recommended
Montana	K-12	4 doses if 6 years or less; 3 if 7 years or older; last dose after 4th birthday
Nebraska	K-12	3 doses
Nevada	K-12	4 doses minimum, with at least 1 dose on or after 4th birthday
New Hampshire	K-12	3 doses minimum, provided the last dose is given on or after 4th birthday
New Jersey	K-12	4 doses including booster for ages 1-6; 3 doses for 7 years and older
New Mexico	K-12	4 doses if begun before age 7 years; 3 if begun at age 7 years or older; at least 1 dose after 4th birthday
New York	Not Required	
North Carolina	K-12	5 doses; 3 doses by 1 yr of age, 1 booster dose in 2nd yr, 1 booster dose on or after 4th birthday; only 4 doses required if 4th dose on or after 4th birthday
North Dakota	K-12	4 doses
Ohio	K-12	4 doses; 3 if 3rd received on or after 6th birthday
Oklahoma	K-12	3 doses
Oregon	K-12	4 doses; 5 if 4th was before age 4 years; 3 for grades 2-12 if in Oregon Schools on 3/14/82 unless 1 or more before 6 months, then 4 doses
Pennsylvania	K-12	3 doses
Puerto Rico	K-12	3+ doses, provided the 3rd is given after 4th birthday
Rhode Island	K-12	3 doses
South Carolina	K-12	3 doses, at least 1 must have been on or after 4th birthday
South Dakota	K-12	4 doses, at least 1 must have been after 4th birthday
Tennessee	K-12	4 doses
Texas	K-12	3 doses, 1 dose after 4th birthday plus 1 within 10 years
Utah	K-12	4 doses
Vermont	K-12	3 doses, with 6 months between 2nd dose and any thereafter; plus booster in 10 years
Virginia	K-12	3 doses, with 3rd after 4th birthday or 4th dose required
Washington	K-12	4 doses, last dose must be at or after age 4 years
West Virginia	New Enterers	3 doses minimum, with at least 1 after 4th birthday
Wisconsin	K-12	4 doses, only 3 doses if 3rd received after 4th birthday
Wyoming	New Enterers	4 doses, entering Wyoming schools

PERTUSSIS
Immunization Requirements
(For Any or All of Grades K-12)



Not Required

New Enterers

K-5 yrs or K-6 yrs

PERTUSSIS

State Immunization Requirements
Applicable to Any or All of Grades K-12

State	Grade	Dosage Requirements and Additional Comments
Alabama	K-6 yrs	3 dose minimum required
Alaska	K-6 yrs	5 doses unless 4th dose after 4th birthday, then 4 doses
Arizona	Not Required	Usually given with diphtheria
Arkansas	K-6 yrs	3 doses, but last must have been after 4th birthday
California	K-6 yrs	4 doses, 4th dose after 2nd birthday
Colorado	K-6 yrs	4 doses
Connecticut	K-6 yrs	3 doses
Delaware	K-6 yrs	4 doses; 5 if 4th was before 4th birthday
Dist. of Col.	K-6 yrs	3 doses
Florida	K-6 yrs	5 doses unless 4th dose after 4th birthday; then 4 doses
Georgia	K-6 yrs	3 doses minimum; the last dose given after the 4th birthday
Hawaii	K-6 yrs	As recommended by American Academy of Pediatrics
Idaho	Not Required	
Illinois	K-5 yrs	4 doses; the last a booster on or after 4th birthday
Indiana	K-6 yrs	4 doses
Iowa	K-6 yrs	3 doses, 1 must be after age 4 years
Kansas	K-6 yrs	4 doses
Kentucky	New Enterers	4 doses minimum; if 4th given before 4th birthday, a 5th is required
Louisiana	New Enterers	4 to 5 doses; at least 1 after age 4 years; required to age 7 years
Maine	K-6 yrs	3 doses
Maryland	K-6 yrs	4 doses if 6 yrs or younger
Massachusetts	K-6 yrs	4 doses
Michigan	New Enterers	4 doses, not required after 6th birthday
Minnesota	K-6 yrs	5 doses unless 4th dose after 4th birthday; then 4 doses
Mississippi	K-6 yrs	4 doses if before 7 years; at least 1 booster after 4th birthday
Missouri	Not Required	3 doses, at least 1 after age 3 years recommended
Montana	K-6 yrs	4 doses if 6 yrs or less; last dose after 4th birthday
Nebraska	K-6 yrs	3 doses
Nevada	K-6 yrs	4 doses minimum, with at least 1 dose on or after 4th birthday
New Hampshire	K-6 yrs	3 doses minimum; provided the last dose is given after the 4th birthday; not required to be given if 7 years or older
New Jersey	K-6 yrs	4 doses including booster for ages 1-6
New Mexico	K-6 yrs	4 doses
New York	Not Required	
North Carolina	K-6 yrs	5 doses; 3 doses by 1 yr of age, 1 booster dose in 2nd yr, 1 booster dose on or after 4th birthday; only 4 doses required if 4th dose on or after 4th birthday
North Dakota	K-6 yrs	4 doses
Ohio	K-6 yrs	4 doses; 3 if 3rd dose required on or after 6th birthday
Oklahoma	K-6 yrs	3 doses
Oregon	Not Required	
Pennsylvania	Not Required	
Puerto Rico	K-6 yrs	3+ doses, if 3rd is given after 4th birthday; not required after 7th birthday
Rhode Island	Not Required	
South Carolina	K-5 yrs	3 doses, at least 1 received on or after 4th birthday
South Dakota	K-6 yrs	4 doses, at least 1 received after 4th birthday
Tennessee	K-6 yrs	4 doses
Texas	Not Required	
Utah	K-6 yrs	4 doses
Vermont	K-6 yrs	3 doses, 6 months between 2nd and any thereafter
Virginia	K-6 yrs	3 doses, with 3rd dose after 4th birthday or 4th dose required
Washington	Not Required	
West Virginia	New Enterers	3 doses minimum, with at least 1 dose after 4th birthday; not required after 7 years of age
Wisconsin	K-6 yrs	4 doses, only 3 doses if 3rd received after 4th birthday
Wyoming	K-6 yrs	4 doses; required up to but not including 7th birthday

MEASLES
Immunization Requirements
(For Any or All of Grades K-12)

New Enterers

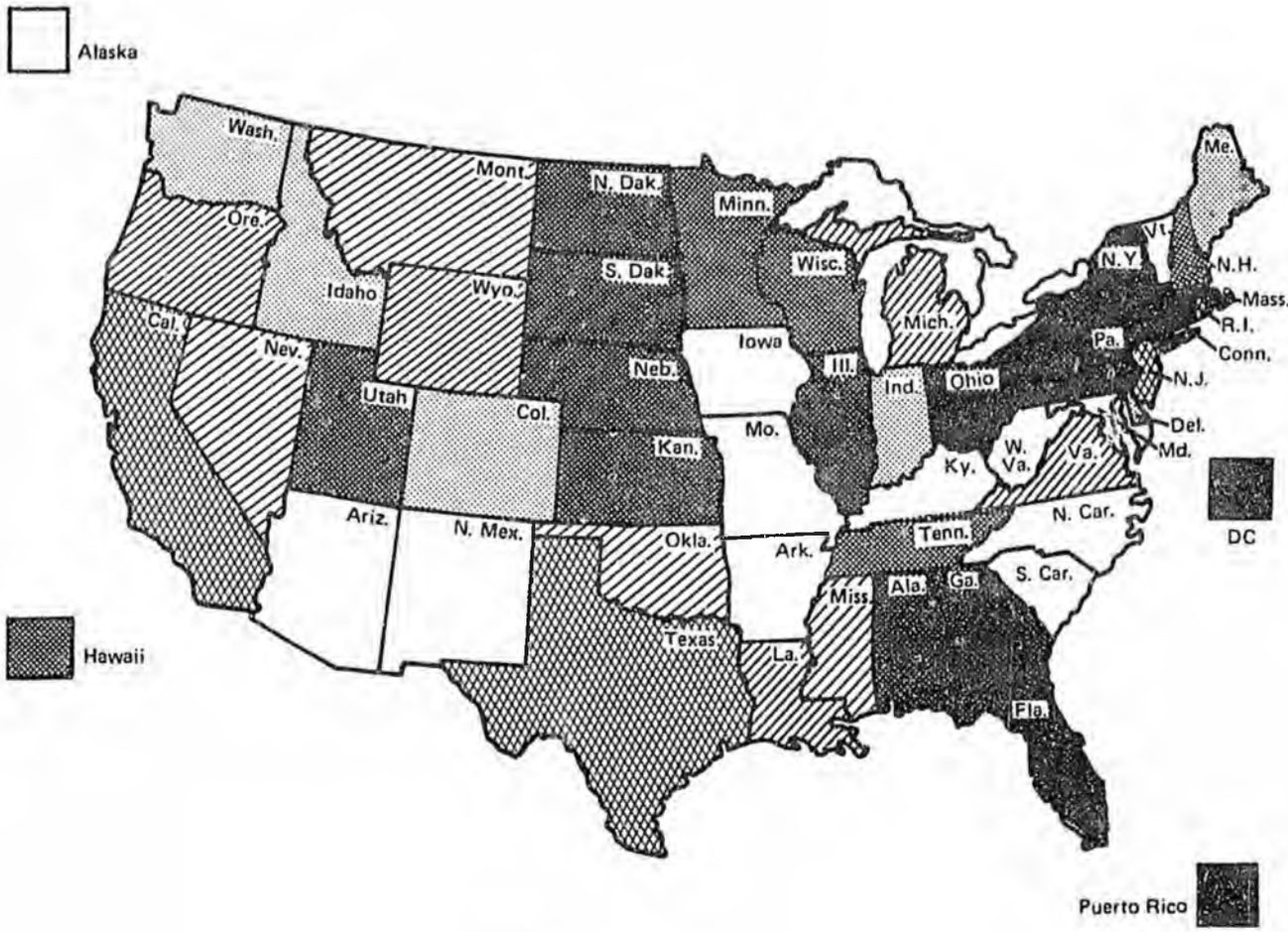
K-5th Grade

K-12th Grade

MEASLES
State Immunization Requirements
Applicable to Any or All of Grades K-12

State	Grade	Dosage Requirements and Additional Comments
Alabama	K-12	1 dose after 15 months of age
Alaska	K-12	1 dose on or after 1st birthday
Arizona	K-12	1 dose live measles vaccine given on or after 1st birthday
Arkansas	K-12	1 dose given after 1st birthday and after January 1968
California	K-12	1 dose of live virus vaccine administered on or after 1st birthday
Colorado	K-12	1 dose on or after 1st birthday
Connecticut	K-12	1 dose after age 1 and vaccine did not include gamma globulin
Delaware	K-12	1 dose after 15 months of age
Dist. of Col.	K-12	1 dose, must be repeated if given before 1969; also required of college students
Florida	K-12	1 dose at 15 months recommended, over 12 months accepted; and in 1968 or later
Georgia	K-12	1 dose of live virus vaccine given after the 1st birthday and after 1968; or positive serology
Hawaii	K-12	1 dose as recommended by American Academy of Pediatrics
Idaho	K-5	1 dose after 1st birthday; MD diagnosis of disease or laboratory confirmation of immunity accepted
Illinois	K-12	1 dose at 15 months of age or later; MD diagnosis of disease or laboratory confirmation accepted
Indiana	K-12	1 dose on or after 12 months of age; MD diagnosis of disease or laboratory confirmation accepted
Iowa	K-12	1 dose after 15 months of age or physician's diagnosis
Kansas	K-12	1 dose given after 12 months of age
Kentucky	K-12	1 dose on or after 12 months of age, recommended 15 months
Louisiana	New Enterers	1 dose given on or after 15 months, 12 to 15 months also accepted
Maine	K-12	1 dose after 1st birthday or serologic confirmation of immunity
Maryland	K-12	1 dose live vaccine at 1 year or older or serologic confirmation of immunity
Massachusetts	K-12	1 dose on or after 1st birthday
Michigan	New Enterers	1 dose after 1st birthday; MD diagnosis of disease accepted
Minnesota	K-12	1 dose after 12 months of age
Mississippi	K-12	1 dose after 1st birthday
Missouri	K-12	1 dose given after 12 months of age; children born in or after 1982 at 15 months
Montana	K-12	1 dose given after 12 months of age; on or after 15 months after 7/1/89
Nebraska	K-12	1 dose at or after 12 months of age
Nevada	K-12	1 dose, either single or any combination of vaccine on or after 12 months of age
New Hampshire	K-12	1 dose live vaccine on or after 1st birthday
New Jersey	K-12	1 dose live virus vaccine given after 12 months of age, except 15 months if child born after 1/88
New Mexico	K-12	1 dose live virus given on or after 12 months of age
New York	K-12	1 dose live vaccine administered after 12 months of age, but recommended at 15 months
North Carolina	K-12	1 dose live vaccine on or after 1st birthday
North Dakota	K-12	1 dose if given after 15 months of age; 12 months accepted; also required for students attending state funded colleges & universities
Ohio	K-12	1 dose live virus vaccine on or after 1st birthday
Oklahoma	K-12	1 dose, received on or after 1st birthday
Oregon	K-12	1 dose at or after 12 months of age, but recommended at 15 months
Pennsylvania	K-12	1 dose live vaccine on or after 1st birthday, or positive serology
Puerto Rico	K-12	1 dose live vaccine if given after 15 months of age; 12 months accepted
Rhode Island	K-12	1 dose after 12 months of age; also required of college students
South Carolina	K-12	1 dose, must have been on or after 1st birthday
South Dakota	K-12	1 dose after 12 months of age or MD's diagnosis of disease; also required by State funded colleges
Tennessee	K-12	1 dose given after 12 months of age
Texas	K-12	1 dose on, after, or during the calendar month of the 1st birthday or physician verified history of disease
Utah	K-12	1 dose given after 12 months of age
Vermont	K-12	1 dose administered on or after 1st birthday or a MD diagnosed disease history
Virginia	K-12	1 dose after 12 months of age
Washington	K-12	1 dose of live vaccine after 1st birthday; laboratory confirmation of disease accepted
West Virginia	New Enterers	1 dose given after 12 months of age
Wisconsin	K-12	1 dose on or after 1st birthday
Wyoming	New Enterers	1 dose after 12 months of age entering Wyoming schools

MUMPS
Immunization Requirements
(For Any or All of Grades K-12)

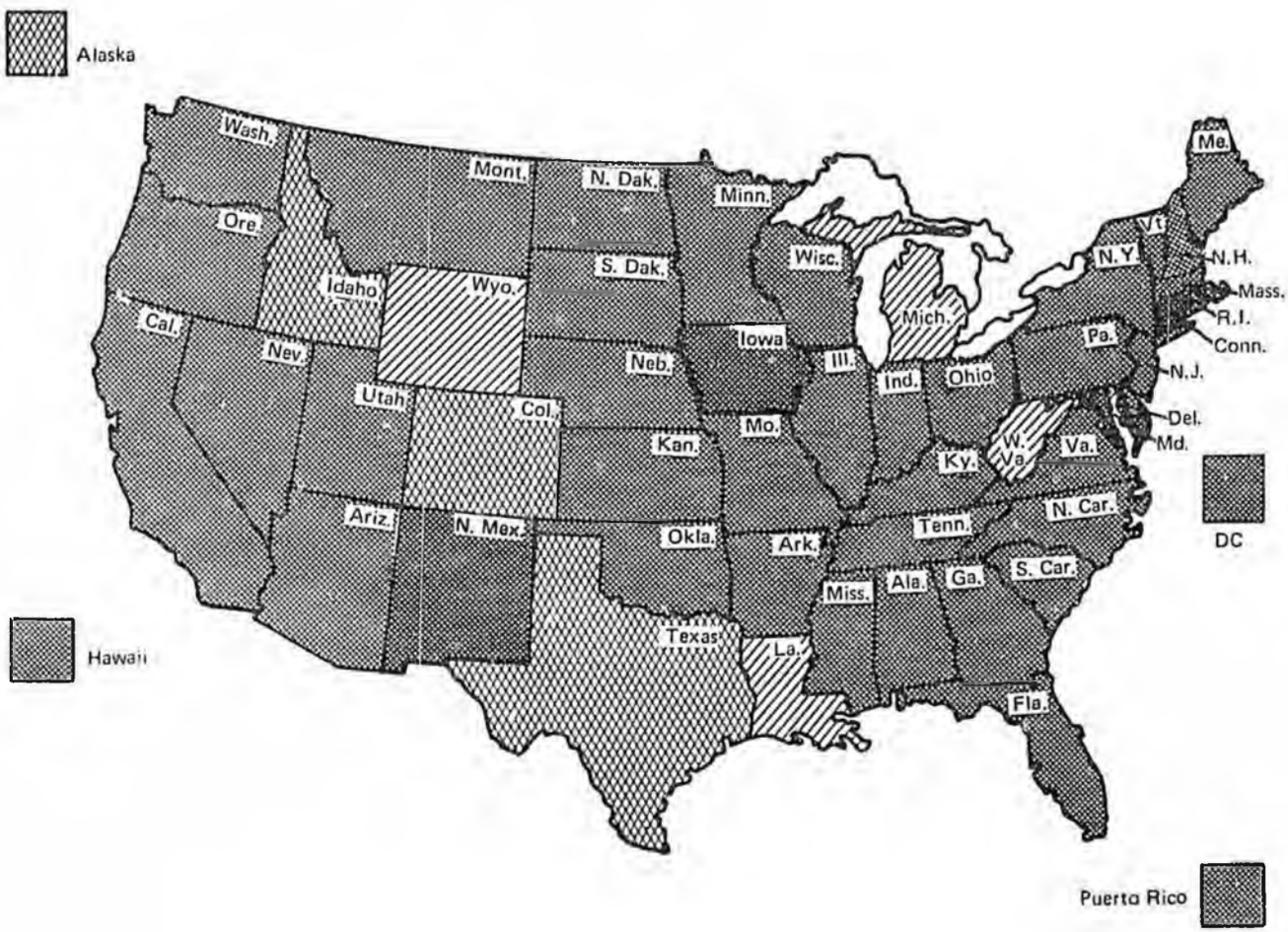


- Not Required
- New Enterers
- K, K-1st, K-5th, or K-10th Grade
- K-6yrs, K-15yrs, or K-17yrs
- K-12th Grade

MUMPS
State Immunization Requirements
Applicable to Any or All of Grades K-12

State	Grade	Dosage Requirements and Additional Comments
Alabama	K-12	1 dose after 15 months of age
Alaska	Not Required	
Arizona	Not Required	Usually given with measles and rubella vaccine
Arkansas	Not Required	
California	K-6 yrs	1 dose administered on or after 1st birthday
Colorado	K	1 dose on or after 1st birthday, not required after K
Connecticut	K-12	1 dose given after age 1 year
Delaware	K-10	1 dose after 1 year of age; K-11 in 90-91, K-12 in 91-92
Dist. of Col.	K-12	1 dose, also required of college students
Florida	K-12	1 dose at 15 months recommended, over 12 months accepted
Georgia	K-12	1 dose of live virus vaccine given after the 1st birthday
Hawaii	K-12	1 dose as recommended by American Academy of Pediatrics
Idaho	K-5	1 dose after 1st birthday; MD diagnosis of disease or laboratory confirmation of immunity accepted
Illinois	K-12	1 dose at 1 year of age or later, or MD diagnosis of disease
Indiana	K-5	1 dose on or after 12 months of age; 1 additional grade each year; MD diagnosis of disease or laboratory confirmation of immunity accepted
Iowa	Not Required	
Kansas	K-12	1 dose given after 12 months of age
Kentucky	Not Required	
Louisiana	New Enterers	1 dose given on or after 15 months; 12 to 15 months also accepted
Maine	K-10	1 dose after 1st birthday; or serologic confirmation of immunity
Maryland	Not Required	
Massachusetts	K-12	1 dose at or after 12 months of age
Michigan	New Enterers	1 dose, only in children who entered K in 1979 or later; MD diagnosis of disease accepted
Minnesota	K-12	1 dose
Mississippi	New Enterers	1 dose after 12 months of age
Missouri	Not Required	1 dose, given on or after 15 months; recommended
Montana	New Enterers	1 dose given on or after 15 months of age
Nebraska	K-12	1 dose at or after 12 months of age
Nevada	New Enterers	1 dose, either single or any combination of vaccine, on or after 12 months of age
New Hampshire	K-12	1 dose after 12 months of age, except 15 months of age if child born after 1/88
New Jersey	K-15 yrs	1 dose; required of those born on or after 1/1/73
New Mexico	Not Required	1 dose strongly recommended
New York	K-12	1 dose live vaccine given after 12 months of age
North Carolina	New Enterers	1 dose live vaccine by 2 yrs of age; not required for children who entered 1st grade before July 1, 1987
North Dakota	K-12	1 dose if given after 15 months of age — 12 months accepted
Ohio	K-12	1 dose live virus vaccine on or after 1st birthday
Oklahoma	New Enterers	1 dose received on or after 1st birthday
Oregon	New Enterers	1 dose includes all out-of-state transferees but not students in grades 2-12 in Oregon schools on 3/14/82
Pennsylvania	K-12	1 dose on or after 1st birthday or MD diagnosis of disease
Puerto Rico	K-12	1 dose live vaccine if given after 15 months of age; 12 months accepted
Rhode Island	K-6 yrs	1 dose after 12 months of age
South Carolina	Not Required	
South Dakota	K-12	1 dose given after 12 months of age
Tennessee	K-12	1 dose given after 12 months of age
Texas	K-17 yrs	1 dose or physician verified disease; by September 1990, mumps will be required for all enrollees
Utah	K-12	1 dose given after 12 months of age
Vermont	Not Required	
Virginia	New Enterers	1 dose given at 12 months of age or older; required of all new enterers since 8/1/81
Washington	K-1	1 dose at or after 12 months of age
West Virginia	Not Required	
Wisconsin	K-12	1 dose on or after 1st birthday
Wyoming	New Enterers	1 dose, entering Wyoming schools

RUBELLA
Immunization Requirements
(For Any or All of Grades K-12)



New Enterers

K-11 yrs, K-5th, or K-6th Grade

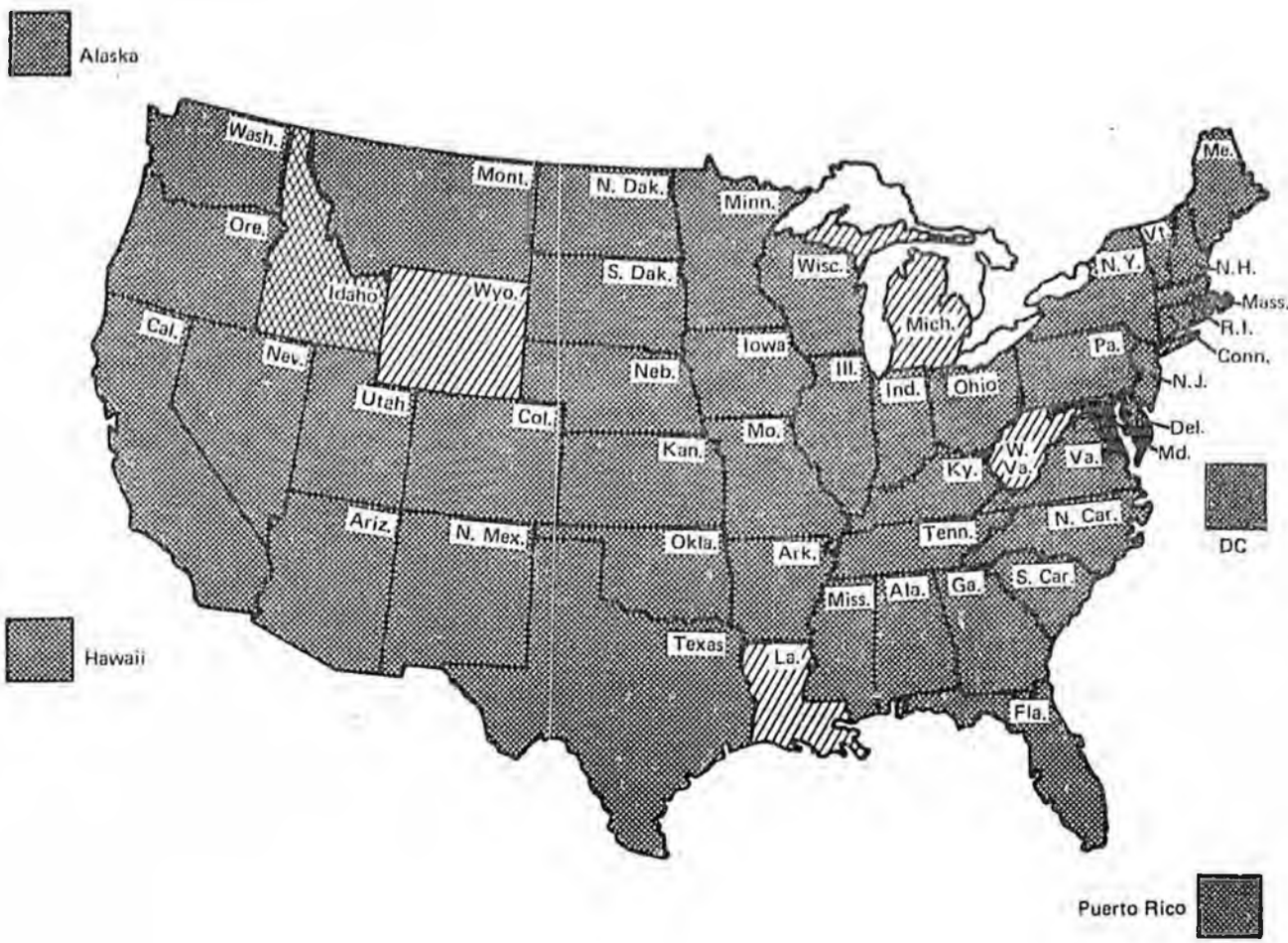
K-12th Grade

RUBELLA

State Immunization Requirements
Applicable to Any or All of Grades K-12

State	Grade	Dosage Requirements and Additional Comments
Alabama	K-12	1 dose administered after 15 months of age
Alaska	K-11 yrs	1 dose administered on or after 1st birthday
Arizona	K-12	1 dose given on or after 1st birthday
Arkansas	K-12	1 dose given after the 1st birthday and after 6/1/69
California	K-12	1 dose administered on or after 1st birthday
Colorado	K-6	1 dose on or after 1st birthday; post pubertal females exempt
Connecticut	K-12	1 dose given after 1 year of age
Delaware	K-12	1 dose given after 1 year of age
Dist. of Col.	K-12	1 dose; also required of college students
Florida	K-12	1 dose at 15 months of age recommended, over 12 months accepted
Georgia	K-12	1 dose of live virus vaccine given after the 1st birthday
Hawaii	K-12	1 dose, as recommended by American Academy of Pediatrics
Idaho	K-5	1 dose after 1st birthday; laboratory confirmation of immunity accepted
Illinois	K-12	1 dose at 1 year of age or later, or laboratory confirmation
Indiana	K-12	1 dose on or after 12 months of age; laboratory confirmation of immunity accepted
Iowa	K-12	1 dose after 15 months of age, or laboratory confirmation
Kansas	K-12	1 dose given after 12 months of age
Kentucky	K-12	1 dose on or after 12 months of age
Louisiana	New Enterers	1 dose given on or after 15 months of age; 12 to 15 months also accepted
Maine	K-12	1 dose after 1st birthday; or serologic confirmation of immunity
Maryland	K-12	1 dose of live vaccine or serologic confirmation of immunity
Massachusetts	K-12	1 dose at or after 12 months of age
Michigan	New Enterers	1 dose given after the 1st birthday
Minnesota	K-12	1 dose
Mississippi	K-12	1 dose after 12 months of age
Missouri	K-12	1 dose given after 12 months of age; children born in or after 1982, at 15 months
Montana	K-12	1 dose after 12 months of age; on or after 15 months after 7/1/89
Nebraska	K-12	1 dose at or after 12 months of age
Nevada	K-12	1 dose, either single or any combination of vaccine, on or after 12 months of age
New Hampshire	K-12	1 dose after 12 months of age, except 15 months of age if child born after 1/08
New Jersey	K-12	1 dose
New Mexico	K-12	1 dose at 12 months of age
New York	K-12	1 dose live vaccine after 12 months of age; may be waived for females 11 years old and up
North Carolina	K-12	1 dose of live vaccine by age 2 years
North Dakota	K-12	1 dose, if given after 15 months of age — 12 months accepted; also required for student attending state funded colleges and universities
Ohio	K-12	1 dose live virus vaccine on or after 1st birthday
Oklahoma	K-12	1 dose; received on or after 1st birthday
Oregon	K-12	1 dose at or after 12 months of age, but recommended at 15 months
Pennsylvania	K-12	1 dose on or after 1st birthday, or positive serology
Puerto Rico	K-12	1 dose live vaccine if given after 15 months of age; 12 months accepted
Rhode Island	K-12	1 dose after 12 months of age; also required of college students
South Carolina	K-12	1 dose on or after 1st birthday; not required of females after onset of puberty
South Dakota	K-12	1 dose given after 12 months of age; or positive serology; also required by state funded colleges
Tennessee	K-12	1 dose on or after 12 months of age; females 13 years old and up are exempt
Texas	K-11 yrs	1 dose
Utah	K-12	1 dose given after 12 months of age
Vermont	K-12	1 dose given on or after 1st birthday, or positive serology
Virginia	K-12	1 dose given after 12 months of age or older
Washington	K-12	1 dose after 1 year; or positive serology
West Virginia	New Enterers	1 dose given after 12 months of age
Wisconsin	K-12	1 dose given on or after 1st birthday
Wyoming	New Enterers	1 dose after 12 months of age, entering Wyoming schools through age 10 years

POLIO
Immunization Requirements
(For Any or All of Grades K-12)



New Enterers

K-5th Grade

K-12th Grade

POLIO

State Immunization Requirements
Applicable to Any or All of Grades K-12

State	Grade	Dosage Requirements and Additional Comments
Alabama	K-12	3 dose minimum required, last dose on or after 4th birthday
Alaska	K-12	4 doses unless 3rd dose after 4th birthday, then 3 doses
Arizona	K-12	5 doses unless 4th dose after 4th birthday, then 4 doses
Arkansas	K-12	3 doses, last must have been given after 4th birthday
California	K-12	3 doses, 3rd dose after 2nd birthday
Colorado	K-12	3 doses
Connecticut	K-12	3 doses TOPV or IPV-3 virus types plus 1 TOPV; or IPV with 2 year boosters
Delaware	K-12	4 to 5 doses; 3 doses if given after 4th birthday
Dist. of Col.	K-12	3 OPV plus booster if series started before 4 years of age
Florida	K-12	4 doses; unless 3rd dose after 4th birthday, then 3 doses
Georgia	K-12	3 doses minimum of TOPV or 4 of IPV given after 1968; last dose must have been given after 4th birthday
Hawaii	K-12	As recommended by American Academy of Pediatrics
Idaho	K-5	3 doses
Illinois	K-12	3 doses; the last a booster on or after 4th birthday
Indiana	K-12	3 doses
Iowa	K-12	3 doses, 1 must be after 4 years of age; not required after 18 years of age
Kansas	K-12	3 doses
Kentucky	K-12	3 to 4 doses, the last a booster on or after 4th birthday
Louisiana	New Enterers	4 to 5 doses; at least 1 dose after age 4 years
Maine	K-12	3 doses, 1 of which is given after 1st birthday
Maryland	K-12	3 doses; not required age 18 yrs and older
Massachusetts	K-12	3 doses
Michigan	New Enterers	3 doses, not required after 18th birthday
Minnesota	K-12	4 doses; unless 3rd dose after 4th birthday, then 3 doses
Mississippi	K-12	3 doses, 1 must have been after 4th birthday
Missouri	K-12	3 doses TOPV, at least 1 after age 3 years
Montana	K-12	3 dose minimum of trivalent poliomyelitis vaccine, last dose after 4th birthday
Nebraska	K-12	3 doses
Nevada	K-12	3 doses minimum, with at least 1 dose on or after 4th birthday
New Hampshire	K-12	3 doses; if 3rd is on 4th birthday
New Jersey	K-12	3 doses OPV including booster; IPV 4 doses including booster 1968 and after
New Mexico	K-12	3 doses, at least 1 dose after 4th birthday
New York	K-12	3 or more doses of TOPV, or 4 or more doses of IPV, and administered after 1968
North Carolina	K-12	4 doses oral vaccine; 3 doses by age 2 yrs; 1 dose on or after 4 years; only 3 doses if 3rd dose on or after 4th birthday
North Dakota	K-12	4 doses
Ohio	K-12	3 doses OPV or 4 IPV through 17 years of age
Oklahoma	K-12	3 doses
Oregon	K-12	4 doses; 3 for grades 2-12 in Oregon schools on 3/14/82 unless 1 or more received before 6 months, then 4 doses
Pennsylvania	K-12	3 doses OPV or 4 doses IPV
Puerto Rico	K-12	3 doses, provided the 3rd is given after 4th birthday
Rhode Island	K-12	3 doses
South Carolina	K-12	3 doses, at least 1 must be on or after 4th birthday
South Dakota	K-12	3 doses OPV or 4 doses IPV, at least 1 received after the 4th birthday
Tennessee	K-12	4 doses, 1 dose given on or after the 6th birthday
Texas	K-12	3 doses, 1 dose since 4th birthday; through 17 years old
Utah	K-12	3 doses
Vermont	K-12	3 doses, with 6 months between 2nd dose and any thereafter
Virginia	K-12	3 doses, with 3rd after 4th birthday or 4th dose required
Washington	K-12	3 doses OPV or 4 IPV, with last dose after 4 years of age
West Virginia	New Enterers	3 doses minimum, with 1 after 4th birthday
Wisconsin	K-12	4 doses, only 3 if 3rd received after 4th birthday
Wyoming	New Enterers	4 doses, entering Wyoming schools

Haemophilus b
Immunization Requirements
(For Licensed Day-Care Centers)

Not Required

Required

Physician Diagnosis of Disease
Accepted as Evidence of Immunity (K-12)

Accepted Not Accepted — Not Applicable (Immunity not required)

State	Diphtheria	Tetanus	Pertussis	Measles	Mumps	Rubella	Polio
Alabama							
Alaska					—		
Arizona		—	—		—		
Arkansas					—		
California							
Colorado							
Connecticut							
Delaware							
Dist. of Col.							
Florida							
Georgia							
Hawaii							
Idaho			—				
Illinois							
Indiana							
Iowa					—		
Kansas							
Kentucky					—		
Louisiana							
Maine							
Maryland					—		
Massachusetts							
Michigan							
Minnesota							
Mississippi							
Missouri		—	—		—		
Montana							
Nebraska							
Nevada							
New Hampshire							
New Jersey							
New Mexico					—		
New York		—	—				
North Carolina							
North Dakota							
Ohio							
Oklahoma							
Oregon			—				
Pennsylvania			—				
Puerto Rico							
Rhode Island			—				
South Carolina					—		
South Dakota							
Tennessee							
Texas			—				
Utah							
Vermont					—		
Virginia							
Washington			—				
West Virginia					—		
Wisconsin							
Wyoming							

Immunization Date and Dose Documentation Required (K-12)

■ Single date/dose documentation required ▨ Mixed date/dose documentation used

State	Dose Only	Applicable Vaccines	Dose & Year	Applicable Vaccines	Dose & Mo/Yr	Applicable Vaccines	Dose & M/D/Y	Applicable Vaccines
Alabama					■	ALL		
Alaska					■	ALL		
Arizona					▨	D,PO,R	▨	MEASLES
Arkansas							■	ALL
California					■	ALL		
Colorado					▨	DTP,PO	▨	MMR
Connecticut							■	ALL
Delaware					■	ALL		
Dist. of Col.	■	ALL						
Florida							■	ALL
Georgia					■	ALL		
Hawaii							■	ALL
Idaho							■	ALL
Illinois							■	ALL
Indiana					▨	DTP,PO	▨	MMR
Iowa							■	ALL
Kansas							■	ALL
Kentucky					■	ALL		
Louisiana					▨	DTP,PO,MU,R	▨	MEASLES
Maine					■	ALL		
Maryland							■	ALL
Massachusetts					■	ALL		
Michigan							■	ALL
Minnesota					▨	DTP,PO,MU,R	▨	MEASLES
Mississippi					■	ALL		
Missouri					■	ALL		
Montana							■	ALL
Nebraska					■	ALL		
Nevada					■	ALL		
New Hampshire							■	ALL
New Jersey					▨	DTP,PO	▨	MMR
New Mexico							■	ALL
New York							■	ALL
North Carolina							■	ALL
North Dakota					■	ALL		
Ohio							■	ALL
Oklahoma					■	ALL		
Oregon					■	ALL		
Pennsylvania					■	ALL		
Puerto Rico					■	ALL		
Rhode Island					■	ALL		
South Carolina					▨	DTP,PO	▨	ME,R
South Dakota					■	ALL		
Tennessee					■	ALL		
Texas					■	ALL		
Utah					■	ALL		
Vermont							■	ALL
Virginia							■	ALL
Washington							■	ALL
West Virginia							■	ALL
Wisconsin							■	ALL
Wyoming							■	ALL

ALL = All vaccines required by individual states

Exemptions from Immunization Requirements (K-12)

■ Allowed □ Not Allowed

State	Medical	Religious	Philosophical
Alabama	■	■	
Alaska	■	■	
Arizona	■	■	■
Arkansas	■	■	
California	■	■	■
Colorado	■	■	■
Connecticut	■	■	
Delaware	■	■	
Dist. of Col.	■	■	
Florida	■	■	
Georgia	■	■	
Hawaii	■	■	
Idaho	■	■	■
Illinois	■	■	
Indiana	■	■	■
Iowa	■	■	
Kansas	■	■	
Kentucky	■	■	
Louisiana	■	■	■
Maine	■	■	■
Maryland	■	■	
Massachusetts	■	■	
Michigan	■	■	■
Minnesota	■	■	■
Mississippi	■		
Missouri	■	■	■
Montana	■	■	
Nebraska	■	■	■
Nevada	■	■	
New Hampshire	■	■	
New Jersey	■	■	
New Mexico	■	■	
New York	■	■	
North Carolina	■	■	
North Dakota	■	■	■
Ohio	■	■	■
Oklahoma	■	■	■
Oregon	■	■	
Pennsylvania	■	■	■
Puerto Rico	■	■	
Rhode Island	■	■	■
South Carolina	■	■	
South Dakota	■	■	
Tennessee	■	■	
Texas	■	■	
Utah	■	■	■
Vermont	■	■	■
Virginia	■	■	
Washington	■	■	■
West Virginia	■		
Wisconsin	■	■	■
Wyoming	■	■	

Immunization Requirements Applicable to Any or All Students Enrolled in K-12, Day-Care, and College

■ Required □ Not Required — Not Applicable (no law or requirement)

	Diphtheria			Tetanus			Pertussis			Measles			Mumps			Rubella			Polio			Haemophilus		
	K-12	Day Care	College	K-12	Day Care	College	K-12	Day Care	College	K-12	Day Care	College	K-12	Day Care	College	K-12	Day Care	College	K-12	Day Care	College	K-12	Day Care	College
Alabama	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—
Alaska	■	■	—	■	■	—	■	■	—	■	■	—	□	□	—	■	■	—	■	■	—	■	■	—
Arizona	■	■	—	□	□	—	□	■	—	■	■	—	□	■	—	■	■	—	■	■	—	■	■	—
Arkansas	■	■	□	■	■	□	■	■	□	■	■	□	□	□	□	■	■	□	■	■	□	■	■	□
California	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—
Colorado	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—
Connecticut	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—
Delaware	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—
Dist. of Col.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Florida	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□
Georgia	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—
Hawaii	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—
Idaho	■	—	—	■	—	—	■	—	—	■	—	—	■	—	—	■	—	—	■	—	—	■	—	—
Illinois	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Indiana	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—
Iowa	■	■	—	■	■	—	■	■	—	■	■	—	□	□	—	■	■	—	■	■	—	■	■	—
Kansas	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—
Kentucky	■	■	—	■	■	—	■	■	—	■	■	—	□	□	—	■	■	—	■	■	—	■	■	—
Louisiana	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—
Maine	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Maryland	■	■	—	■	■	—	■	■	—	■	■	—	□	□	—	■	■	—	■	■	—	■	■	—
Massachusetts	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Michigan	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—
Minnesota	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—
Mississippi	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□
Missouri	■	■	—	□	□	—	□	■	—	■	■	—	□	□	—	■	■	—	■	■	—	■	■	—
Montana	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□
Nebraska	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—
Nevada	■	■	—	■	■	—	■	■	—	■	■	—	□	□	—	■	■	—	■	■	—	■	■	—
New Hampshire	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—
New Jersey	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—
New Mexico	■	■	—	■	■	—	■	■	—	■	■	—	□	□	—	■	■	—	■	■	—	■	■	—
New York	■	■	—	□	□	—	□	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—
North Carolina	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
North Dakota	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□
Ohio	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—
Oklahoma	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—
Oregon	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—
Pennsylvania	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—
Puerto Rico	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□
Rhode Island	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□
South Carolina	■	■	—	■	■	—	■	■	—	■	■	—	□	□	—	■	■	—	■	■	—	■	■	—
South Dakota	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□
Tennessee	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—
Texas	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□
Utah	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—
Vermont	■	■	—	■	■	—	■	■	—	■	■	—	□	□	—	■	■	—	■	■	—	■	■	—
Virginia	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□
Washington	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—
West Virginia	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□
Wisconsin	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—	■	■	—
Wyoming	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□	■	■	□

Enforcement of Immunization Requirements

■ Law/requirement contains clause □ Law/requirement does not contain clause
— Not Applicable (No law or requirement)

State	Penalty Clause for Noncompliance			Exclusion Clause for Noncompliance		
	K-12	Day-Care	College	K-12	Day-Care	College
Alabama	■	■	—	■	□	—
Alaska	□	□	—	■	■	—
Arizona	□	□	—	■	■	—
Arkansas	■	■	□	■	□	□
California	□	□	—	■	■	—
Colorado	□	□	—	■	■	—
Connecticut	■	■	—	□	□	—
Delaware	□	□	—	■	■	—
Dist. of Col.	□	■	□	■	■	□
Florida	□	□	□	■	■	■
Georgia	■	■	—	■	■	—
Hawaii	■	■	—	■	■	—
Idaho	□	—	—	□	—	—
Illinois	■	■	□	■	□	■
Indiana	□	□	—	■	□	—
Iowa	■	■	—	□	□	—
Kansas	□	■	—	■	□	—
Kentucky	■	■	—	□	□	—
Louisiana	■	■	—	■	■	—
Maine	□	□	□	■	■	■
Maryland	□	□	—	■	■	—
Massachusetts	□	■	□	■	■	□
Michigan	■	■	—	■	■	—
Minnesota	□	□	—	■	■	—
Mississippi	■	■	□	■	■	■
Missouri	□	□	—	■	□	—
Montana	■	□	□	■	■	■
Nebraska	■	■	—	■	■	—
Nevada	■	■	—	■	■	—
New Hampshire	■	■	—	■	■	—
New Jersey	■	■	—	■	■	—
New Mexico	■	■	—	■	■	—
New York	■	□	—	■	■	—
North Carolina	■	■	■	■	■	■
North Dakota	■	■	□	■	■	□
Ohio	□	□	—	■	■	—
Oklahoma	■	■	—	■	■	—
Oregon	□	□	—	■	■	—
Pennsylvania	■	■	—	■	□	—
Puerto Rico	■	■	■	■	■	■
Rhode Island	□	□	□	■	■	■
South Carolina	■	■	—	■	■	—
South Dakota	□	■	□	■	□	□
Tennessee	■	■	—	□	□	—
Texas	□	□	□	□	□	□
Utah	■	■	—	■	□	—
Vermont	□	□	—	■	□	—
Virginia	■	■	■	■	■	■
Washington	□	□	—	■	■	—
West Virginia	■	□	□	□	□	■
Wisconsin	■	■	—	■	■	—
Wyoming	□	□	□	□	■	■

Rubella Susceptibility Testing

■ Required ☐ Not Required

State	Premarital	Hospital Employee
Alabama		
Alaska		■
Arizona		
Arkansas		
California	■	
Colorado	■	
Connecticut		
Delaware		■
Dist. of Col.		
Florida		
Georgia	■	
Hawaii	■	
Idaho		
Illinois		
Indiana	■	
Iowa		
Kansas		
Kentucky		
Louisiana		
Maine		■
Maryland		
Massachusetts		
Michigan		
Minnesota		
Mississippi		
Missouri		
Montana	■	
Nebraska	■	
Nevada		
New Hampshire		■
New Jersey		■
New Mexico	■	
New York	■	■
North Carolina		
North Dakota		
Ohio		
Oklahoma		
Oregon		
Pennsylvania		
Puerto Rico		
Rhode Island	■	■
South Carolina		
South Dakota		
Tennessee		
Texas		
Utah		
Vermont		
Virginia		
Washington		
West Virginia		
Wisconsin		■
Wyoming	■	

Immunization of Rubella Susceptibles

■ Required ☐ Not Required

State	Premarital	Hospital Employee
Alabama		
Alaska		■
Arizona		
Arkansas		
California		
Colorado		
Connecticut		
Delaware		
Dist. of Col.		
Florida		
Georgia		
Hawaii		
Idaho		
Illinois		
Indiana		
Iowa		
Kansas		
Kentucky		
Louisiana		
Maine		■
Maryland		
Massachusetts		
Michigan		
Minnesota		
Mississippi		
Missouri		
Montana		
Nebraska		
Nevada		
New Hampshire		■
New Jersey		
New Mexico		
New York		■
North Carolina		
North Dakota		
Ohio		
Oklahoma		
Oregon		
Pennsylvania		
Puerto Rico		
Rhode Island		■
South Carolina		
South Dakota		
Tennessee		
Texas		
Utah		
Vermont		
Virginia		
Washington		
West Virginia		
Wisconsin		■
Wyoming		

23 January 1992

Children's Defense Fund
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ATTN: Publications

Dear Mesdames or Sirs:

Enclosed is a check for $9.00 to purchase two copies of your children's immunization report.

Also enclosed is an envelope in which to return these reports. I would be most appreciative of an expedited return since the Senate HESS Committee is currently considering legislation that would provide a personal exemption to mandatory immunization in Alaska.

Sincerely yours,

Melissa Aber Fouse
Committee Aide

MEDICAID AND CHILDHOOD IMMUNIZATIONS: A NATIONAL STUDY

January, 1992

Joseph Tiang-Yau Liu*
Sara Rosenbaum **

*Senior Associate, Children's Defense Fund

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Senior Fellow, George Washington University
Center for Health Policy Research

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Supported by a grant from the Robert Wood Johnson Foundation

Executive Summary and Overview of Key Findings

The Immunization Crisis

One appalling manifestation of the broader crisis in the nation's health care system has been the falling number of children immunized against wholly preventable diseases like polio, measles, mumps, rubella, diphtheria, tetanus, pertussis, and meningitis. Falling immunization rates have inevitably led to more cases of disease and death and disability. The most glaring result has been a three-year long measles epidemic that has claimed over 55,000 Americans, including 89 who died in 1990 alone. Twice as many children contracted pertussis last year than in 1981, and rubella cases stood five times higher than in 1988.

While the rest of the world, including developing nations, has rapidly increased immunization rates, the U.S. has fallen behind. During the 1980s, the proportion of American preschoolers immunized against routine childhood diseases fell to fewer than one-half.

The United States ranks behind 16 other nations in the proportion of infants immunized against polio. When the proportion of U.S. nonwhite infants adequately immunized is compared to other nations' overall rates, the United States ranks 70th in the world, behind Burundi, Indonesia, Cuba, Jamaica, and Trinidad and Tobago.

Key reasons for the U.S. immunization decline have included skyrocketing vaccine costs, rising child and family poverty rates, inadequate access to health care, and underfunding of public health programs.

- Since 1981, the price of a single dose of diphtheria, tetanus, pertussis (DTP) vaccine rose from 33 cents to nearly $10. The price for a dose of polio vaccine quadrupled from $2.10 to $9.45. Measles, mumps, rubella (MMR) vaccine nearly tripled, rising from $9.32 to $25.29.

- In one recent study, 84 percent of pediatricians and 66 percent of family practitioners reported referring at least some of their patients to public clinics for immunizations. The overwhelming majority of these doctors cited the affordability of immunizations both to themselves and their patients as the underlying cause.

- After adjusting for inflation, funding for community health centers fell by 38 percent between 1981 and 1991. With shrinking resources and rising demand for immunization services, 70 percent of all health centers have reported vaccine shortages in their clinics.

Findings of the Study: Medicaid Reimbursement Systems Are Discouraging Providers from Vaccinating Children While Unnecessarily Inflating State and Federal Costs.

In the fall of 1991 the Children's Defense Fund undertook a survey of 49 states and the District of Columbia to determine how well Medicaid programs are providing immunizations. It shows that Medicaid, the nation's safety net health program which should be easing the immunization crisis, instead is worsening the problems. In 1990, nearly one-quarter of all young children, 5.3 million youngsters under age 6, relied on the Medicaid program for health care.

There are two basic price levels for vaccines in this country. The "catalog" price that physicians or other providers pay for vaccines (and then in turn charge to insurance companies or patients) is far higher than the "contract" prices that the federal Centers for Disease Control (CDC) pay for bulk purchase of vaccines they distribute to public clinics. Oral polio vaccine, for example, is $9.45 for private purchase and $2.00 when bulk purchased by CDC.

CDC's contract with vaccine manufacturers allows states to bulk purchase as much vaccine as they want. In theory every state could -- and should -- buy and distribute enough vaccine at least for its Medicaid eligible children, rather than reimbursing physicians to buy vaccine at far higher prices.

But only a minority of states bulk purchase some or all types of vaccine, either for Medicaid recipients or for all children in the state. Thirty states instead continue a fee-for-service reimbursement system in Medicaid. But most of these states, while paying far more than the CDC price for vaccine alone, pay providers an unreasonably low combined amount for vaccines and administration. This led many physicians to discontinue delivering immunizations to Medicaid children.

- States reimburse Medicaid providers only a fraction of the fee typically charged by office-based physicians for immunization services. On average, Medicaid programs pay just 53 percent of usual fees for the diphtheria, tetanus, and pertussis (DTP) vaccine and only 67 percent of usual fees for oral polio vaccine (OPV). Average state Medicaid reimbursements for measles, mumps, and rubella (MMR) and meningitis (HiB) vaccines were 72 and 84 percent of usual fees, respectively.

- In a single office visit for immunizations for a 15-month-old child, the typical Medicaid program underpays doctors by nearly $40. In some states, Medicaid underpays physicians more than $60 compared to usual fee for vaccinations.

- Only one state out of the 30 states that use a fee-for-service vaccine system in Medicaid pays over 85 percent of the usual fee charged by private doctors to immunize children for all four routine vaccines. -- diphtheria, tetanus, and pertussis (DTP); oral polio vaccine (OPV), measles, mumps and rubella (MMR); and haemophilus influenza B (HiB).

- Several states actually reimburse physicians for immunizations services at a rate less than the cost of the vaccine alone. Kentucky's reimbursements for all four routine vaccines fell below the catalog price available to private doctors. Nevada and West Virginia set reimbursements for measles, mumps, and rubella (MMR) and meningitis (HiB) vaccines below cost. And Georgia, Hawaii, Nebraska, Oklahoma, and South Dakota have Medicaid vaccination fees set below the cost of vaccines for at least one antigen.

- When a child needs a followup visit to complete an immunization series, 17 states refuse to pay physicians for the second office visit and only allow billing for the vaccine and administration. The result is that many children never get the additional immunizations they need.

Low Medicaid reimbursement rates for immunization services and the absence of followup visit fees lead to serious problems. Combined with generally depressed reimbursements for other primary care services, insufficient payment for immunization services may push a pediatric provider out of Medicaid completely. More commonly, the low payment levels can lead providers to cease offering immunization services to Medicaid-enrolled children and to routinely refer their patients to public immunization clinics. The result is that Medicaid-covered children get pushed into an already overwhelmed public health system that cannot meet all their needs and safety net health services deteriorate even further for both Medicaid-eligible and other children. As a consequence fewer and fewer children receive protection against preventable disease.

In Milwaukee, 86 percent of the preschool measles cases reviewed by the CDC were 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.

Recommendations

All states could solve the problem of high vaccine cost, which in turn drives down the vaccination fee paid to Medicaid providers. They could accomplish this and save money by taking advantage of

the special discounts for bulk purchase vaccine negotiated by the federal Centers for Disease Control. In the past three years, Ohio's Medicaid program has saved $3.3 million by taking advantage of the federal discount prices. Similar savings have been achieved by the other states that purchase and distribute vaccines directly.

Moreover, every state should implement a universal vaccine distribution system to save money and to assure that no child is denied immunizations because a family cannot afford the cost of vaccines. At a minimum state Medicaid agencies should develop vaccine replacement programs to capture vaccine price savings available through the CDC and increase immunization rates. States should invest part of those savings in more adequate reimbursement levels to Medicaid providers for the administration of the free vaccine. Improved reimbursements will stem the tide of children into public immunization clinics and make immunization services more accessible. At a time of exceedingly tight state budgets, states must stop wasting the millions they pay in high vaccine prices rather than bulk purchasing at a discount and in treating children who are unnecessarily ill from preventable diseases because of state-created barriers to delivery of vaccines.

In the long run, the nation must move towards a system that guarantees every child immunizations, regardless of family income or insurance status. All the necessary vaccines could be purchased by the CDC and distributed free of charge to all health care providers in the country. Considering that more than 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 disease.

INTRODUCTION

The United States health care system is filled with ironies, not the least of which is the failure of the world's most expensive health system to deliver basic preventive care to its children. Health expenditures exceed 12 percent of the nation's gross national product. The U.S. spends more on personal health care per capita than any other nation and is the world's leader in advanced medical technology. At the same time our infant mortality rate lags behind 19 other nations, including Hong Kong, Spain, and Singapore. And the U.S. falls behind 16 other nations in the proportion of infants immunized against polio, including Bulgaria and Chile (Table 1). When the proportion of U.S. nonwhite infants adequately immunized is compared to other nations' overall rates, the nation ranks 70th in the world, behind Burundi, Iran, Indonesia, Cuba, Jamaica, and Trinidad and Tobago, among others. U.S. preschool immunization rates, according to all available measures, declined during the 1980s, causing major new outbreaks of preventable childhood diseases.

Problems on such basic indicators as these mark a health care system with fundamental failings. They evidence a need for major changes in how basic health services are delivered. They tell us that the most essential preventive health services are an increasingly remote benefit for a growing share of our child population, to be enjoyed only by those children fortunate enough to live in families with substantial incomes and good health

Table 1. Percentage of One Year-Old Children Fully Immunized Against Polio, 1990

Rank	Nation	Rate	Rank	Nation	Rate
1	Denmark	100	38	Iran	91
2	Bulgaria	99	40	Austria	90
2	Chile	99	40	Dominican Republic	90
2	Czechoslovakia	99	40	Finland	90
2	Hungary	99	40	Malaysia	90
2	North Korea	99	40	Mauritius	90
7	China	98	40	Sri Lanka	90
7	Sweden	98	40	Syria	90
7	Switzerland	98	40	Tunisia	90
10	Greece	97	48	Algeria	89
11	Albania	96	48	Argentina	89
11	Hong Kong	96	50	Philippines	88
11	Mexico	96	50	Uruguay	88
11	Oman	96	52	Egypt	87
11	Pakistan	96	52	Honduras	87
11	Poland	96	52	Jamaica	87
17	Australia	95	52	Trinidad & Tobago	87
17	Belgium	95	52	United Kingdom	87
17	Bhutan	95	52	Vietnam	87
17	Costa Rica	95	58	Burundi	86
17	France	95	58	Nicaragua	86
17	Germany	95	58	Panama	86
17	Romania	95	61	Canada	85
17	United States	95	61	Italy	85
25	Cuba	94	61	Mongolia	85
25	Kuwait	94	61	Singapore	85
25	Netherlands	94	61	United Arab Emirates	85
25	Saudi Arabia	94	66	Morocco	84
29	Brazil	93	66	Norway	84
29	Colombia	93	68	Rwanda	83
29	India	93	68	Sierra Leone	83
29	Israel	93	70	Botswana	82
29	Japan	93	70	Central Africa Rep.	82
34	Jordan	92	70	Lebanon	82
34	Portugal	92	70	Tanzania	82
34	Thailand	92		U.S., Black	82
34	Yugoslavia	92	74	Libya	81
38	Indonesia	91			

SOURCE: UNICEF, State of the World's Children, 1992, except U.S. data which is from the 1985 U.S. Immunization Survey.

insurance.

This special report looks at the role of Medicaid, one of the most important sources of funding for children's health services, in the nation's vaccination crisis. It is based on a national survey of state Medicaid programs conducted during the fall of 1991. That survey finds widespread and significant underpayment for vaccination services by state Medicaid programs. It also finds that a majority of states have failed to take advantage of special federal arrangements that could both reduce their Medicaid (and indeed all families') vaccine costs substantially, while at the same time promoting increased provider participation in childhood vaccination programs, including Medicaid, and promoting higher immunization rates.

In great part as a result of inadequate state Medicaid program vaccination practices, in countless communities throughout the country there are critical shortages of physicians willing to vaccinate Medicaid-eligible children (who now constitute nearly one in four children under age 6 in the United States). At the same time, publicly funded providers of pediatric health care, such as community and migrant health centers and local health department clinics, are overwhelmed by unimmunized children and lack the supplies, staff, or the financial resources (through Medicaid or other programs) to accommodate the growing demand for their services. They are neither equipped nor financed to address a total breakdown of the private vaccination system.

Worst of all, this lethal chain of events is not well

understood, perhaps because it has proven easier for some officials to blame low income parents for neglecting their children than to address a breakdown in national and state vaccination programs that pose ever-higher barriers to care. Indeed, this study shows that Maryland, a state which in recent weeks has proposed measures conditioning AFDC payments on proof of childhood vaccination status, pays Medicaid childhood immunization fees far below the levels necessary to assure either that enough private providers are immunizing children in the Medicaid program or that there is sufficient support for public vaccination services.

The answer to these problems lies in the development at the state level, and ultimately at the national level, of a universal vaccine program that assures a steady supply of vaccines to all health providers, pays physicians and clinics reasonably for the immunization delivery services they provide, eliminates financial barriers to vaccination for families, and develops sources of primary health services in communities with shortages.

Such steps are well within our grasp, and they would benefit all children. At a time when a single measles shot in a physician's office can cost $50, vaccination reforms are not only vital for poor, Medicaid-enrolled children. Today 25 million children -- 40 percent of all children -- have no employer health insurance. Tens of millions of others from poor, moderate, and middle income families will experience intermittent spells without insurance coverage or have insurance that does not cover the cost of immunizations. For working families with moderate incomes,

Table 2. Percentage of Infants and Toddlers Who Were Fully Immunized[1], by Age and Race, U.S.[2], 1980 and 1985

Infants		Polio	DTP[3]	Measles	Mumps	Rubella
Total	1980	80.0%	84.2%			
	1985	79.6	82.7	These vaccines are not recommended for		
White	1980	80.9	84.9	children of this age.		
	1985	81.5	84.4			
Nonwhite	1980	73.2	79.0			
	1985	58.5	64.8			

Age one		Polio	DTP	Measles	Mumps	Rubella
Total	1980	95.5%	76.2%			
	1985	95.2	78.3	These vaccines are not recommended for		
White	1980	96.2	78.6	children of this age.		
	1985	96.9	80.1			
Nonwhite	1980	89.1	56.5			
	1985	82.3	64.9			

Age two		Polio	DTP	Measles	Rubella	Mumps
Total	1980	80.7%	87.0%	83.0%	83.2%	80.2%
	1985	76.7	85.8	81.7	77.3	78.9
White	1980	83.0	89.4	84.8	84.4	81.5%
	1985	79.5	88.0	82.7	78.6	80.8
Nonwhite	1980	62.8	68.0	69.0	73.4	70.7
	1985	56.5	69.1	74.7	66.9	64.2

[1] Dosage levels are approximations of level needed to fully immunize a child of a given age: younger than age one, one or more doses of polio and DTP; at age one, one or more doses of polio and three or more doses of DTP; and at age two, three or more doses of polio and DTP and one dose of measles, rubella, and mumps vaccines.

[2] Data are from the U.S. Immunization Survey sample confirmed by parent consultation with an immunization record.

[3] DTP stands for a combined dose of diphtheria, tetanus, and pertussis vaccines.

SOURCE: U.S. Immunization Survey, Centers for Disease Control.

whose children are most vulnerable to the loss of insurance or limited insurance, yet too "well off" for Medicaid, the vaccination crisis is not Medicaid's problem alone. Only a system that makes immunizations a basic guarantee for all children will repair this problem.

THE GROWING CHILDHOOD VACCINATION CRISIS IN THE UNITED STATES

Over the past decade, the proportion of U.S. infants and toddlers adequately immunized against preventable childhood disease has fallen, and the incidence of preventable disease has risen enormously. Between 1980 and 1985 the proportion of children at age two who were fully immunized against seven major childhood illnesses declined (Table 2), with rates as low as 50 percent or fewer of all children adequately immunized in some major American cities, according to the national Centers for Disease Control. The Reagan Administration ceased the collection of nationwide immunization rates, but numerous neighborhood, city, and state studies in the late 1980s and 1990 showed continuing erosion of immunization levels among preschoolers, especially minority and inner city children.

Inadequate immunization rates inevitably led to a soaring incidence of preventable childhood diseases. In 1979, the U.S. Surgeon General set a goal of no more than 500 cases of measles nationally in 1990. In 1983 the nation was down to fewer

Table 3. Cases of Selected Preventable Childhood Diseases

Disease	Public Health Service Year 2000 Objective	Lowest Number of Cases (Year)	Number of Cases in 1991[1]
Measles	0	1,497 (1983)	9,378
Mumps	500	2,982 (1985)	3,822
Rubella	0	225 (1988)	1,344
Pertussis	1,000	1,248 (1981)	2,441

[1] Reported cases through Dec. 7, 1991.

SOURCE: Centers for Disease Control.

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than 1500 measles cases, but by 1990 the number surpassed 27,000 and 89 died. In 1991, the number of measles cases dipped significantly, but experts warn that the three-year long measles epidemic (which claimed over 55,000 cases before beginning to abate in part because so many children were exposed) will strike again soon. Like all cyclical epidemics of preventable disease, measles will not go away unless aggressive action is taken to raise immunization rates substantially.

Similarly, other preventable childhood diseases have risen again to unacceptably high levels (Table 3). More than twice as many children suffered pertussis in 1991 than in 1981 and rubella cases were five times higher last year than in 1988. The number of mumps cases also remained at levels over 25 percent higher than in 1985.

Letting immunization rates drop and disease rates climb is a particularly self-destructive act for a nation. It not only causes

Table 4. Catalog Prices for Selected Vaccines, Per Dose, 1977-1991.

Year	Diphtheria, Tetanus & Pertussis (DTP)	Oral Polio Vaccine (OPV)	Measles, Mumps & Rubella (MMR)
1981	$0.33	$2.10	$9.32
1982	$0.37	$2.75	$10.44
1983	$0.45	$5.56	$11.30
1984	$0.99	$4.60	$12.08
1985	$2.80	$6.15	$13.53
1986	$11.40	$8.67	$15.15
1987	$8.92	$8.07	$17.88
1988	$11.03	$8.07	$24.11
1989	$10.65	$9.45	$24.11
1990	$10.65	$9.45	$24.07
1991	$9.97	$9.45	$25.29
Increase 1981-91	2,921%	350%	171%

SOURCE: Centers for Disease Control.

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greatly increased childhood death, disability, and suffering, but it is very expensive. Studies show that every $1 the U.S. has invested in immunization in recent decades has saved $10 in hospital and other costs.

Several key factors are causing this totally avoidable crisis:

Skyrocketing vaccine costs: Between 1981 and 1991 the price of vaccines skyrocketed (Table 4). The cost of a dose of DTP climbed from $0.33 to $9.97 and polio vaccine increased from $2.10 to $9.45. The price for a single dose of MMR vaccine nearly tripled to $25.29. These soaring prices became harder and harder for economically pressed low and middle income families to pay and wiped out increases in federal funding for childhood vaccine grant

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)	85.4	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.[1]

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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[1] 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.

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.

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.[2]

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)[3]; 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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[2] National Vaccine Advisory Committee, The Measles Epidemic: Problems, Barriers and Recommendations (U.S. Public Health Service, January, 1991)

[3] 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.[4] 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.[5] 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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[4] 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.

[5] 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

Vaccine	Private Catalog Price	Federal Contract Price	Savings Per Dose	Percentage Discount
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[6] (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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[6] 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.[7] 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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[7]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 MCManus 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	68.5%	$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.[8] 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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[8] 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 affadavit 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

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 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 path of least resistence. (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 t. 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 identifed 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 deliberatedly 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 goverment circles to play down any open discussion of problems associated with vaccines...Perhaps this has been overdone. Scientists how 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: 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"(178) 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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179. Letters from the other 15 states allowing philosophical exemptions.

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February 11, 1991

Sandy Mintz
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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 of 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 severe 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.(PRIMUN 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.

<u>In Summary:</u>

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 <u>not</u> 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.

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
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February 11, 1991

PERSONAL DATA:
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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 (By application)	1967
Fellow: American Academy of Clinical Toxicology (By appointment only)	1976

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: Prescribed 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 Aniversity 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-
Dos 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 - AACTion - Editor 15 Years	1990-

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 AMERICAL 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,C.H.; Diagnosis of Brain Abcess by Computerized Tomography, JOURNAL OF THE IOWA MEDICAL SOCIETY, 67:14-16, 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.

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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 coersion, 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 may 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 occurrance 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, vaccinatons 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 f.ilures." (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 occured 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

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 though 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 pharmicists are required to report adverse events to the U.S. Food and Drug Administration.

IMMUNIZATION ASSESSMENT OF KINDERGARTEN STUDENTS - 1989 01/22/90

FINAL RESULTS

TABLE 2 NUMBER AND PERCENT OF STUDENTS ADEQUATELY IMMUNIZED

COUNTY	NUMBER OF STUDENTS	POLIO		DTP		MEASLES		RUBELLA		MUMPS	
		NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
TOTAL	467113	436974	93.5	429102	91.9	458936	98.2	458857	95.2	458835	98.2
ALAMEDA	18531	17431	94.0	17411	94.0	18252	98.5	18259	98.5	18257	98.5
ALPINE	19	18	94.7	17	89.5	19	100.0	19	100.0	19	100.0
AMADOR	371	354	95.4	344	92.7	365	98.4	365	98.4	365	98.4
BUTTE	3258	[illegible]	93.7	3045	93.5	3190	97.9	3190	97.9	3190	97.9
CALAVERAS	486	427	87.9	433	89.1	463	95.3	463	95.3	463	95.3
COLUSA	291	277	95.2	275	94.5	289	99.3	289	99.3	289	99.3
CONTRA COSTA	12423	11917	95.9	11765	94.7	12263	98.7	12263	98.7	12263	98.7
DEL NORTE	474	449	94.7	429	90.5	469	98.9	469	98.9	469	98.9
EL DORADO	2105	1931	91.7	1920	91.2	2039	96.9	2039	96.9	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	516	98.7	516	98.7
HUMBOLDT	2070	1945	94.0	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	10936	10361	94.7	10047	91.9	10907	99.7	10908	99.7	10907	99.7
KINGS	2234	2125	95.1	2053	91.9	2229	99.8	2230	99.8	2229	99.8
LAKE	752	697	92.7	682	90.7	723	96.1	723	96.1	723	96.1
LASSEN	469	437	93.2	434	92.5	458	97.7	458	97.7	458	97.7
LOS ANGELES	129567	115735	[illegible]	116575	90.0	127269	98.2	127252	98.2	[illegible]	98.2
MADERA	1722	1629	94.6	1590	92.3	1705	99.0	1705	99.0	1705	99.0
MARIN	2641	2455	93.0	2436	92.2	2569	97.3	2557	96.8	2555	96.8
MARIPOSA	190	177	93.2	170	89.5	180	94.7	180	94.7	180	94.7
MENDOCINO	1327	1236	93.1	1205	90.7	1255	94.6	1254	94.5	1254	94.5
MERCED	3944	3792	96.1	3687	93.5	3927	99.6	3927	99.6	3927	99.6
MODOC	179	164	91.6	160	89.4	177	98.9	177	98.9	177	98.9
MONO	159	151	95.0	[illegible]	92.3	154	97.0	154	97.0	154	97.0
MONTEREY	6397	6135	95.9	6025	94.2	6351	99.3	6351	99.3	6350	99.3
NAPA	1581	1500	94.9	1495	94.6	1557	98.5	1557	98.5	1557	98.5
NEVADA	1009	[illegible]	[illegible]	[illegible]	93.4	937	92.9	937	92.9	937	92.9
ORANGE	35154	32759	93.2	32224	91.6	34542	98.3	34635	98.5	34632	98.5
PLACER	2995	2854	95.3	2751	91.9	2902	96.9	2900	96.8	2899	96.8
PLUMAS	320	307	95.9	305	95.3	313	97.8	313	97.8	313	97.8
RIVERSIDE	19892	18637	93.7	18251	91.8	19511	98.1	19511	98.1	19505	98.0
SACRAMENTO	17324	16332	[illegible]	16014	92.4	17062	98.5	17052	98.4	17052	98.4
SAN BENITO	687	643	93.6	654	95.2	679	98.8	679	98.8	679	98.8
SAN BERNARDINO	26104	24372	93.4	23810	91.2	25489	97.6	25484	97.6	25486	97.6
SAN DIEGO	37553	35107	93.5	34635	92.2	36830	98.1	36823	98.1	36821	98.1
SAN FRANCISCO	7444	6992	93.9	6952	93.4	7301	98.1	7305	98.1	7302	98.1
SAN JOAQUIN	9175	8755	95.4	8572	93.5	9019	98.3	9020	98.3	9021	98.3
SAN LUIS OBISPO	3010	[illegible]	[illegible]	2512	83.4	2939	97.6	2953	98.1	2952	98.1
SAN MATEO	8315	[illegible]	[illegible]	7740	93.5	8275	99.5	8294	99.7	8224	98.9
SANTA BARBARA	5322	5174	97.2	4996	93.9	5249	98.6	5249	98.6	5248	98.6
SANTA CLARA	22322	21875	98.0	21153	94.8	22112	99.1	22105	99.0	22105	99.0
SANTA CRUZ	3667	3344	91.2	3311	90.3	3504	95.6	3503	95.5	3502	95.5

IMMUNIZATION ASSESSMENT OF KINDERGARTEN STUDENTS - 1990 01/22/90
FINAL-RESULTS

TABLE 1 TOTAL ENROLLMENT AND ADMISSION STATUS

COUNTY	NUMBER OF STUDENTS	CONDITIONAL ADMISSION NEED ONE OR MORE IMMUNIZATIONS NUMBER	CONDITIONAL ADMISSION NEED ONE OR MORE IMMUNIZATIONS PERCENT	ALL REQUIRED IMMUNIZATIONS NUMBER	ALL REQUIRED IMMUNIZATIONS PERCENT	UNCONDITIONAL ADMISSION EXEMPTION MEDICAL NUMBER	UNCONDITIONAL ADMISSION EXEMPTION MEDICAL PERCENT	EXEMPTION PERSONAL NUMBER	EXEMPTION PERSONAL PERCENT
TOTAL	467113	33519	7.2	424815	90.9	523	.11	3276	.70
ALAMEDA	18331	1139	6.1	17319	93.4	14	.08	59	.36
ALPINE	19	3	15.8	16	84.2	0	.00	0	.00
AMADOR	371	21	5.7	344	92.7	0	.00	6	1.62
BUTTE	3253	180	5.5	3032	93.1	4	.25	37	1.14
CALAVERAS	436	47	9.7	430	98.5	0	.00	9	1.36
COLUSA	291	15	5.2	274	94.2	1	.34	1	.34
CONTRA COSTA	12423	676	5.4	11694	94.1	8	.06	45	.36
DEL NORTE	474	27	5.7	429	90.3	2	.00	4	.74
EL DORADO	2104	161	7.6	1910	90.7	1	.05	34	1.61
FRESNO	13250	1511	11.4	11572	87.0	12	.09	85	.64
GLENN	523	32	6.1	485	92.7	1	.19	5	.95
HUMBOLDT	2070	142	6.9	1894	91.6	1	.05	33	1.59
IMPERIAL	2319	206	8.8	2106	90.8	7	.00	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	2063	92.1	0	.00	2	.09
LAKE	752	53	7.0	681	90.6	3	.40	15	1.99
LASSEN	469	36	7.7	430	91.7	2	.43	1	.21
LOS ANGELES	129567	14325	11.1	114583	88.4	108	.08	551	.43
MADERA	1722	124	7.2	1583	91.9	0	.00	15	.87
MARIN	2491	193	7.8	2416	97.1	2	.08	40	1.61
MARIPOSA	190	10	5.3	170	89.5	1	.53	9	4.74
MENDOCINO	1359	133	9.8	1188	87.4	3	.22	35	2.58
MERCED	3944	273	6.9	3655	92.9	4	.10	2	.05
MODOC	179	20	11.2	156	88.3	0	.00	1	.56
MONO	143	12	7.1	131	92.3	0	.00	1	.56
MONTEREY	6377	351	5.5	6004	93.9	4	.06	23	.44
NAPA	1581	80	5.1	1477	94.1	4	.38	8	.61
NEVADA	1042	44	4.1	947	89.2	4	.38	67	6.31
ORANGE	35154	2946	8.4	31957	90.9	38	.11	213	.61
PLACER	2995	172	5.7	2762	92.2	2	.07	59	1.97
PLUMAS	320	9	2.8	304	95.0	0	.00	7	2.19
RIVERSIDE	19393	1649	8.5	15056	90.9	31	.16	157	.79
SACRAMENTO	17329	1231	7.1	15915	91.8	17	.10	116	.67
SAN BENITO	687	38	5.5	647	94.2	1	.15	1	.15
SAN BERNARDINO	26194	2090	8.0	23595	90.4	49	.19	370	1.42
SAN DIEGO	37553	2730	7.3	34407	91.6	31	.14	343	.91
SAN FRANCISCO	7444	422	5.7	6937	92.8	3	.04	42	.56
SAN JOAQUIN	9178	566	6.2	8543	93.1	13	.14	54	.59
SAN LUIS OBISPO	3010	185	6.2	2777	92.3	5	.17	38	1.26
SAN MATEO	8196	569	6.9	7771	92.9	2	.02	24	.29
SANTA BARBARA	5352	300	5.6	4992	93.5	2	.04	38	.71

CHILD CARE FACILITY IMMUNIZATION ASSESSMENT
ALL FACILITIES

CALIFORNIA, FALL 1989

COUNTY	TOTAL FACILS	FACILS REPTING	REPORTNG PERCENTS	ENROL <2	ENROL 2-<5	POLIO 3+ No.	POLIO 3+ Pct.	DTP 3+ No.	DTP 3+ Pct.	DTP 4+ No.	DTP 4+ Pct.	MEASLES No.	MEASLES Pct.	RUBELLA No.	RUBELLA Pct.	MUMPS No.	MUMPS Pct.	FOLL-UP NEEDED No.	FOLL-UP NEEDED Pct.	NO FOLL-UP NEEDED No.	NO FOLL-UP NEEDED Pct.	MEDICAL EX. No.	MEDICAL EX. Pct.	PERSONAL EX. No.	PERSONAL EX. Pct.
TOTAL-All	7,279	7,191	98.8	11,650	343,701	332,464	96.7	335,156	97.5	317,311	92.3	336,785	98.0	336,705	98.0	336,658	98.0	25,723	7.5	318,039	92.5	355	0.10	1,214	0.35
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
Berkeley	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
Alpine	3	3	100 0	0	46	38	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 00	1	2 17
Amador	7	7	100 0	0	165	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
Amador	7	7	100 0	0	165	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	6,968	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
Glenn	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/D 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	5,989	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	3,897	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
Nevada	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 38
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	9,036	99 4	9,036	99 4	9,036	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	8,998	98 5	8,998	98 5	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	1,429	98 0	1,429	98 0	153	10 5	1,305	89 5	0	0 00	1	0 07
Sierra	5	5	100 0	9	65	65	100 0	65	100 0	59	90 8	64	98 5	64	98 5	64	98 5	6	9 2	59	90 8	1	1 54	0	0 00
Siskiyou	17	17	100 0	0	381	339	89 0	354	92 9	310	81 4	357	93 7	357	93 7	357	93 7	49	12 9	332	87 1	0	0 00	4	1 05
Solano	68	68	100 0	101	3,805	3,509	92 2	3,625	95 3	3,342	87 8	3,621	95 2	3,521	95 2	3,621	95 2	362	9 5	3,439	90 4	1	0 03	10	0 26
Sonoma	109	109	100 0	50	4,770	4,704	98 6	4,706	98 7	4,640	97 3	4,704	98 6	4,704	98 6	4,704	98 6	53	1 1	4,717	98 9	24	0 50	68	1 43
Stanislaus	94	94	100 0	207	4,222	4,153	98 4	4,189	99 2	4,004	94 8	4,208	99 7	4,208	99 7	4,208	99 7	209	5 0	4,013	95 0	3	0 07	11	0 26
Sutter	20	20	100 0	1	942	933	99 0	932	98 9	896	95 1	940	99 8	940	99 8	940	99 8	45	4 8	897	95 2	0	0 00	1	0 11
Tehama	9	9	100 0	0	362	353	97 5	352	97 2	321	88 7	357	98 6	357	98 6	357	98 6	41	11 3	321	88 7	2	0 55	0	0 00
Trinity	4	4	100 0	1	75	73	97 3	71	94 7	61	81 3	71	94 7	71	94 7	71	94 7	12	16 0	63	84 0	1	1 33	2	2 67
Tulare	59	59	100 0	0	2,580	2,520	97 7	2,548	98 8	2,437	94 5	2,557	99 1	2,557	99 1	2,557	99 1	153	5 9	2,427	94 1	0	0 00	0	0 00
Tuolumne	12	12	100 0	15	501	443	88 4	465	92 8	410	81 8	456	91 0	456	91 0	456	91 0	140	27 9	361	72 1	1	0 20	6	1 20
Ventura	161	159	98 8	337	9,923	9,513	95 9	9,749	98 2	9,068	91 4	9,706	97 8	9,698	97 7	9,685	97 6	542	5 5	9,330	94 0	2	0 02	49	0 49
Yolo	41	41	100 0	55	1,684	1,652	98 1	1,654	98 2	1,562	92 8	1,642	97 5	1,642	97 5	1,642	97 5	120	7 1	1,564	92 9	0	0 00	5	0 30
Yuba	14	14	100 0	0	361	347	96 1	354	98 1	316	87 5	354	98 1	353	97 8	354	98 1	45	12 5	316	87 5	2	0 55	1	0 28

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†** -	NA	NA	NA	0.5%	1.3%	0.8%	0.6%	1.0%	2.3%	1.0%	0.9%	0.9%
4. In Process§** -	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**-	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%	8[illegible]%	95%	96%	98%	98%	97%	97%	97%	97%	96%
DTP(3+doses)	84%	89%	90%	95%	96%	99%	98%	98%	97%	97%	97%	96%

† 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'Alène, 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'Alène, 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 immunization, 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 folowing 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 fighting 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

THE NEW YORK TIMES **HEALTH** THURSDAY, DECEMBER 1, 1988

Baffling Rise of Intestinal Disorder in the Young

By HAROLD M. SCHMECK Jr.

Crohn's disease, a serious disorder of the intestines, appears to be increasing sharply among children, a trend that may reflect some unknown influence of Western industrial civilization, a British scientist said yesterday at a scientific symposium in Houston.

"It's almost as if the infection-free environment of modern Western society could be a factor," said Dr. John Walker-Smith of St. Bartholomew's Hospital in London, an expert on intestinal diseases of children.

The cause of Crohn's disease is unknown, although there appears to be some hereditary influence involved. The painful disorder, which flares up in episodes and is often debilitating, involves inflammation of segments of the intestinal tract.

In children, the disorder also hampers normal growth and development. Children in whom the inflammation and obstruction of the intestine has been corrected by surgery sometimes experience growth spurts shortly afterward, said Dr. Walker-Smith and Dr. Anne Ferguson of Western General Hospital in Edinburgh.

Charting Dramatic Rise

In a telephone interview, Dr. Ferguson said that the excellent health records compiled through the National Health Service in Britain had allowed her to chart a dramatic and unexplained increase in Crohn's disease among children in Scotland over 15 years. Dr. Ferguson is an expert on the immunology of the digestive tract.

She said initial hospital admissions for treatment of the disease more than doubled from 1968 to 1983, suggesting an increase in incidence of the disease among 8- to 16-year-olds. In that period, the rate rose to 23 admissions per million population, from 6 per million.

Dr. James E. Everhart, an epidemiologist of the National Institute of Diabetes and Digestive and Kidney Diseases in Bethesda, Md., said that there were no good national figures on Crohn's disease in the United States, but that it was widely believed that the disease is increasing.

A study in Maryland estimated the number of new cases each year among 10- to 20-year-olds as 4.5 per 100,000 people. Another study, in Minnesota, estimated the overall incidence as 4.3 per 100,000 a year.

> Doctors don't know the cause of the debilitating disease.

Role of Immune System

Dr. Walker-Smith said it was possible that the decline of many childhood infections might allow children in the West to grow up without the vigorous development of their immune defense systems that such infections would ordinarily promote.

"One wonders whether that stimulation of the immune system, particularly in early childhood, may be advantageous later in life," he said.

Dr. Walker-Smith admitted that this is speculation, but he noted that the increase in the disease among children was real and there was evidence indicating that something in the modern Western environment or experience might be involved.

He said the theory was partly based on finding Crohn's disease in children of Indian and West Indian origin who had grown up in Britain. In India and the West Indies, he said, the disease is "very, very rare indeed."

The search for an environmental agent is difficult; so far the search for bacteria or viruses that might cause the disease has been unavailing, Dr. Walker-Smith said.

Research by the British scientist has shown that T-lymphocytes, white blood cells that are important in the immune defense system, may behave abnormally in the intestines of patients who suffer from the disease. He believes that this may contribute to the damage to the intestines that is characteristic of Crohn's disease.

Richard Moskowitz, M.D.
173 Mt. Auburn Street
Watertown, Massachusetts 02172

Alaska State Senate Health Subcommittee
c/o Sandy Mintz
1433 W. 13th Avenue
Anchorage, Alaska 99501

Dear Sir:

I am writing in support of the position paper of Sandy Mintz, and of Senate Bill 148, "An Act Relating to the Immunization of Minors."

I am a family physician and have been practising medicine for twenty-three years. During that time I have noticed that a wide variety of chronic diseases can be provoked, exacerbated, and even in some cases initiated by the various childhood vaccines in general use.

I am especially troubled by the fact that investigations of vaccine-related illness have generally been limited to <u>acute</u> complications occurring within thirty (30) days of the vaccine. My experience suggests that the vaccines act much more commonly as non-specific stressors of the immune system as a whole, such that the child becomes more susceptible to chronic responses generally, e.g., to chronic otitis media, allergies, asthma, and the like. In other words, in many cases the vaccines seem to favor illnesses that do not resolve themselves spontaneously, but continue to smolder or relapse for months and years at a time.

Requiring all children to be vaccinated with foreign proteins or live viruses clearly presupposes the moral and legal obligation to prove both that the corresponding natural diseases constitute a serious public health hazard, and that the vaccines are in no way detrimental to health. Furthermore, it implies full legal and financial liability for any illness or injury sustained by those vaccinated against their will.

Adequate investigation of vaccine-related illness will necessarily be prolonged and difficult. It will require following large numbers of both vaccinated and unvaccinated children for at least two decades, to determine any differences in overall health patterns, including IQ, school performance, and absenteeism, as well as in the incidence and severity of various chronic diseases (recurrent otitis media, asthma, epilepsy, behavior disorders, hyperactivity, etc.).

Until these studies are completed, it would be reckless indeed to continue routine childhood vaccination on a compulsory or statutory basis. I personally favor making all vaccines completely <u>optional</u>, i.e., making them freely available to all

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Hours by Appointment

who want them, and allowing parents to make the choice for their children, as in West Germany and many other countries. This practice will effectively reduce the liability of the state, if and when complications do occur. It will also create a sizeable control group of unvaccinated children for the long-term studies that urgently need to be done.

Nor do these children pose any threat to the rest of society. When children recover spontaneously from measles, mumps, and the rest, they will never again be susceptible to these diseases, no matter how many times they are re-exposed. We must face the fact that, if the vaccines are as effective as their proponents claim, unvaccinated children pose a threat only to themselves.

For all of these reasons, I urge you to support S. B. 148, and to make it as simple as possible for parents not to vaccinate their children. I have read the position paper of Sandy Mintz, and I believe that her proposals are well thought out, carefully researched, and clearly presented. If enacted, this law will be an important step forward, one that will bring Alaska abreast of the other states that have already acted to protect the free choice of their citizens in this matter. It deserves your full support.

Thank you.

Truly yours,

Richard Moskowitz, M. D.

ROBERT F. CATHCART III, M.D.
ALLERGY, ENVIRONMENTAL & ORTHOMOLECULAR MEDICINE
127 SECOND STREET, SUITE 3
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(415) 949-2822

February 12, 1990

Sandy Mintz
1433 West 13th Avenue
Anchorage, Alaska 99501

Dear Ms. Mintz:

Thank you for your POSITION PAPER ON SB148. I certainly support its postion. Reasonable people can certainly disagree about the value of any or all vaccines for particular children. This difference can range all the way from the use of smallpox vaccines in cases of eczema which everyone knows can be fatal to the possible objections that certain autoimmune diseases in later life may be caused by vaccinations in childhood. I think that the incidence of vaccinations in places that allow exceptions to vaccinations as you propose will allow the investigations of such concerns in the future without increaseng dangers of epidemics to either unvaccinated or vaccinated children.

I would suggest, in addition, that vaccinations be prohibited in children who at the time of vaccination are malnourished or have a cold or other infectious or "toxic" disease because the incidence of problems is greatly increased by any of these factors.

Sincerely,

Robert F. Cathcart, III, M.D.

RFC:omm

UNIVERSITY OF DUBLIN TRINITY COLLEGE DUBLIN 2 IRELAND

Department of Community Health

TRINITY 400

January 18, 1990

Ms. Sandy Mintz,
1433 West 13th Ave,
Anchorage, Alaska 99501,
USA

Dear Ms. Mintz,

thank you for letting me see your position paper on compulsory vaccination. It is a very thoughtful document and I support your argument.

With best wishes,
Yours sincerely,

Dr. Petr Skrabanek,
Lecturer in Community Health

MICHAEL A. WEINER, PH.D.

(University of California, Berkeley)

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December 20,1990

Alaska State Senate Health Subcommittee
c/o Sandy Mintz
6981 Kincaid Road
Anchorage, Alaska 99502

To Whom It May Concern:

I am writing to lend my voice of support to the efforts of Sandy Mintz and others who are backing passage of Senate Bill # 148. "An Act Relating to the Immunization of Minors."

As a scientist trained in immunity and the author of numerous books, including "MAXIMUM IMMUNITY" (Houghton-Mifflin Co., Boston), I can safely say that many thousands of readers have advised me of the negative health effects of various childhood vaccines in general use. As the parent of two healthy children I can verify that the "P" portion of the common "DPT" vaccine induced severe fever in my son in 1970. The fever was at such a dangerous degree (106°degrees F) that we, as young parents, had to submerge our infant in an ice-cube bath in order to prevent brain damage and possibly death.

The evidence is clear that childhood vaccines do not benefit all children. In fact, as cited above, some children are severely hurt or killed by these "routine" injections. Therefore, why promulgate state-controlled murder by making it illegal for parents to elect <u>not</u> to have their children vaccinated with these questionable materials?

If I can be of further assistance in this or related matters please do not hesitate to call on me.

Sincerely,

Michael C Weiner

Michael A. Weiner,M.S.,M.A., Ph.D.,
Executive Director,
Alzheimer's Research Institute

MW:jac

Curriculum Vitae

MICHAEL A. WEINER, M.S., M.A., Ph.D.
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EDUCATION

Queens College (CUNY)	B.S., 1963	(Biology)
University of Hawaii	M.S., 1970	(Ethno-botany)
University of Hawaii	M.A., 1972	(Medical Anthropology)
University of California, Berkeley	Ph.D., 1978	(Epidemiology & Nutrition) (In the School of Natural Resources)

TEACHING EXPERIENCE

University of Hawaii	1970-1972	Dept. of Biology
University of California, Santa Cruz	1976-1980	Environmental Sciences Dept. (Research)
Nassau College (SUNY)	1985-1987	Dept. of Biology

PRESENT RESPONSIBILITIES

Executive Director, Fund for Ethnic Medicine, Mill Valley, California

Director of Environmental & Scientific Affairs, Nature's Herbs Co., Orem, Utah (a TwinLab Co.)

Executive Director, Alzheimer's Research Institute, Mill Valley, California

RESEARCH GRANTS AND AWARDS

National Science Foundation,	1965-1966; renewed 1968-1969
Archbold Expeditions of the American Museum of Natural History	1969; renewed 1973
Hawaii Botanical Gardens Foundation	1971; renewed 1973
United States Public Health Service	1969
National Cancer Institute	1975-1976; 1980-1981
National Science Teachers Association	1976 ("Outstanding Science Book for Children")
The Asia Foundation	1981-1982
Estorick Foundation	1983-1984
National Endowment for the Humanities	1987
Estorick Foundation, London England	1988-1989-1990 (for the study of Alzheimer's disease and diet)
Japan Creativity Society, Tokyo, Japan	1989 (Prize for creative research and writings on environment and health)

(continued)

PUBLICATIONS

BOOKS:

Earth Medicine: Earth Foods: (American Indian Medicine)	(Macmillan, 1972)
Plant A Tree: A Working Guide To Regreening America	(Macmillan, 1975)
Man's Useful Plants (Narcotics & Other Addictive Plant Compounds)	(Macmillan, 1976)
Earth Medicine (revised edition)	(Macmillan, 1980)
Weiner's Herbal	(Stein & Day, 1980) (revised ed., 1990)
Homeopathic Medicine	(Bantam, 1982)
The Skeptical Nutritionist	(Macmillan, 1981)
Nutrition Against Aging	(Bantam, 1983)
Third World Medicine	(Government Press, Suva, 1984)
Maximum Immunity	(Houghton Mifflin, 1986) (also in Dutch, Danish, Norwegian, Italian, & French editions; Japanese and Chinese translations in progress)
The Complete Book of Homeopathy	(Avery Books, 1989)
Reducing the Risk of Alzheimer's	(Scarborough House, 1989)
Earth Medicine: Earth Foods (American Indian Medicine)	(Random House, 1991) (in press)
Rainforest Medicine	(Quantum Books, 1991) (in press)

ARTICLES:

Stomach Cancer in Japan: An Environmental Link	**Medical Hypothesis**; *20*: 357-358
The Legal & Health Effects of the Use of Dental Amalgams	**San Francisco Barrister**; Vol. 4(5): 10-15, June, 1985
Diet & the Immune Response	**Health Alert** Vol. No. 1, Winter, 1986
Heavy Metals Reduce Immunity	**Nutrition Health Review** No. 37, Winter, 1986
Aspartame May Impair Immunity	**Nutrition Health Review** No. 37, Winter, 1986
Genetics and Nutrient Needs	**Nutrition Health Review** No. 37, Spring, 1986
Omega – Three Fatty Acids & Hyperlipidemia (letter)	**New England Journal of Medicine** (Sept. 25, 1986)

(continued)

ARTICLES (continued):

Cholesterol in Foods Rich in Omega - Three Fatty Acids (reply to five letters)	**New England Journal of Medicine** (March 5, 1987)
Alzheimer's & Aluminum	**Longevity** *1*(7): 32, 1989
Alzheimer's, Aluminum and Non-Prescription Drugs	**Health & Nutrition Update** *4*(3): 7-9, 1989
Evidence Points to Aluminum's Link with Alzheimer's Disease (letter)	**New York Times** (Nov. 26, 1989)
Aluminum and Dietary Factors in Alzheimer's Disease	**Journal of Orthomolecular Medicine** *5*(2): 74-78, 1990
Herbs and the Immune System	**Herbal Healthline** *1*(1): 1-15, 1989
Herbs Allergy & Inflammation	**Herbal Healthline** *1*(2): 1-16, 1990
Herbs & Energy	**Herbal Healthline** *1*(3): 1-16, 1990
The Effects of Plutonium Seepage on Edible & Medicinal Plants in the Eastern Pacific	(Manuscript)

RECENT INVITED SPEAKING ENGAGEMENTS

Title of Presentation	**Organization, Place, & Date**
Rescuing Tropical Botanical Resources of the Future	NNFA (National Nutritional Food Assoc.) Las Vegas, NV, July 1989
Man's Useful Plants	EXPO EAST, Philadelphia, PA, 1989
Plant Resources of the Native American: A Vision of the Future	SOHO Convention (Southern Health Organization), Orlando, FL, December 1989
The Healing Wisdom of Earth's Medicines	SWHO Convention (Southwestern Health Organization) Dallas, TX, February 1990
Natural Remedies from Nature's Apothecary	Natural Foods Expo, Anaheim, CA, March 1990
Asian Herbal Medicine: A Response-Based Healing System	Malaysia, 3 city speaking tour (Kuala Lumpur, Ipo, Johor Baru), April 1990
Careers in Environmental Science	Earth Day, 1990, Loma Linda University
North American Botanical Resources: Medicines of the Future	Indianapolis, IN, June 1990
Herbal Remedies for Self-Treating Allergies	San Francisco Marriot, June 1990
In Search of the Vanishing Rainforest	NNFA (National Nutritional Food Assoc.) Boston, MA, July 1990

(continued)

RECENT INVITED SPEAKING ENGAGEMENTS (continued):

Environmental Action, 1990's Style	La Jolla, CA, Marriot, September 1990
160,000,000 Years Old and Dying: The Sarawak Rainforest	Rainforest Day Convention, San Francisco, CA October 1990
Environmental Realities: Can We Save the Malaysian Rainforest?	EXPO EAST Convention, Philadelphia, PA, November 1990
The World's Oldest Rainforest: Is It Nearly Extinct?	SOHO Convention, Orlando, FL, December 1990

In addition to the above, numerous appearances on radio and television programs on the above environmental issues.

REFERENCES

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YORK GASTROENTEROLOGY
JOANNE M. HATEM, M.D.
412 RATHTON ROAD · YORK, PA 17403
(717) 843-0965

June 6, 1990

Sandy Mintz
6981 Kincaid Road
Anchorage, Alaska 99502

Dear Mrs. Mintz,

I am writing to you in support of your effort to allow for philosophical objections to mandatory vaccination policies in your beautiful state of Alaska.

Unfortunately, the balance between individual good and common good seems to be lost in many of our present vaccine policies. It has become apparent to me, after developing a life threatening illness after a mandatory rubella vaccine, that the trust I had placed in those making immunization policies was unfounded. Having reviewed extensive documents from the FDA it is clear to me that the prelicensing studies done for the measles, mumps, and rubella vaccines is woefully inadequate. Many of these studies were performed under very suboptimal conditions in Ethiopia, Costa Rica and other parts of the Third World. The double standard appolied to vaccine licensing as compared to the more rigorous testing of pharmaceuticals in appalling.

The Centers for Disease Control and the FDA are inadequately evaluating adverse reactions, so the true risk of immunizations, even after decades of use, is not known. This is intolerable.

Healthy individuals, or their parents, should not be forced to have immunizations, especially where the risk is not known and the benefit is often theoretic. One unfortunate consequence of mandatory vaccine policies is the loss of incentive for industry to improve their products; another unfortunate consequence has been needless serious harm.

Since individuals have the option to choose vaccinatinoo for themselves or their children, unvaccinated individuals do not present a risk to the general population. There is no reason why immunizations must be mandatory--there is

every reason to provide parents with the information needed to make an informed decision.

With best wishes.

Sincerely,

Joanne Hatem, M.D.

YORK GASTROENTEROLOGY
JOANNE M. HATEM, M.D.
412 RATHTON ROAD / YORK, PA 17403
(717) 843-0965

Statement before the National Vaccine Advisory Committee
June 15, 1990

As a practicing physician and now as a patient, I am gravely concerned about the ethics of vaccine policies. Let me remind you, immunizations represent a unique aspect of clinical medicine where, in many cases, a committee decides and a law implements. No committee tells me which colon cancer patients to give chemotherapy, no law requires a patient to have this therapy. Underscoring a physician's relationship with patients is the medical tradition: do no harm, and the legal tradition: physicians are accountable.

At a minimum those agencies, committees, and individuals that determine vaccine policy must include with their recommendations the data upon which they are based, a reasonable estimate of risk, and, most important of all, an acceptable risk/benefit ratio for each vaccine and each clinical setting for which it is being recommended. A cookbook of recommendations without this information is an insult to physicians and a risk to the public.

It is not acceptable to vaccinate on theory alone and then squabble over whether a destroyed life is an adverse reaction or an adverse event.

YORK GASTROENTEROLOGY
JOANNE M. HATEM, M.D.
412 RATHTON ROAD / YORK, PA 17403
(717) 843-0965

June 18, 1990

James Mason, M.D.
Assistant Secretary of Health
Hubert Humphrey Building
200 Independence Avenue
Washington, D. C. 20201

Dear Dr. Mason,

I attended the National Vaccine Advisory Committee meetings on June 14 and 15, 1990 and was very pleased to learn of your active involvement in immunization policy.

I am a practicing physician who has suffered ongoing serious reactions to a legally required rubella vaccine which I received at the beginnning of my fellowship in 1984. I am deeply concerned that vaccine recommendations are being made without adequate supporting data for both safety and efficacy. Priority must be given to determining appropriate risk/benefit ratios for all available vaccines. The medical community needs this data to make appropriate clinical decisions.

On June 14, but not June 15, Drs. Hinman and Orenstein presented data that at least 60% of the cases of measles in the present epidemic are due to vaccine failures. I was particularly disturbed by the recommendation of the CDC that children be revaccinated two or three additional times with MMR to achieve measles immunity. There is no study documenting the safety of this approach, and in fact there is very limited information on the safety of MMR in adults. Certainly, to expose measles susceptible college students to rubella vaccine, which has never been tested in adults and has recently been demonstrated to cause, in some individuals, chronic rubella viremia and devastating neurologic disease, is ridiculous.

On June 15, I read a brief statement ot the committee summarizing my concerns. I have enclosed a copy for your review.

I hope you will give consideration to these suggestions:

1. Appoint a clinician who is expert in the role of infectious agents in causing chronic disease.

2. Establish a multidisciplinary ethics committee to review all vaccine recommendations prior to implementation.

I hope these measures would achieve a better balance between the good and the harm that is done by immunization policy. It would be unfortunate if the lack of consideration given to risk were to undermine the great good that can be accomplished by judicious immunizations.

With best wishes.

Sincerely,

Joanne M. Hatem, M.D.

JMH:nec

SERAMMUNE PHYSICIANS LAB

Providers of the ELISA ACT

[illegible] Preston White Drive, AMSA Building, 2nd Floor, Reston, VA [illegible]

June 1, 1990

Sandy Mintz
6981 Kincaid Road
Anchorage, Alaska 99502

Dear Ms. Mintz:

As my compliments, enclosed is a copy of Dr. Coulter's book.

I would be willing to testify as part of the medical profession , if the need arises.

Please contact me if I can be of any further assistance.

Sincerely,

Russell Jaffe, MD

Russell Jaffe, MD

Enclosure: 1

$14.95 MEDICINE

Physicians and Psychologists on

Vaccination, Social Violence, and Criminality

"...this thoroughly documented exposé of the dangers of childhood vaccinations will shock our complacent society. If Dr. Coulter is correct—and his evidence is as compelling as it is alarming—parents, children and civilization itself are paying dearly for our uncritical acceptance of inadequately tested medical "advances." This book will no doubt start an acrimonious but timely debate about the known benefits and hidden costs of childhood vaccination programs."

—**Bernard Rimland, Ph.D.**, Autism Society of America

"...a masterpiece; one of the most important works of several decades. It indicts present childhood vaccination programs as a major factor in immunologic and neurologic disorders in today's children. Evidence presented in these pages can no longer be ignored: we are long overdue a reassessment of current childhood immunization programs."

—**Harold E. Buttram, M.D.**

"Future generations may look upon us as an irresponsible group of sorcerers' apprentices, setting in motion processes difficult to reverse. That childhood vaccination is an overwhelmingly safe procedure is an article of faith in medicine, accepted by physicians and the public alike. Medical historian Harris Coulter shows that this assumption is not borne out by the evidence--citing data from the specialized literature and many parent interviews.

Coulter considers the relationship of vaccination to autism, hyperactivity, allergies, autoimmune diseases, and learning disabilities. He carries his argument into the social realm, suggesting a connection between neurologic damage and the present high level of criminality in American society. *Vaccination, Social Violence, and Criminality* will become a cornerstone in the ongoing debate about childhood vaccinations."

—**Russell Jaffe, M.D., Ph.D.**

ISBN 1-55643-084-1

North Atlantic Books
Berkeley, California
Center for Empirical Medicine
W[illegible] D.C.

VACCINATION
SOCIAL VIOLENCE AND CRIMINALITY

THE MEDICAL ASSAULT ON THE AMERICAN BRAIN

HARRIS L. COULTER

LEONARD A. SAGAN, M.D.
177 Toyon Road
Atherton, California 94025
(415) 323-4506

May 15, 1990

Sandy Mintz
6981 Kincaid Road
Anchorage, Alaska 99502

Dear Ms Mintz,

Thanks very much for your letter and the copy of your Ms.

I am really astonished at the highly competent and thorough review that you have conducted. It is a highly professional job, addressing all of the relevant medical and ethical issues. If it were shortened somewhat, it might well be submitted for publication in a medical journal. I shall certainly keep it in my files for reference.

In my book, the Health of Nations, I do make the point that the importance of vaccination and immunization as factors contributing to the decline in mortality has been grossly exaggerated. You will find the evidence for that conclusion in the book, but the central point is that childhood diseases such as measles and diptheria persisted unabated until quite recently. What had changed was not the incidence of these diseases, but rather the risk of death in those with the disease (the case fatality rate).

I certainly agree with you that there may be unrecognized late effects of immunization which may occur years or decades later. There has been essentially no study of this issue. It may also be that the natural experience of childhood diseases may somehow stimulate the immune system and protect against other diseases. For example, when polio was common among children, it was observed that upper class children who presumably were protected against childhood diseases, were more susceptible to polio. It was also observed that children who had had tonsillectomies, and presumably were protected against tonsillitis, were more susceptible to polio.

You will also find in my book a reference to some research conducted in Germany relevant to the introduction of smallpox vaccination in Berlin, more than a hundred years ago. While the deaths from small pox disappeared, deaths from other diseases,

particularly gastrointestinal diseases, increased to an almost identical extent, so that death rates remained almost constant.

I think, however, that your most powerful argument is the libertarian view that individuals, including individual parents, should be permitted control over their own lives and those of their children unless the danger to those children (such as with child abuse) can be shown to be clearly harmful to the child or to others in the community.

These are difficult decisions as with parents who refuse to allow their children to be given life saving transfusions. When the benefits to the child are questionable, then the state should come down on the side of parental discretion. I think that you have very clearly made the point that in the case of immunization, the harm of state controlled intrusion into the family is greater than the benefits of immunization.

Your memory is correct; I was cited (rather harshly) in the Brodeur articles on non-ionizing radiation in the New Yorker. Because I am now so intensely involved in that area of research that I am afraid I shall not be able to testify on your behalf in the matter at hand.

Best wishes,

Leonard Sagan MD

Leonard Sagan, MD

Tel: 0983-752658

Ref:

Springwell,
High Down,
Totland,
Isle of Wight,
England, PO39 OHY.

14 March, 199-

Ms Sandy Mintz,
1433 West 13th Avenue,
Anchorage,
Alaska.

Dear Ms Mintz,

This is in answer to your letter about vaccination which was forwarded to me from the University of Glasgow. It arrived while I was away, hence the delay in replying. I have now retired from my university appointment, and my address is as above.

I agree that exemption on the lines suggested in your motion should be a matter of right for every parent or guardian on behalf of their child. Would you care to draft the kind of letter which you require and send it to me.

For additional support, I would suggest that you write to Mrs Barbara Fisher, Secretary of Distressed Parents Together (DPT!), 1571 Windbreak Drive, Alexandria, Va 22306. She has names of several physicians who are concerned about vaccinations.

Subject to hearing more about what you have in mir I shall be willing to testify in a Teleconference

Yours sincerely,

Gordon T Stewart, M.D.

GORDON T STEWART.

MD,BSc,FRCP(G),FRCPATH.,FFCM,FSS,LTM&H.

Emeritus Professor of Public Health, University of Glasgow, Glasgow UK.

DECLARATION OF PERSONAL STATUS IN RELATION TO SUBMISSIONS CONCERNING PERSONS WITH BRAIN DAMAGE FOLLOWING INJECTIONS OF PERTUSSIS VACCINE:
Whooping Cough and Pertussis Vaccine are far from being my main professional interest but, by coincidence and intention, I have some special experience of both, as follows:

I qualified in medicine (MB,ChB) in 1942. Since 1946, I have been especially interested in the epidemiology, diagnosis and control of infectious diseases, and have held junior and senior appointments which gave me experience in routine work, in teaching and in research in this field.

In 1950, while working at St Mary's Hospital, London, I helped to organise and coordinate an investigation of respiratory infections in children in Paddington, cooperatively with Dr REV Brimblecombe, under the supervision of Professors Robert Cruickshank and Donald Reid, with the support of the Medical Research Council. In parallel with this, I assisted in some of the work of the national trials of pertussis vaccines between 1949 and 1956.

From 1954 onward, I have held senior appointments in Britain and in the USA in which control of infectious disease, especially respiratory disease, featured as a main commitment. Before going to Glasgow in 1972 as Buchan Professor of Public Health, I held the Watkins Chair of Epidemiology at Tulane University Medical Center in New Orleans and was a consultant in infectious diseases in two major Hospitals. I have served also as Visiting Professor in Karachi (1953-54), Cornell University Medical College, New York (1970-72) and in other Universities in the British Commonwealth, Africa and USA. I have acted as Consultant or Temporary Adviser to the World Health Organisation (1952 - 1986), New York City Dept of Health (1971-72), US Navy (Field Research Laboratory, Respiratory Diseases in Recruits, 1964 - 1969), and to various Health Authorities, Commercial Firms, Foundations and Charities. Since 1968, I have in publications and otherwise expressed increasing concern about the excessive reliance placed upon bio-technical methods for the control of certain infections and other diseases, and have endeavoured to focus more attention upon social and behavioural factors, notably those associated with inequality of health education and health maintenance. This is how I became from 1973 onward closely involved in the problems of whooping cough and pertussis vaccine. In this, as in some other major infections, I perceived vaccination as an inadequate method of control because risk might exceed benefit in some populations. I found reason for concern also in the lack of valid assessment and ethic in certain mass vaccination programmes.

In 1974, I initiated a 10 year continuing survey of whooping cough, of related infections and of the risk-benefit status of pertussis vaccines in Glasgow and elsewhere. At the request of the Committee on the Safety of Medicines, I

established a register and helped to assess over a thousand cases in which adverse effects of vaccines had been reported by parents, doctors and others (1977-81). I served as a member of the Advisory Panel on Suspected Adverse Reactions to Pertussis Vaccine (1977-81), of the Symposia on same organised by the National Institutes of Health and other Organisations in 1978 and 1984. My research during the period 1974 - 80, funded by the Chief Scientist, England & Wales, and the Greater Glasgow Health Board (1976 - 83), was reported to the Chief Scientist (1982, 1983) and in publications (1976 - 84). During this time, I personally saw many cases of alleged adverse reactions and their families. Many problems were reported to me from overseas, and this is continuing (1989). I have maintained contact or cooperated with individuals and organisations in several European countries and in North America, as listed in my report to the DHSS; I have been and am still quite frequently asked to serve, formally and informally, as an adviser in enquiries about pertussis and other vaccines conducted by members of both Houses of Parliament, by medical and legal Tribunals, by the WHO and other international agencies, by the Law Society, by Courts, by Departments of Social Work, by Charities and by newspapers, radio and television programmes in Britain and overseas. My views on pertussis vaccine, and on certain other mass vaccination programmes, are admittedly controversial. I would submit that they are none the less relevant to the Test Case of Loveday v DHSS and Others, and to some wider aspects of assessment of quality of health care, and of medical injury, audit and compensation.

I have to declare a financial interest in so far as I have received fees and expenses from the Law Society, from Courts, from Solicitors and others for some of my services in matters concerning pertussis vaccines. Until my retirement in 1984, fees from the above were used for research expenses or remitted by me to the University of Glasgow or to Charities, as were all fees to date received from the Media, and certain cases that went to Court

In the course of my medical career, I have vaccinated thousands of persons, especially during war service in the Royal Navy and in my junior days, so I am familiar with the routine. I am also familiar with clinical aspects of whooping cough and of adverse reactions to vaccines. I have four children and seven grand-children. All four children received pertussis vaccine (without severe adverse results) but only one of the grand-children. All seven have received DT and OPV

17 May, 1990.

Signed .....

DR. MARK R. GEIER
MEDICAL/LEGAL CONSULTANT
14 REDGATE COURT
SILVER SPRING, MARYLAND 20904
(301) 384-0980

January 18, 1991

Sandy Mintz
6981 Kincade Road
Anchorage, Alaska 99502

Dear Ms. Mintz,

As per your request I am writing this letter to convey to you some of my opinions concerning DPT vaccination policy in the United States. I am a medical doctor licensed to practice in the state of Maryland, certified by the American Board of Medical Genetics and am a specialist in obstetrical genetics. I also hold a Ph.D. in genetics. Attached is to this letter is my Curriculum Vitae.

I have spent more than one thousand hours researching and reviewing medical and scientific literature on DPT vaccine, pertussis, the Bordetella pertussis organism, medical records of children who have sustained severe adverse reactions to DPT vaccine, depositions of expert medical and scientific witnesses retained by pharmaceutical companies and plaintiffs alike. I have attached a Table of Contents to my six large notebooks which contain the important materials concerning DPT on which I rely for my opinions.

I have been accepted as an expert witness on DPT vaccine injury in federal, state and Canadian courts. My expert testimony has been accepted in more than 30 hearings on Petition for Vaccine Compensation held before Special Masters of the United States Claims Court.

I was recently invited to address the National Academy of Sciences, Institute of Medicine, on the subject of toxins in DPT vaccine, the adverse reactions associated with these toxins, and the time frame within which the adverse reaction can be expected. A copy of the text of that presentation is attached.

I am familiar with the adverse reactions associated with DPT vaccine and specifically with the medical conditions commonly known and referred to as; pertussis vaccine induced encephalopathy; episodes of shock-collapse or hypotonic-hyporesponsive collapse, and residual seizure disorder.

It is my opinion that American parents currently have a difficult choice to make when it comes to whether or not their

children are to receive the DPT vaccination. On the one hand, there is a vaccine called DT, which omits the pertussis portion of the vaccine. This vaccine is far safer than the DPT vaccine, however, this vaccine does not protect against pertussis or whopping cough. On the other hand, it has been know for at least 60 years that wholecell pertussis vaccine, which is the only current form of pertussis vaccine used in the United States, does on occasion cause severe adverse reactions, including permanent neurological reactions and death. It is my feeling that it is very unfortunate that the United States still uses this old and unnecessarily dangerous form of pertussis vaccine. It has been known for many years that there is a safer form of vaccine called an acellular pertussis, which provides good protection against pertussis while removing most of the toxins that cause the adverse reactions. The adverse reaction are such a problem in DPT vaccines that the majority of children who receive the vaccine have at least some systemic reaction including significant fevers. However, faced with the choice, as American parents are, between this defective wholecell vaccine and no vaccination at all, it is my opinion that the benefits of the wholecell DPT vaccine outweigh the risk of the vaccine. Therefore, it is my opinion that parents should choose the wholecell vaccine rather omitting the pertussis portion of the vaccine. It is my hope the we as American parents will soon not have to make this terrible choice, and be allowed to utilize an acellular vaccine as has been available in Japan for approximately 10 years.

It is my opinion that in using the unfortunate and defective wholecell vaccine that physicians and other health care professionals should be extremely careful in following all the contra-indications which are known to exist for this vaccine. No child should receive this vaccine who has a previous personal history of any neurological problems. The vaccine should probably also be omitted in children who have a family history of neurological problems. No child should receive the vaccine who has had a severe reaction to a previous pertussis vaccine, and probably no child whose has a significant family history of severe pertussis vaccine reactions should be given this shot, in my opinion. For these children, it is my opinion, that they should receive the DT vaccine.

It is my opinion that due to dangerous nature of the wholecell DPT vaccine, that parents should be fully informed of the risks and benefits prior to making their decision, as to whether to receive the DPT or DT vaccine. Precedent for this decision, for the freedom to make this choice, is very wide in the international scene. For example in England parents are permitted to elect either the DPT or DT vaccine. In fact, there are a number of countries in which the pertussis vaccine is not generally used, including the countries of Sweden and Germany. The wholecell vaccine was dropped in the mid 70's in Japan as well. Some of the countries who have ceased to use the wholecell vaccine have had increases in the rate of whooping in their population. Other counties have not. It is my opinion that it is best not to take

this chance with American children and therefore, as I mentioned previously I would choose to use the wholecell vaccine. However, it is my opinion that the parents should be permitted a choice in whether or not their children are vaccinated with DPT or DT. There are some instances in which a society has a compelling interest in requiring vaccination, because unvaccinated individuals might be a threat to the rest of the population. It is my opinion that the individual selection of DT vs DPT is not a significant threat to the general population. My reasons for saying this are that the current wholecell DPT vaccine does not confer life long immunity. Furthermore, this vaccine cannot be given as a booster to children over the age of six. Therefore, there is a very large segment of our population which already is not immune to pertussis. These adults constitute a large reservoir for the pertussis organism. Adding a certain percentage of young children to this reservoir will not in my opinion significantly endanger the rest of the population anymore than it currently is. It is my hope that with the introduction of an acellular vaccine, that pertussis can be totally eliminated from the population by eliminating the pool of individuals who are not immune. However, since there is a large pool around already who lack immunity I do not feel a compelling case can be made that our society has a compelling reason to require pertussis vaccine against parental will.

It is my deepest hope that the problems with our wholecell vaccine will be eliminated by the general introduction of an acellular vaccines. Lederle Laboratories has announced in a press release that they are applying for an acellular vaccine similar to that used in Japan. However, the issue of parental choice in taking wholecell DPT still is important because it is not clear to me when and if such a product will actually become available to the general vs. population.

It is my opinion that forcing parents to use a potentiality dangerous product against their will, when it is not a significant threat to others in the population, is inappropriate and cannot be justified by simply saying that the wholecell pertussis vaccine efficacy outweighs its risk. Although, I do feel that its efficacy does outweigh its risk. Therefore, I think a reasonable current position for the government to take is (1) to do everything possible to make a safe acellular vaccine available as soon as possible for American children (2) until that occurs to have health care providers inform all parents of the risks and benefits of the vaccine, and (3) to allow those who want to do so to take the DT rather than the DPT that option. This is not the option that I have taken and I have indeed vaccinated my own son with DPT; however, it is not generally American policy to force people to take or restrain from taking products for their own good unless their action constitute a clear and present danger to the society as a whole. I don't think that is the case with the decision between DPT and DT.

If I can be of any further help to you in providing information or in any other way concerning this matter please feel free to contact me.

Sincerely,

Dr. Mark R. Geier

Mark R. Geier, MD, Ph.D.
Medical/Legal Consultant

Enclosures: as stated

CURRICULUM VITAE

Name	Mark Robin Geier	
Address	14 Redgate Court Silver Spring, MD 20905	
Date of Birth	May 3, 1948	
Place of Birth	Washington, D.C.	
Marital Status	Married (Anne Watson Geier) Son - David (born 10/02/80)	
Education	1970 B.S.	George Washington University, Washington, D.C.
	1970-1971	Graduate Student Dept. of Human Genetics and Development, Columbia University, N.Y.C., N.Y.
	1973	Ph.D. Genetics, George Washington University, Washington, D.C.
	1978	M.D. George Washington University, Washington, D.C.
Work Experience	1969-1970	Research (Student) at the National Institutes for Health
	1970-1971	NIH Traineeship at Columbia University, Department of Human Genetics and Development, N.Y.C.
	1971-1973	Research Geneticist, Laboratory of General and Comparative Biochemistry, NIMH, NIH
	1973-1974	Staff Fellow, Laboratory of General and Comparative Biochemistry, NIMH, NIH
	1974-1978	On Professional Staff Laboratory of General and Comparative Biochemistry NIMH, NIH

1978-1979 Intern and Fellow, Department of Obstetrics and Gynecology, The Johns Hopkins University Hospital, Baltimore

1979-1982 Assistant Professor, Department of Gynecology and Obstetrics, The Johns Hopkins School of Medicine, Baltimore

1980-1982 Guest worker Laboratory of General and Comparative Biochemistry, NIMH, NIH

State Licensure: Maryland, September 1979.

Board Certification: American Board of Medical Genetics, 1987

Other Positions:
1980-present Assoc. Prof. Psych. Dept. U.S.U.H.U.S., Bethesda, Md.
1980-present co-director of Genetic Consultants, Bethesda, MD.
1980-present Laboratory Director Molecular Medcine, Md.
1981-present Director of Institute of Immuno-Oncology and Genetics, Md.
1986-present President of Genetic Counselling and Research, Inc., T/A The Genetic Center Baltimore, Md.
1988-present Director of Genetics of Maryland Medical Laboratory, Inc. Baltimore, Md.
1989-present Member of the Substance Abuse and Doping Committee and the Sports Medicine and Science Committee of the U.S. Bobsled and Skeleton Federation (Olympic committee)

Professional Societies:
Sigma Psi
American Association for Advancement of Science
National Board of Medical Examiners, Diplomat
American Society of Human Genetics
Montgomery County Medical Society
American Fertility Society

Publications:

1. Merril, C.R. and Geier, M.: The effect of freezing and DEAE-D in spheroplast assays. Virology 42: 780-82 (1970).

2. Merril, C.R., Geier, M.R. and Petricciani, J.: Bacterial virus gene expression in human cells. Nature 233: 398-400 (1971).

3. Geier, M.R., and Merril, C.: Lambda phage transcription in human fibroblasts. Virology 47: 638-643 (1972).

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JOHN H. MENKES
1201 Park Way
Beverly Hills, Calif. 90210

January 20, 1991.

Ms. Sandy Mintz
6981 Kincaid Road
Anchorage, Alaska 99502

Dear Ms. Mintz:

In response to your recent letter, I can inform you that at the present time essentially all research which is being conducted on the side effects of vaccines is supported by the various drug houses producing the vaccine. In addition, when comparing risks to benefits, there is a tendency for physicians and scientists to overemphasize the risks of diseases such as whooping cough, and understate the risks of vaccination.

I trust this information will be of assistance to you.

Sincerely yours,

John H. Menkes, M.D.
Professor Emeritus of Neurology and Pediatrics
University of California, Los Angeles,
405 S. Beverly Drive, Suite 300
Beverly Hills, Ca. 90210
FAX (213) 277-6581

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Edward J. Linkner, M.D., Clinical Instructor, University of Michigan Medical School

"Randall Neustaedter's book is the most practical, useful book on immunizations from the viewpoint of alternative medicine written so far. I highly recommend it to all patients, parents, and physicians."

Roger Morrison, M.D., Co-founder, Hahnemann Medical Clinic; Instructor, Hahnemann College of Homeopathy

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Kenneth P. Stoller, M.D., Fellow of the American Academy of Pediatrics

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HARRIS L. COULTER, PH.D.
PRESIDENT

(202) 364-0898
(202) 362-3185

January 28, 1991

Chairman and Members
Health, Education, and Social Services
Committee
Alaska State Senate
Juneau, Alaska

Dear Sirs:

As the author of two books on the neurological effects of childhood vaccinations, I would like to support the Position Paper submitted to you by Ms. Sandy Mintz in April, 1989.*

I cannot add very much that is useful to what has already been stated very eloquently in that Position Paper other than to repeat a few facts which are well-known to physicians and neurologists but not always familiar to the non-medical public, namely:

-- The full extent of neurological damage from childhood vaccinations is not yet known. For example, prior to the publication in 1985 of DPT: A Shot in the Dark by myself and Barbara Fisher, the vaccine authorities would not admit that the whooping cough vaccine could cause death and held that the incidence of neurologic damage generally is infinitesimally small (1 in 350,000 children). But since the establishment in 1990 of a vaccine compensation system in the US Claims Court, Washington, DC, about 5000 cases have already been filed, one third of them for vaccine-caused death (usually diagnosed as "sudden infant death syndrome"). The more we dig into this issue, the worse the data become. So far we have just scratched the surface.

-- There is good evidence that some children are congenitally predisposed to a serious vaccine reaction. In other words, even if the vaccine is "safe" according to the FDA definition, some children could be killed or very seriously damaged by it (epilepsy, mental retardation, hyperactivity, learning disabilities).

-- There is greater awareness today that such childhood diseases as measles or mumps, even whooping cough, have beneficial effects in that they strengthen the child's immune system. Vaccinations, on the contrary, weaken the immune system and, when their effect wears off, leave the

adult even more vulnerable to a later attack of measles, mumps, or whooping cough.

Until all the evidence is in, I think it is unreasonable to force parents with strong contrary opinions to submit their children to the risks associated with these vaccines.

Thank you very much for your attention in this matter.

Very sincerely yours,

Harris L. Coulter, Ph.D.

*Harris L. Coulter and Barbara Loe Fisher, DPT: A Shot in the Dark. New York: Harcourt Brace Jovanovich, 1985. To be reprinted in 1991 by Avery Publishing Company, Garden City, Long Island, New York. Harris L. Coulter, Vaccination, Social Violence, and Criminality. Berkeley, California: North Atlantic Books, 1990.

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CURRICULUM VITAE

Born: Baltimore, Maryland. October 8, 1932

Education: Milton Academy, Milton, Massachusetts, 1948-1950.
Yale University, 1950-1954. B.A., 1954. Major: Russian Studies
Harvard Law School, 1955-1956
Columbia University, 1954-1959. Department of Public Law and Government. M.A. 1961. Ph.D. 1969. Dissertation title: Political and Social Aspects of Nineteenth-Century Medicine in the United States: The Formation of the American Medical Association and its Struggle with the Homoeopathic and Eclectic Physicians
University of Moscow, USSR, Department of Economics, 1962-1963 (under the US-USSR Cultural Exchange Program)

Languages: Russian, French, German, Spanish, Serbocroatian, Hungarian

Family: wife -- Catherine Nebolsine Coulter (separated)
children -- Andrew, Elizabeth, Marian, Alexander

Organizations: American Institute of Homoeopathy
National Center for Homoeopathy
International Foundation for Homoeopathy
Liga Medicorum Homoeopathica Internationalis

Professional Experience: 1960-1963, United Nations, New York. Simultaneous interpreter -- Russian-English, French-English
1964-1966, U.S. Dept. of State. Interpreter and translator
1966-present. Self-employed writer, interpreter, translator, and consultant

Research interests: medical history and philosophy, homoeopathic medicine, childhood vaccinations, the controlled clinical trial

Grants: 1958 -- Ford Foundation Foreign Area Training Fellowship ($2500)
1977 -- writer's Grant from National Center for Homoeopathy, Washington, D.C. ($15,000)

Honors: 1985 -- Hahnemann Prize, from the Societe Royale Belge d'Homoeopathie
1990 -- Centenary Gold Medal, from the Academia Medico-Homeopatica de Barcelona

ge, United States, 1981

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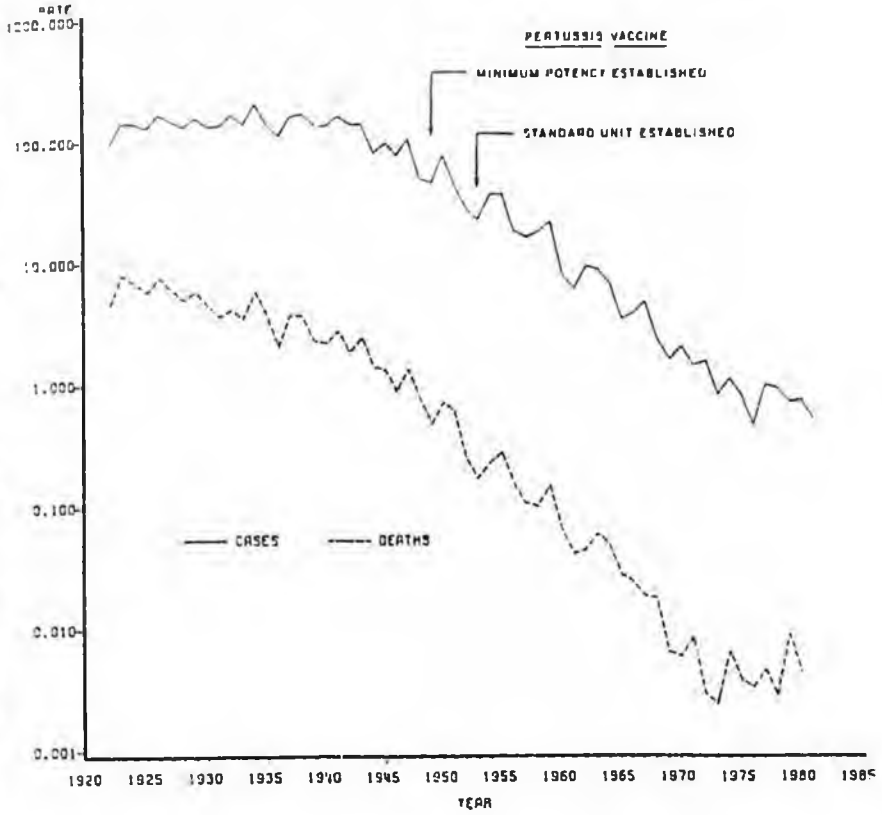
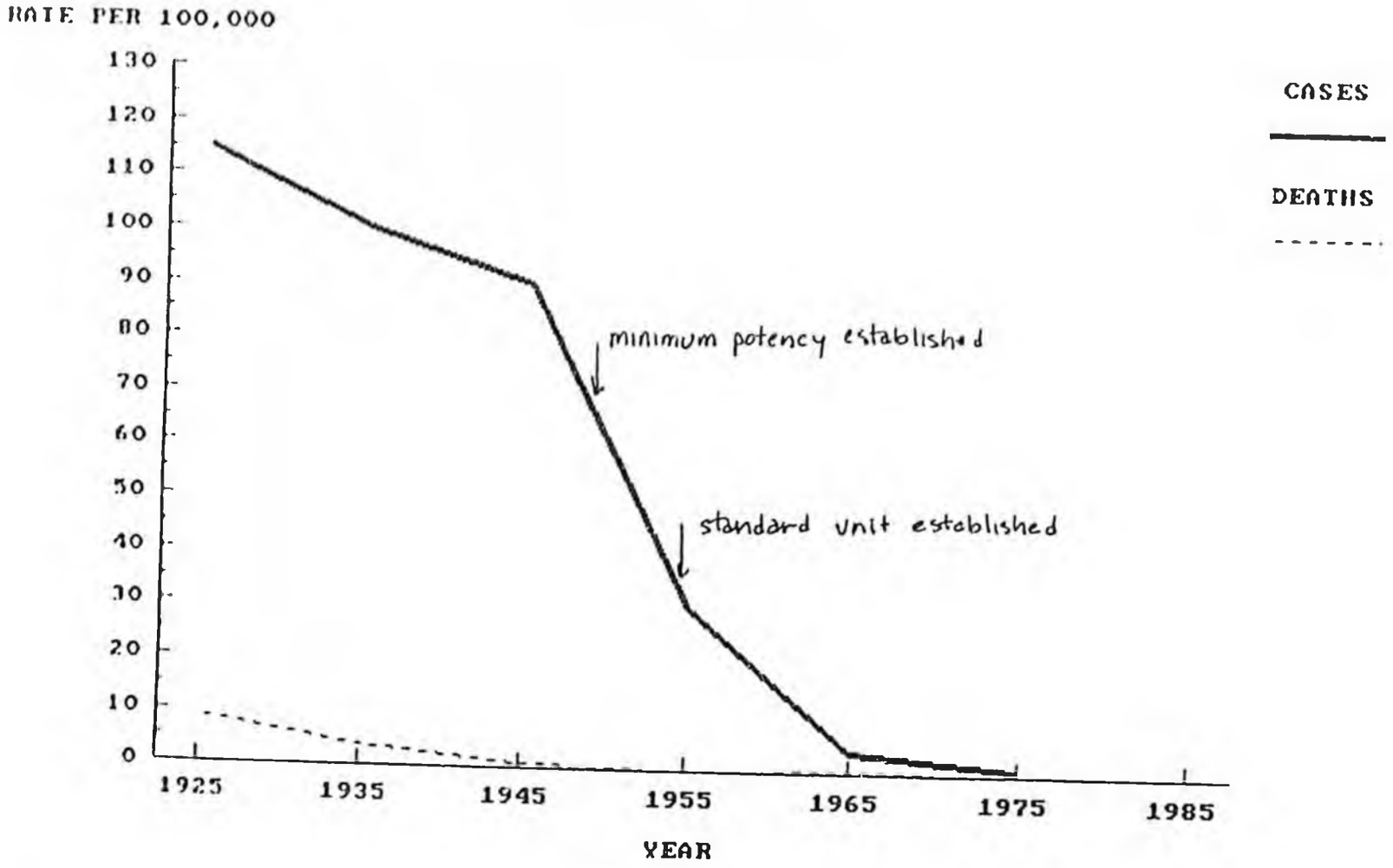
PERTUSSIS (Whooping cough)—Reported cases and deaths per 100,000 population, by year, United States, 1922-1981



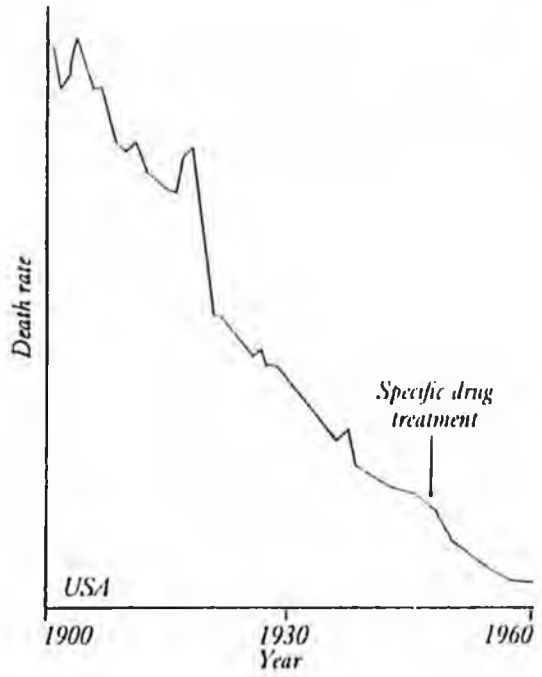
Bordetella pertussis vaccines were not uniform in potency before 1949 when minimum potency requirements were established. A standard unit of potency was adopted in 1953. Concurrently, the use of pertussis vaccine became widespread, and the rate of decrease in pertussis morbidity and mortality accelerated. In more recent years, however, the rate of decrease has been slower, with the preponderance of cases occurring in the < 1-year-old age group. For 1981, 62% of the cases with age reported were in this age group.

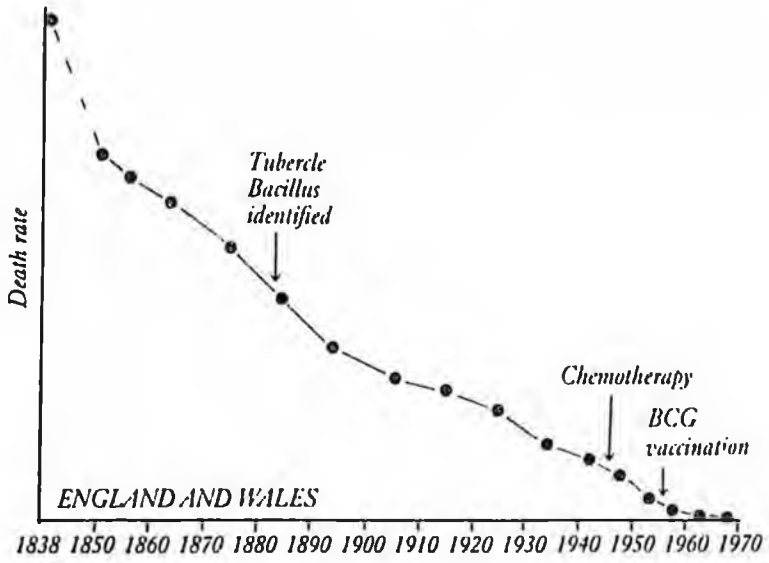
REVISED MMWR GRAPH SHOWING MORBIDITY AND MORTALITY FOR PERTUSSIS*



Graph originally found in MMWR 30:(54),1982.

* Approximate

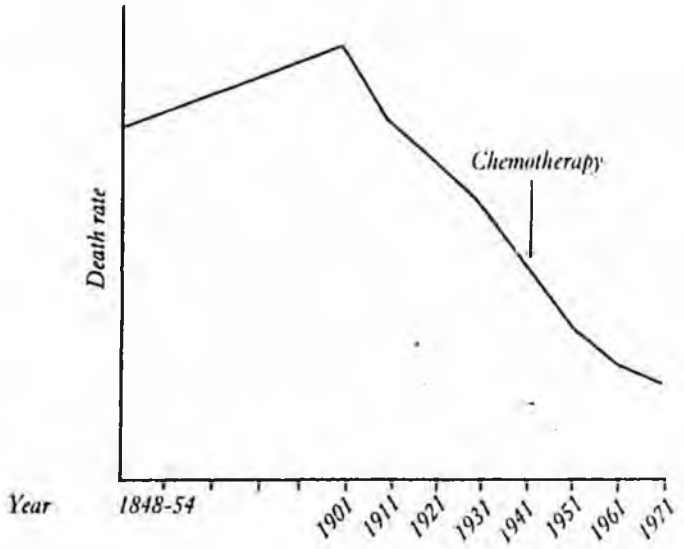




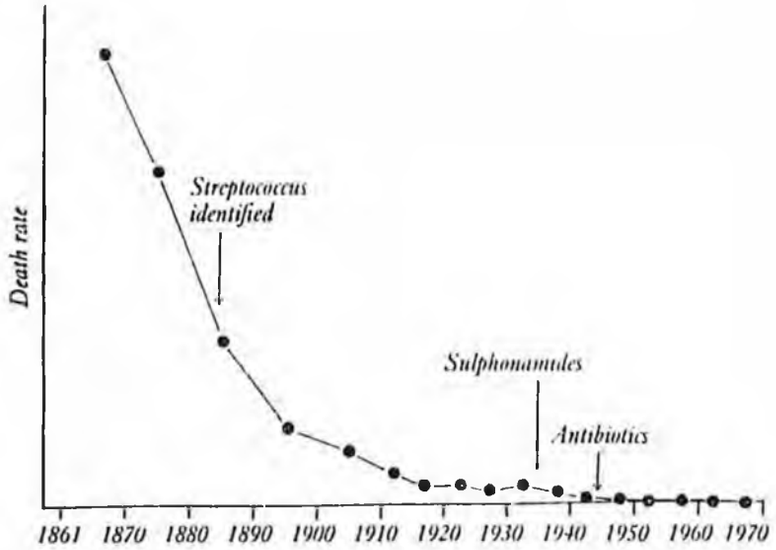
Tuberculosis in England, Wales and the USA

occurred in those vaccinated than in the placebo group![10] On the other hand, the Netherlands had the lowest death rate from respiratory TB for any European country in 1957-59 and 1967-69 despite having no national BCG programme.[6]

During the nineteenth century, pneumonia, bronchitis and influenza were all grouped together in national statistics. The introduction of antibiotics does not seem to have made an impact on the already declining death rate but this is hardly surprising because influenza and some cases of acute bronchitis are viral diseases for which antibiotics are ineffective. Although it is known from clinical experience that antibiotics can successfully treat pneumonia, statistics from 1900 both here and in the USA do not show a major change in the already declining death rate.[11] Since there are so many types of influenza virus, vaccines against one form may be useless against another and one study, involving 50,000 Post Office workers, showed that influenza vaccine had no impact on absenteeism.[12] But mass vaccination can sometimes prove dangerous and it was in 1976 that President Ford ordered the now infamous nationwide vaccination programme against swine flu. Eventually the project had to be abandoned because the vaccine was found to cause death and paralysis amongst the elderly.[10]



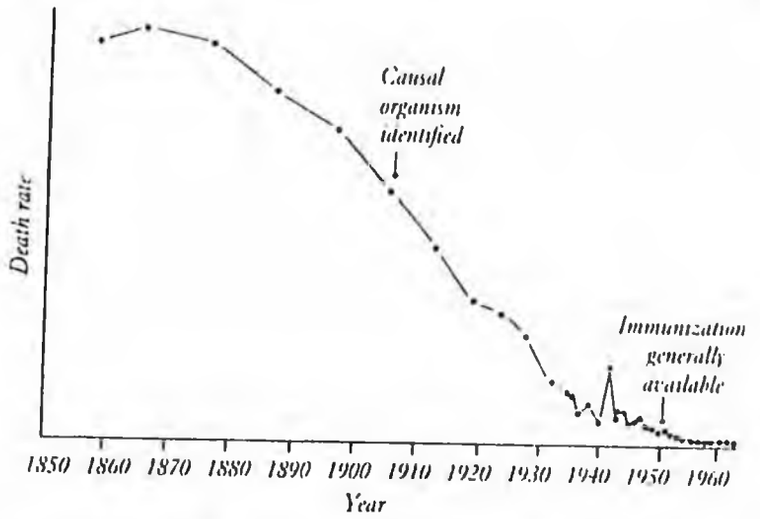
Bronchitis, pneumonia and influenza: death rates (standardized to 1901 population) for England and Wales



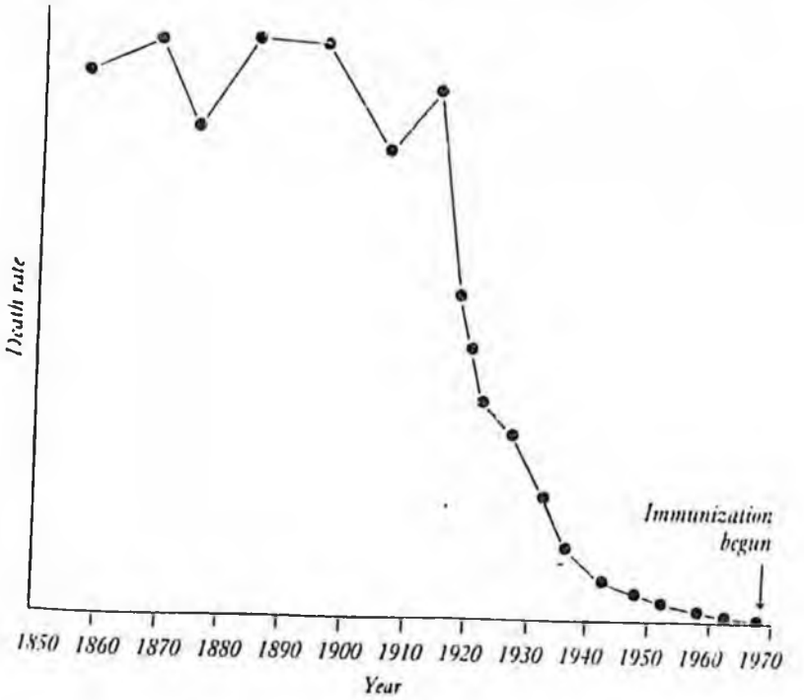
Scarlet fever: the mean annual death rate in children under 15 for England and Wales

Sadly pneumonia still claims many lives – 24,687 in England and Wales during 1984, and death rates for those aged 65 to 84 have risen sharply since the mid 1940s, despite the availability of antibiotics.[13]

Both scarlet fever and whooping cough have declined rapidly since the 1860s and 1870s and had fallen to comparatively low levels by the time antibiotics, and immunization against whooping cough, became available.[14] In the 1860s the death rate from whooping cough was about 1,372 per million children under 15. By 1901-10 it had fallen to 815, by 1921-30 to 405, and by 1940 to about 140 per million. In 1947-8 the rate had declined still further to 73 per million and by the time a nationwide vaccination programme was initiated in the late 1950s, the rate had fallen to around 5 per million children.[15] Since 1969 almost half the deaths have occurred in children under three months old[15] – before vaccination is commenced. In recent years the value and safety of the vaccine has been hotly disputed in the medical press and risks of brain damage between 1 in 750 and 1 in 100,000 children have been quoted.[16] In Glasgow Professor Gordon Stewart, a fierce critic of the vaccine, has found that a child's social class is three times more



Whooping cough: death rates of children under 15 for England and Wales.



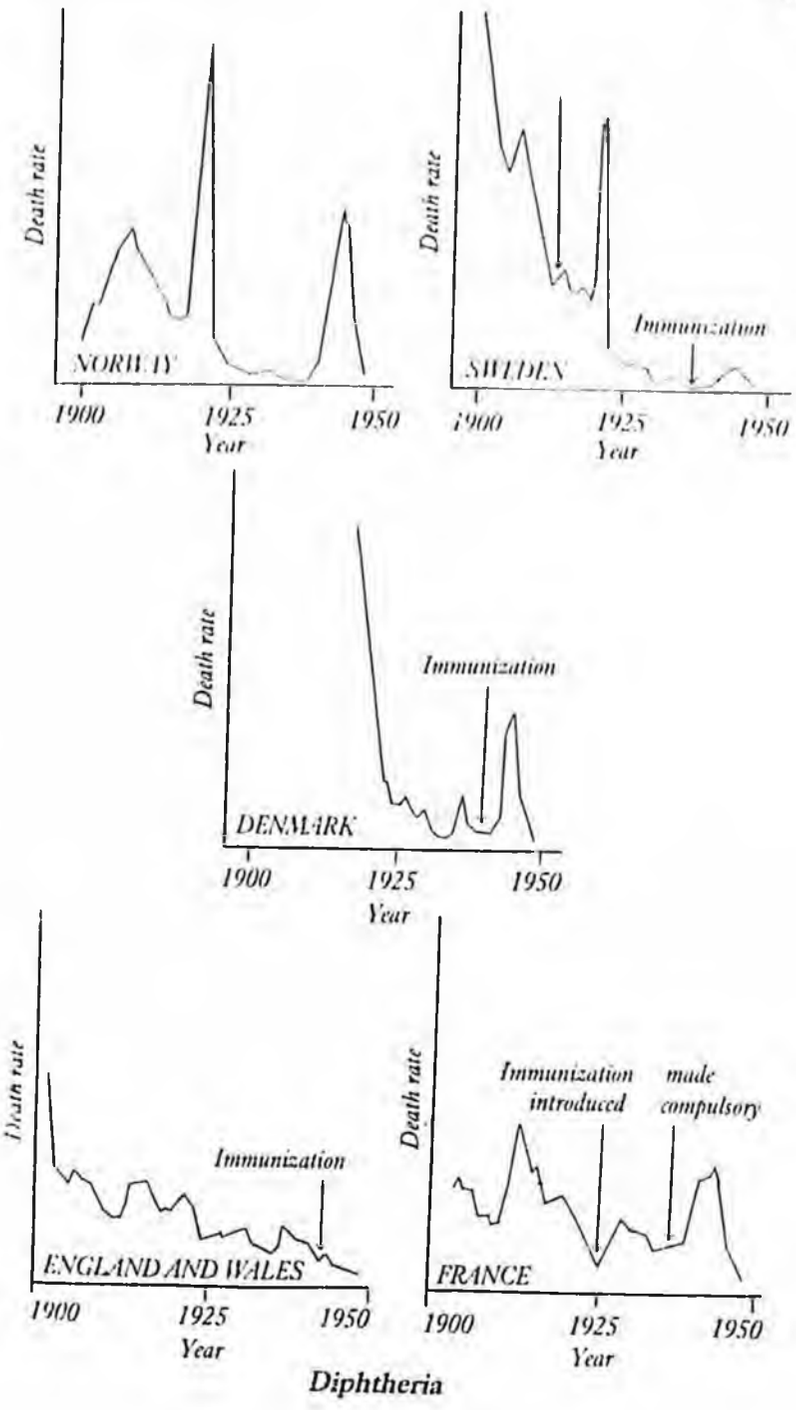
Measles: death rates of children under 15 for England and Wales

important than vaccination in influencing whooping cough outbreaks[17] – more evidence that poverty can cause disease. Other studies revealed that one third of whooping cough patients had previously been immunized![18] Routine use of the vaccine has been stopped in Sweden and West Germany without any rise in deaths or serious disease.[19]

Measles started to decline rapidly at the turn of the century and the death rate had reached very low levels by the time vaccination was introduced in 1968.[6]

In 1860 diphtheria accounted for well over 1,000 deaths per million children[20] but this had fallen sharply to an annual rate of around 400 between 1861 and 1870.[21] Although this fall was not associated with any specific therapy, later declines roughly coincided first with the introduction of horse antitoxin treatment (1894) and then by immunization (1940). Had mortality from other common childhood infections remained the same or increased during the same period, then it would be natural to assume that antitoxin and vaccination were mainly responsible for the fall in diphtheria deaths around 1900 and 1942. But deaths from whooping cough and measles did indeed decline over the same period without any treatment or immunization, suggesting other influences, such as an improved standard of living, may also have been at work with diphtheria. This is confirmed by figures from poorer countries where the death rate from diphtheria is 100 times higher.[22] And evidence taken from countries with a higher standard of living also shows that antitoxin and immunization could not have been solely responsible for the decline of diphtheria.

In his Presidential address to the British Association for the Advancement of Science, Professor Porter described how the value of antitoxin treatment has never been accepted generally[23] and perhaps this is not surprising because controlled clinical trials were never carried out.[24] As a result there are virtually no statistics proving that antitoxin actually works on human beings.[25] The apparent fall in the case-fatality rate (the number of deaths expressed as a fraction of the total number contracting the disease) may well have been caused by new diagnostic methods. Bacterial analysis, introduced at about the same time as antitoxin, meant that mild cases of the disease, previously classified as something else, were now included in statistics, which automatically lowered the overall case-fatality rate.[26] And despite the availability of antitoxin since the 1890s, several

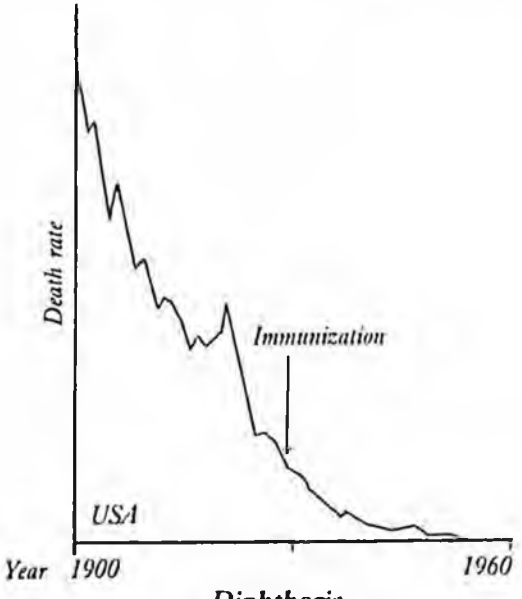


Diphtheria

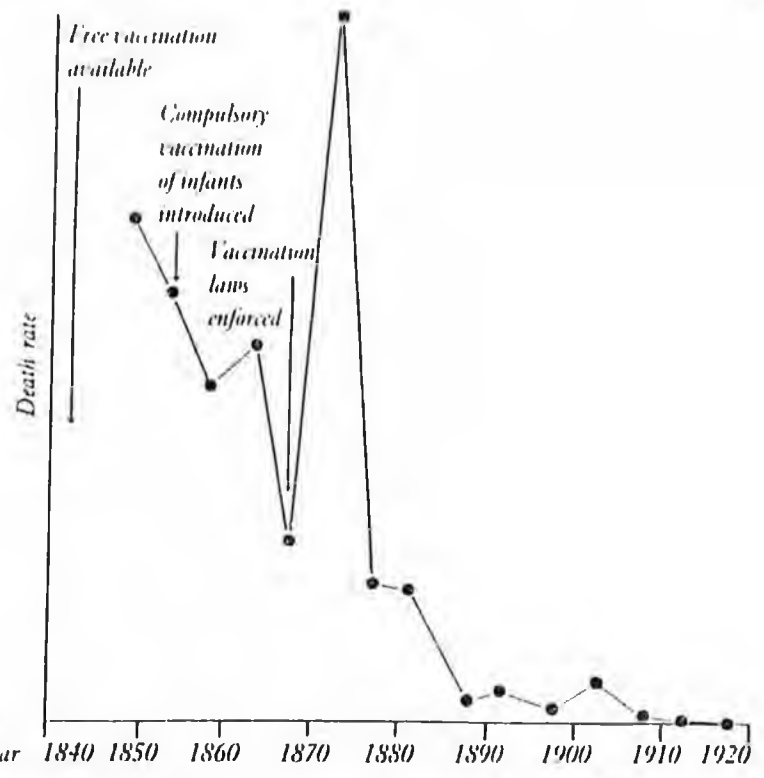
countries have experienced an increased death rate in the early years of this century.[27] In Berlin during the 1920s a severe outbreak of diphtheria led to high case-fatality rates despite large doses of antitoxin being given at an early stage. Debating these findings at the Berlin Medical Society, Professor Friedberger argued that the apparently favourable results following the introduction of antitoxin in the 1890s were really due to a natural decline in the severity of the disease.[28]

Figures for America show that immunization against diphtheria did not produce any detectable change in the death rate, which had already steeply declined.[24] Furthermore diphtheria was gradually declining in Massachusetts, Michigan and New York from about 1880, well before the introduction of antitoxin, let alone vaccination. Studies have also shown that parallels between the number of children immunized and the decline in mortality do not hold for every region in the USA,[24] suggesting that other factors, such as improvements in living standards, are crucially important.

In countries with a high standard of living, such as Denmark, Sweden and Norway, deaths from diphtheria declined rapidly without any vaccination.[29] That is, until World War II when several countries in Western Europe had greatly increased rates. In Denmark, immunization did not begin until 1941, but in



Diphtheria



Smallpox: death rates for England and Wales

Copenhagen, despite 95% of children being inoculated, there was an astonishing increase from 41 cases in 1942 to 1,754 cases in 1944![30] In Norway the disease had rapidly declined and virtually disappeared by 1939 when only 18 cases per million were recorded.[31] It was only after the German occupation in World War II that immunization was introduced, coincidentally with an enormous rise in diphtheria. And, despite immunization, diphtheria had shown a remarkable rise in Germany both before and during the Second World War. Increased overcrowding, a general lowering of hygienic standards and a lack of resistance because of poor food supply seem largely responsible.[31]

Evidence like this, taken from the experience of other countries shows that antitoxin and immunization could not have been solely, or even mainly, responsible for the decline of diphtheria in Britain.

Although the contribution of smallpox to the overall decline in

Britain's death rate between the 1850s and 1970s was relatively small, this is the one major disease for which vaccination was available before 1900. The medical historian Creighton considered vaccination against the disease useless but this is not a generally accepted view. Nevertheless, a recent analysis of the decline of smallpox in London concluded that vaccination could never have been solely responsible.

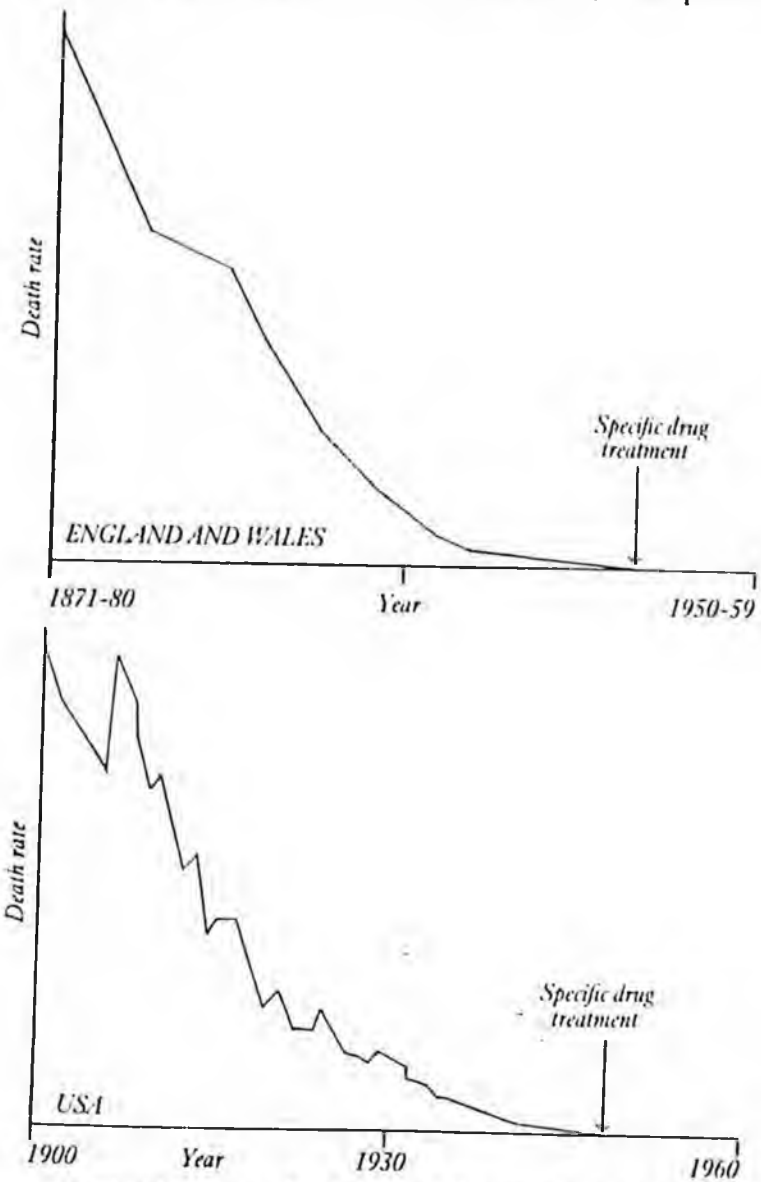
> 'The history of smallpox in the later years of the nineteenth century does not support the contention that vaccination was fully or finally responsible for the eventual disappearance of the disease in Britain. It was in these years, in fact, that there was developed the system for control of the disease that became the basis of the successful modern campaign for its eradication.'
>
> *Medical History*, 1983[32]

The 'system' included the establishment of port sanitary authorities to avoid the disease being imported from abroad, isolation of patients and thorough cleansing of their homes. In fact the Royal Commission on Smallpox and Fever Hospitals traced the beginnings of the decline to the 1780s although Jenner's method of vaccination was not even published until 1798. By the time Jenner's vaccine was being introduced, between 1801 and 1810, the death rate had already fallen from 500 to 200 per 100,000 of the population.[32] Even then vaccine uptake was not great – hence the subsequent Acts of Parliament attempting to enforce the practice. Compulsory vaccination was introduced in 1852 but by then mortality had fallen to 40 per 100,000. Between 1871 and 1880, the period when compulsory vaccination was legally enforced, the death rate leapt from 28 to 46 per 100,000.[32] Worldwide, the elimination of smallpox has been attributed to isolation of contacts, education and mass vaccination.[33]

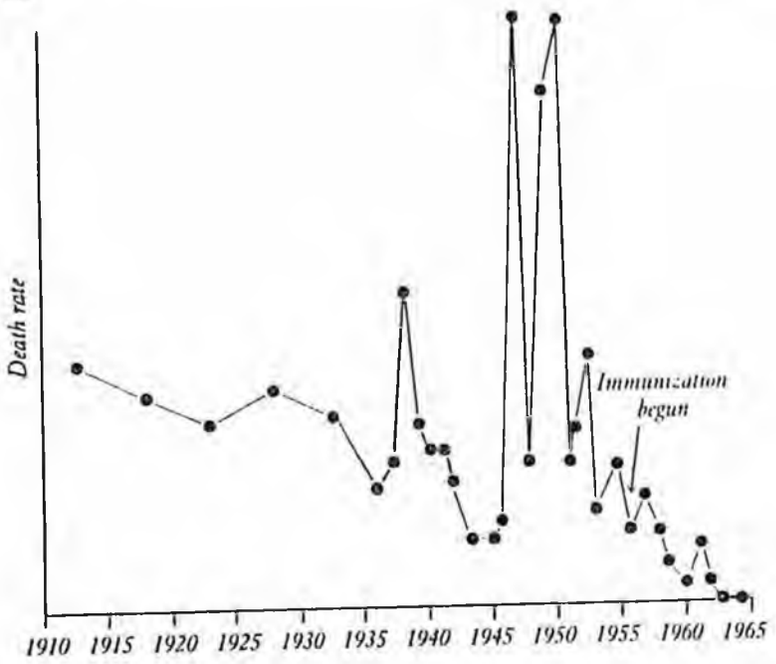
It is often thought that Edward Jenner developed the first protection against smallpox but inoculation against the disease had been practised in India since ancient times and in China since 1063.[2] In 1718 Lady Wortley Montague, wife of the British Ambassador to Turkey, introduced inoculation against smallpox into this country. Small amounts of material from the pustules of those suffering from a mild form of the disease were administered nasally or inoculated into those seeking protection, immunity being conferred against dangerous attacks. The

method was sometimes hazardous although risks could be reduced by making the fluid less virulent.

Jenner's subsequent 'discovery' of vaccination was really based on the chance observation that milkmaids, infected with cowpox from lesions on the udders of cows, were protected



Typhoid Fever in England and Wales and the USA



Poliomyelitis: the mean annual death rate for children under 15 for England and Wales

main reasons being a rising standard of living of which the most important feature was a better diet, improvements in hygiene, and a favourable trend in the relationship between some microbes and the human host. McKeown concludes that therapy made no contribution and the effect of immunization was restricted to smallpox, a disease that accounted for only about one twentieth of the reduction of the death rate. For the twentieth century McKeown lists improved nutrition and better hygiene as by far the most important influences, with therapy and immunization playing a relatively minor role. In the United States where Shattuck had performed the same vital role as Chadwick in Britain, researchers John and Sonja McKinlay found that for ten common infectious diseases (TB, scarlet fever, influenza, pneumonia, diphtheria, whooping cough, measles, smallpox, typhoid and poliomyelitis), medical measures only accounted for between 1 and 3.5 per cent of the decline in mortality since 1900.

> 'In general, medical measures (both chemotherapeutic and prophylactic) appear to have contributed little to the overall decline in mortality in the United States since about 1900 – having in many instances been introduced several decades after a marked decline had already set in and having no detectable influence in most instances. More specifically, with reference to those five conditions (influenza, pneumonia, diphtheria, whooping cough and poliomyelitis) for which the decline in mortality appears substantial after the point of intervention – and on the unlikely assumption that all of this decline is attributable to the intervention – it is estimated that at most 3.5 per cent of the total decline in mortality since 1900 could be ascribed to medical measures introduced for the diseases described here.'[9]

Even traditional medical sources such as the *Lancet* acknowledge that '. . . public health legislation and related measures have probably done more than all the advances of scientific medicine to promote the well-being of the community in Britain and in most other countries.'[40].

But if affluent Western societies have largely eradicated the infectious epidemics, life is not so good in poorer countries. People in the Third World now suffer from the same communicable diseases that were widespread in developed nations during the nineteenth century. Many illnesses are transmitted by food and water contaminated by disease organisms from human and animal excreta. They include diarrhoeal disease, amoebic and bacterial dysentery, typhoid, cholera, polio and infectious hepatitis.[41] Fewer than one in five people in the Third World can obtain clean water. Lack of a clean water supply, and the breeding of mosquitoes and flies in stagnant water, have been connected with 80 per cent of disease in the world.[33] Indeed the World Health Organisation estimate that 25 million people die every year because they do not have clean water and sanitation. Poverty is another major cause of ill health leading to malnutrition and a lowered resistance to infection: the death rates from whooping cough and measles are 300 and 55 times higher respectively in poorer countries.[22] The Third World poor almost always live in overcrowded conditions which accelerates the spread of disease. Whilst modern drugs can tackle many of these infections, they are powerless to break the cycle of disease if the environment remains unhealthy. As Oxfam point out, disease that is rooted in poverty can only be prevented by an onslaught on poverty and inequality.[41] In

the words of the Tanzanian Food and Nutrition Council,[42] a '. . . society that is perpetuating malnutrition cannot be treated with medicine. It has to develop and be restructured in such a way that all its members are ascertained all their basic human needs.' So the prescription for better health in Third World countries is the same as that which worked so effectively in developed nations like the UK: improve nutrition, hygiene and sanitation and living and working conditions. Even tropical diseases like malaria can be effectively controlled through public health measures, that is by draining swamps or treating water so mosquitoes cannot breed.[33]

The evidence shows that society's control of infectious disease rests primarily on efficient public health services and a good standard of living and the dramatic increase in life-expectancy since the early 1800s can be directly traced to these sources. Medical measures clearly played only a relatively small part and later on, in Chapter 5, we will see how little even these owed to experiments on animals. None of this is an argument against *properly conducted* medical research, but it does show that the major influences on our health are outside the scope of laboratory experiments. As medical historian Brian Inglis concludes:

> 'The chief credit for the conquest of the destructive epidemics . . . ought to have been given to the social reformers who had campaigned for purer water, better sewage disposal and improved living standards. It had been their efforts, rather than the achievement of the medical scientists, which had been chiefly responsible for the reduction in mortality from infectious diseases.'[43]

1 A. M. Ramsay and R. T. Emond, *Infectious Diseases* (Heinemann, 1967)
2 R. Sand, *The Advance to Social Medicine* (Staples Press, 1952)
3 Professor R. Watt in reference 2
4 Reproduced in *Animal Liberation*, P. Singer (Thorsons Publishing Group, 1983)
5 Reproduced in reference 2
6 T. McKeown, *The Role of Medicine* (Blackwell 1979)
7 F. Grundy, *Preventive Medicine & Public Health* (H. K. Lewis, 1964)
8 On the state of the Public Health, 1979 (DHSS, 1980)
9 J. B. McKinlay & S. McKinlay, *Health & Society*, 405-428, 1977 (Millbank Memorial Fund)
10 M. Weitz, *Health Shock* (Hamlyn, 1982)
11 In England and Wales, reference 6; in the United States, reference 9

12 R. Smith, *Lancet*, 330, 10 August, 1974
13 See reference 82 in Chapter 2
14 T. McKeown and C. R. Lowe, *An Introduction to Social Medicine* (Blackwell Scientific Publications, 1976)
15 *BMJ*, 1208, April 9, 1983
16 For instance, G. T. Stewart, *BMJ*, 1263, 24 April, 1982, together with reference 19.
17 W. R. Bassili and G. T. Stewart, *Lancet*, 471-473, 28 February, 1976
18 T. T. Salmi, et al, *Lancet*, 811-812, 25 October, 1975
19 *Times*, 8 September, 1982
20 W. H. Parry, *Communicable Diseases* (Hodder & Stoughton, 1979)
21 MRC Special Report Series, no. 247, 1943
22 *Lancet*, 632, 14 September, 1974
23 Presidential address by R. R. Porter at the Swansea Meeting of the British Association for the Advancement of Science, 3 September, 1971
24 H. F. Dowling, *Fighting Infection* (Harvard University Press, 1977)
25 A. B. Christie, *Infectious Diseases* (Churchill Livingstone, 1980)
26 C. S. Singer and E. A. Underwood, *A Short History of Medicine* (Clarendon Press, 1962)
27 For example, H. J. Parish's *Victory with Vaccines* (Churchill Livingstone, 1968) describes how antitoxin was widely used in Germany and France by 1895-1900. Yet in the early years of the twentieth century death rates for diphtheria showed a huge rise. See also graph for Sweden.
28 *Lancet*, 598, 14 August, 1931
29 Diphtheria graphs plotted using statistics from *Epidemiological & Vital Statistics Report*, 92-111, Volume 4, 1951 (WHO). According to Sweden's National Central Bureau of Statistics, vaccination was '. . .introduced in 1939 but not used to a greater extent until 1943' (letter from G. Karlström, 12 August, 1986.) According to the *BMJ*, 614, 3 November, 1945, immunization had not been carried out in Norway before World War II because it '. . . had not been considered necessary'
30 *Lancet*, 915, 20 December, 1947
31 *Lancet*, 628, 11 November, 1944
32 A. Hardey, *Medical History*, 111-128, volume 27, 1983
33 The Wellcome Museum of the History of Medicine (Science Museum, London, November 1986)
34 See Chapter 5
35 L. Hayflick, *Laboratory Practice*, 58-62, volume 19, 1970
36 Typhoid decline in England and Wales: graph plotted using data from *Registrar General's Statistical Review*, 1970 (HMSO, 1972); for United States, see reference 24
37 For declining death rates from polio see graph (reference 14). Reference 1 indicates that the total number of cases had fallen from around 10,000 in 1950 to just over 3,000 by 1956
38 *Lancet*, 1223-1231, 15 December, 1956
39 Conclusion reproduced in reference 9. See also references 6 and 14
40 *Lancet*, 354-355, 12 August, 1978
41 D. Melrose, *Bitter Pills* (Oxfam, 1982)
42 Reproduced in reference 41
43 B. Inglis, *Diseases of Civilization* (Paladin Books, 1983)

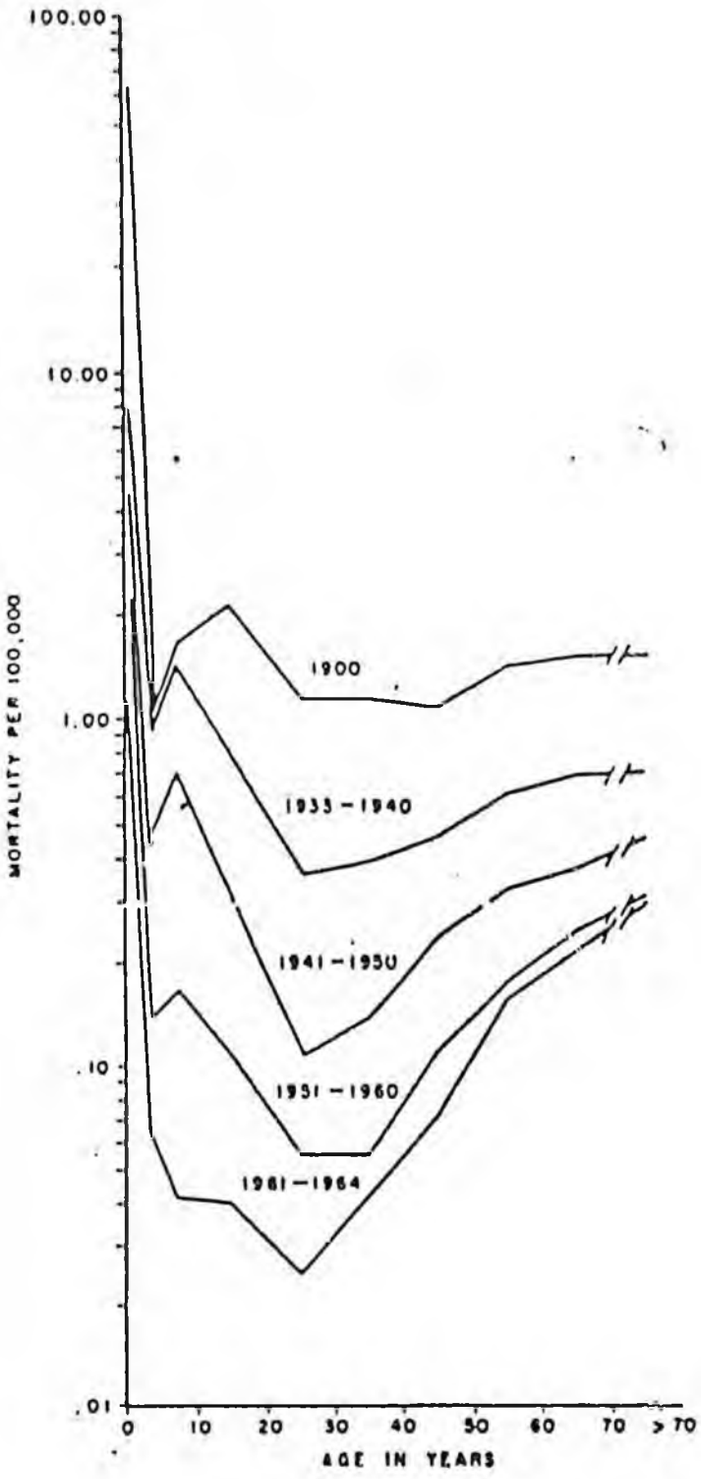
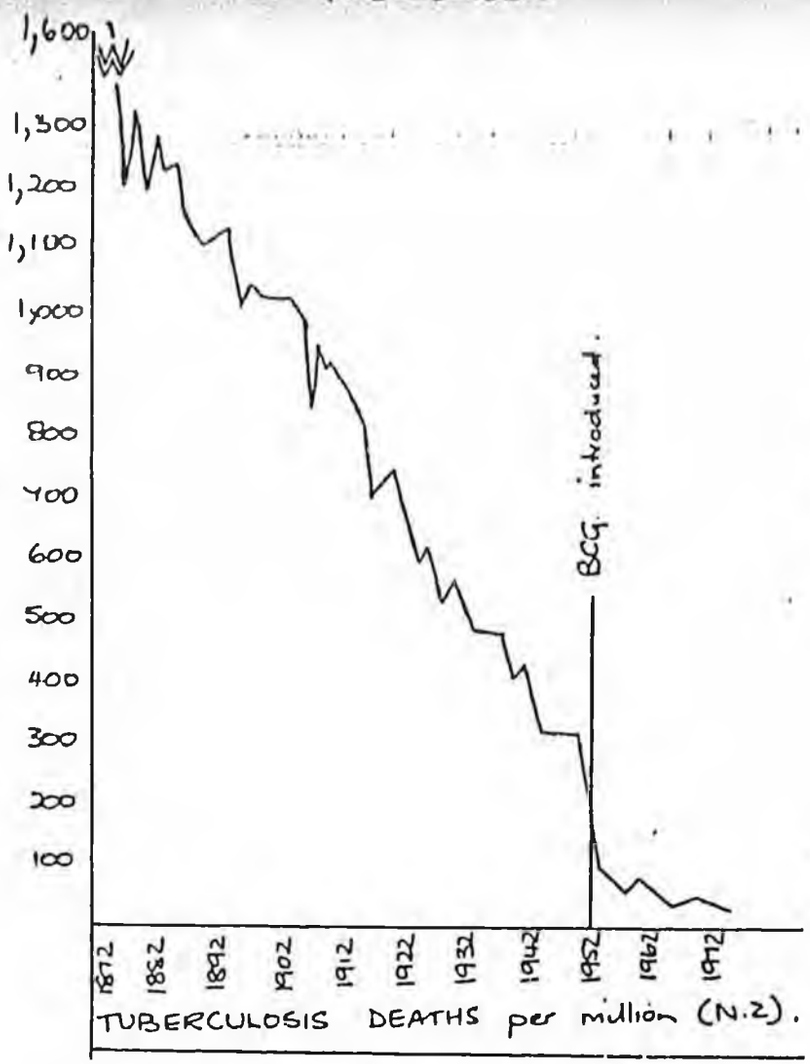


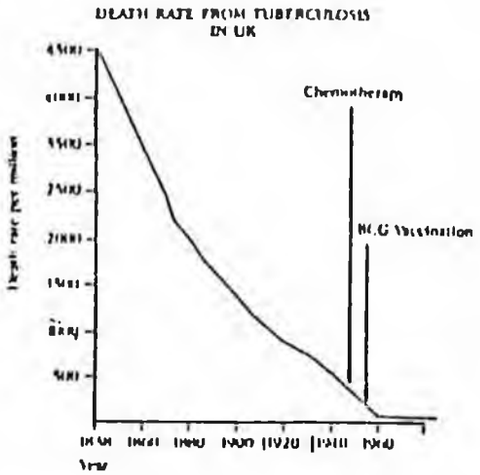
FIGURE 2. *Average Annual Tetanus Mortality Rates, According to Age Group, United States, 1900 and 1933-1964.*

Tetanus

Vaccine used only after 2nd W. War



U.K.
Tuberculosis



Introduction

The prevalence of tuberculosis in Great Britain has declined dramatically over the last hundred years. It is now largely confined to particular high risk groups, such as the single homeless [1,2]. Although tuberculosis is a treatable disease, it has proved difficult to eradicate among the homeless; attendance at mass radiography is notoriously poor [3,4], and the initiation and continuation of effective treatment of the homeless is particularly unsuccessful [5,6]

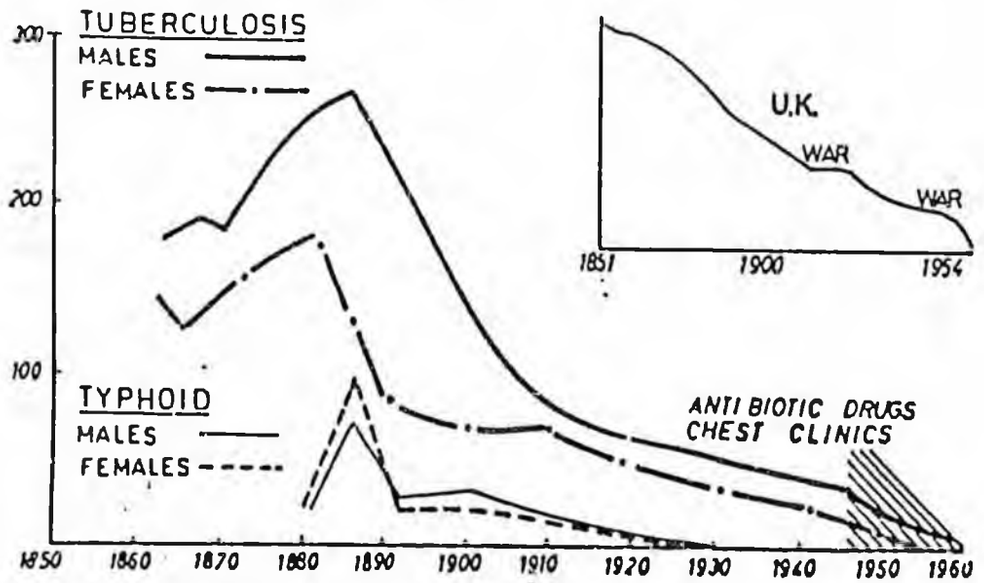
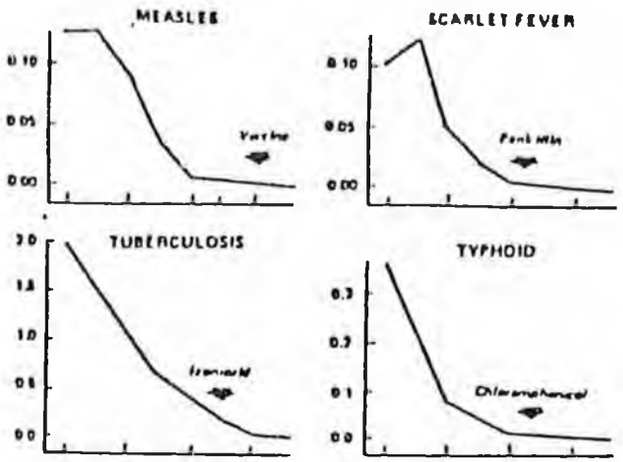


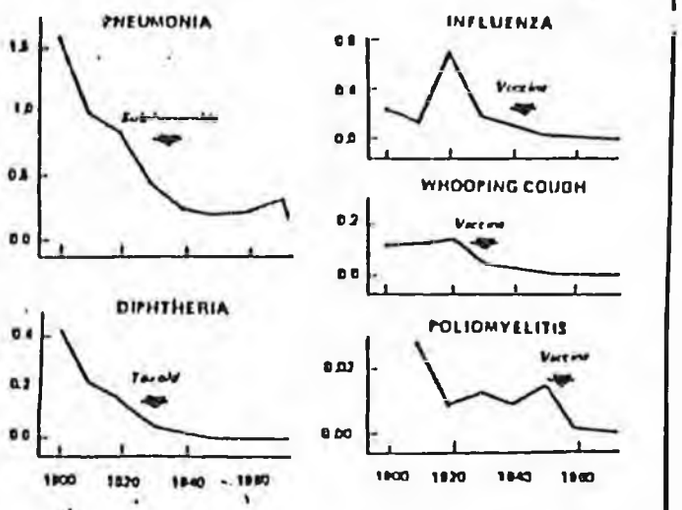
Fig. 19. Deaths from tuberculosis and typhoid all ages per 100,000 population, Australia, 1850–1960. (Graph by H. Silverstone, Department of Social and Preventive Medicine, University of Queensland. Data from H. O. Lancaster and others.)

Australia, Tuberculosis.

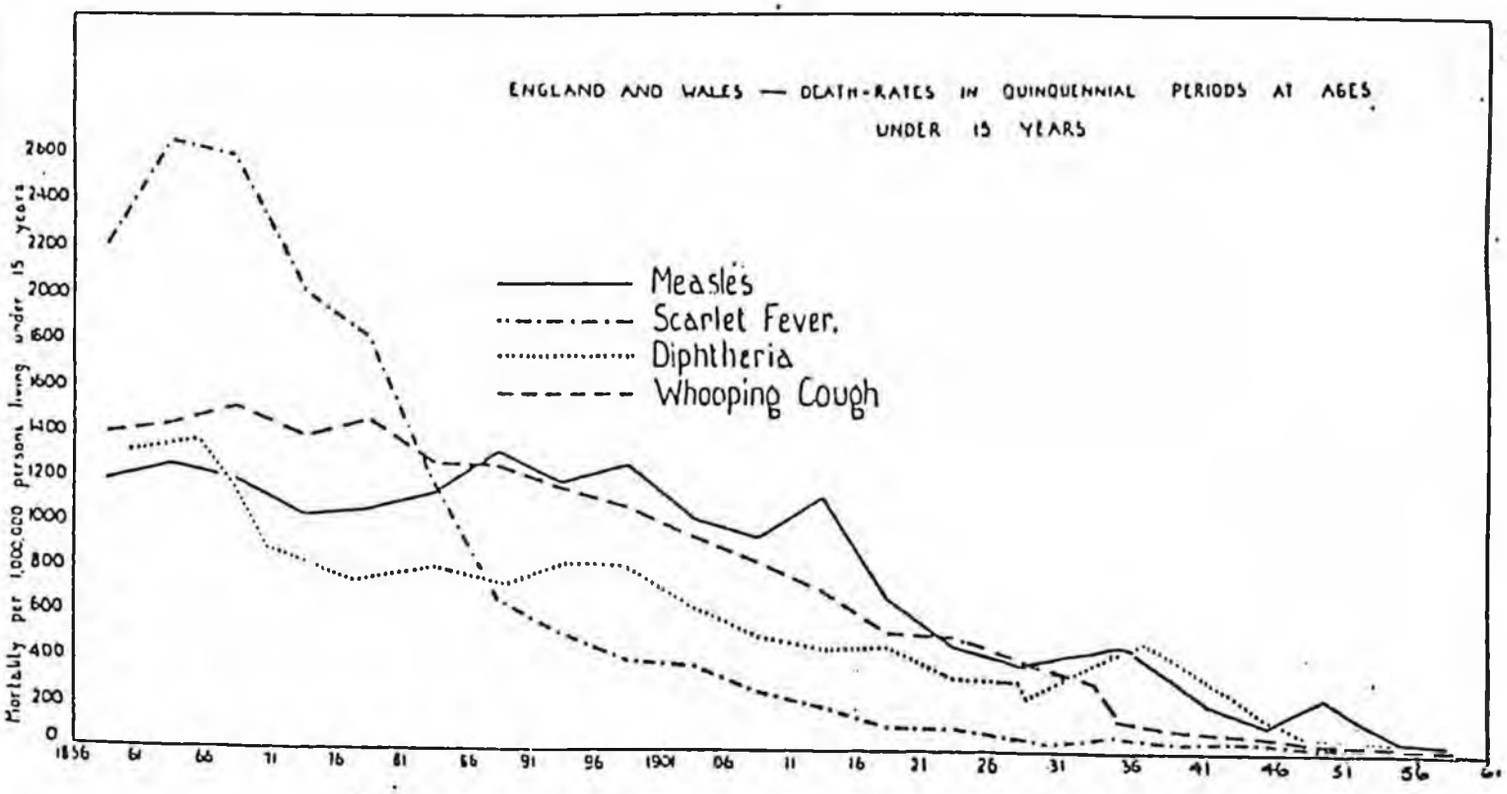
Journal of the Royal College of Physicians of London Vol. 22 No. 1 January 1988

THE FALL IN THE STANDARDIZED DEATH RATE (PER 1,000 POPULATION) FOR NINE COMMON INFECTIOUS DISEASES IN RELATION TO SPECIFIC MEDICAL MEASURES, FOR THE UNITED STATES, 1900-1977.





From "Contribution of Medical Measures to Mortality Decline", by John B. McKinlay and Sonja M. McKinlay.



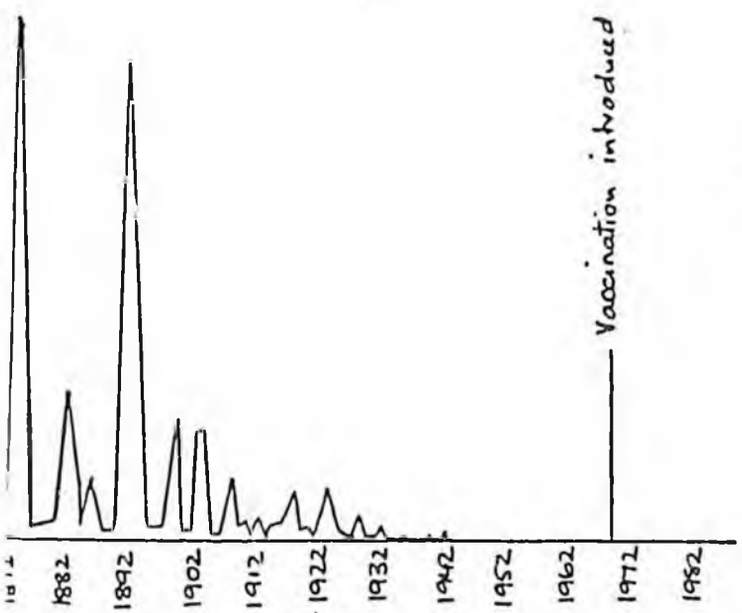
USA. Decline: measles, scarlet fever, T.B., Typhoid, pneumonia, influenza, Diphtheria, polio, whooping cough.
1900 - 1977.

UK Decline measles, scarlet fever, Diphtheria, whooping cough.
1856 - 1961

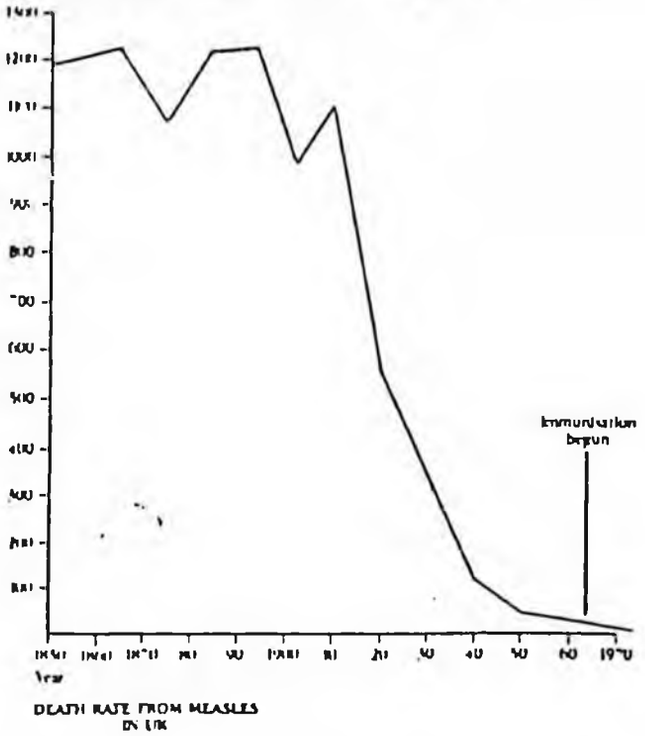
New Zealand

Measles

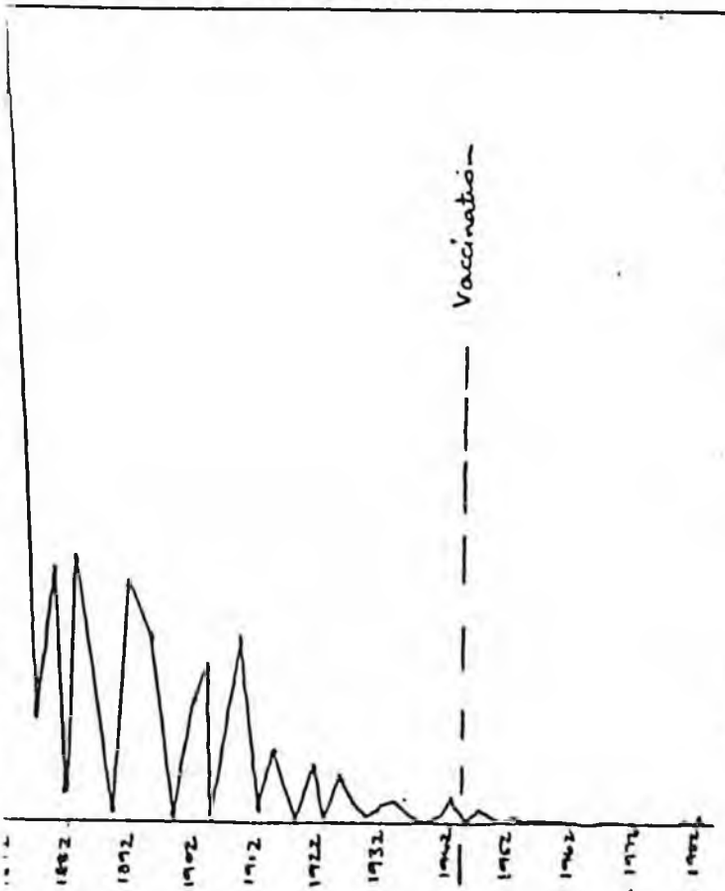
United Kingdom



MEASLES Deaths per million (N.Z)



DEATH RATE FROM MEASLES IN UK



WHOOPING COUGH. DEATHS per million (N.Z)

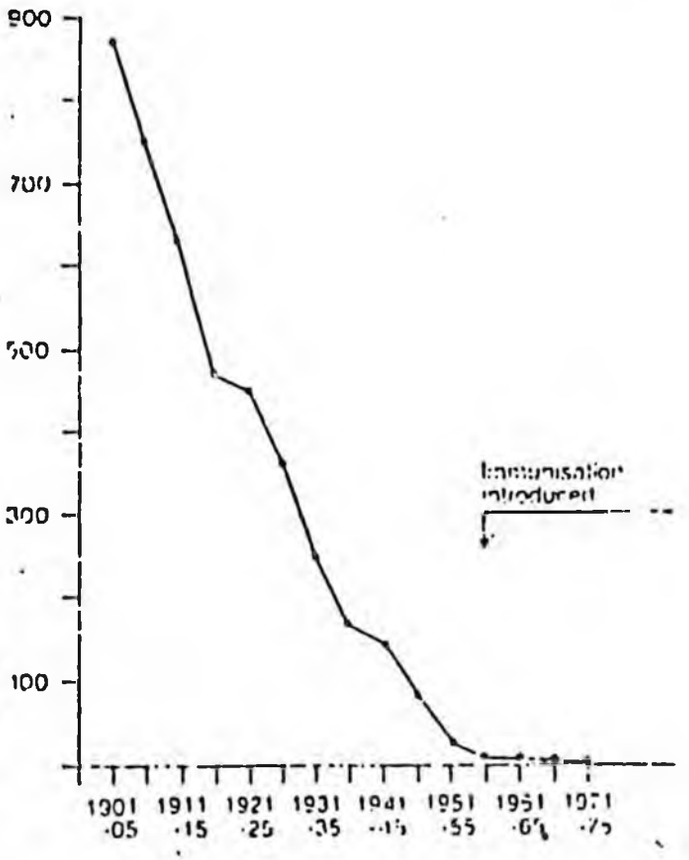


Fig. 3 Deaths from whooping cough per million children under 15 years of age. (UK)

Whooping Cough.

Whooping Cough.

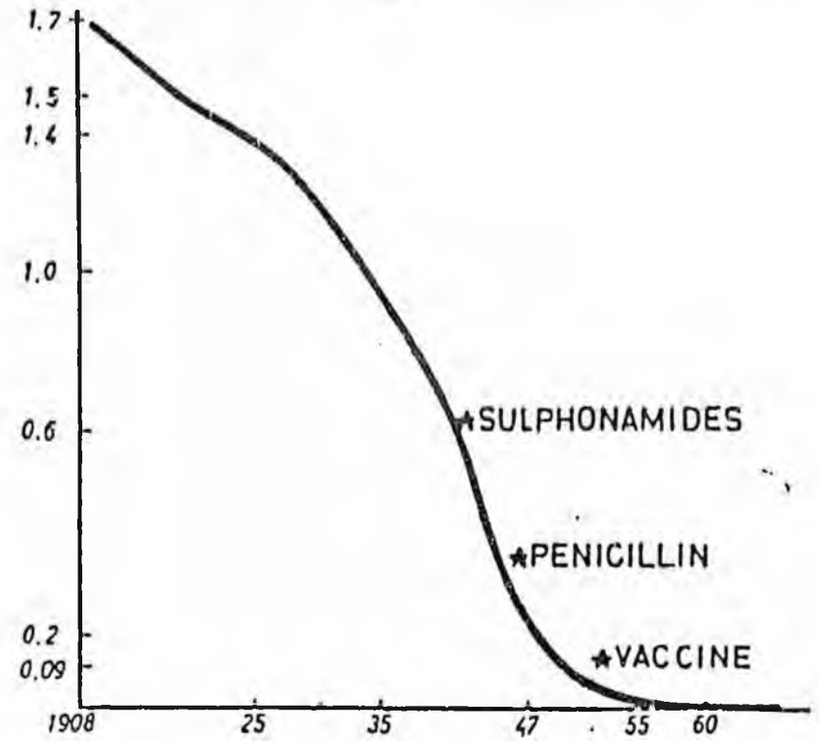


Fig. 17. Deaths from pertussis in first year per 1,000 live births per annum, males, Australia, 1908–60. (Graph by H. Silverstone, Department of Social and Preventive Medicine, University of Queensland. Data from H. O. Lancaster.)

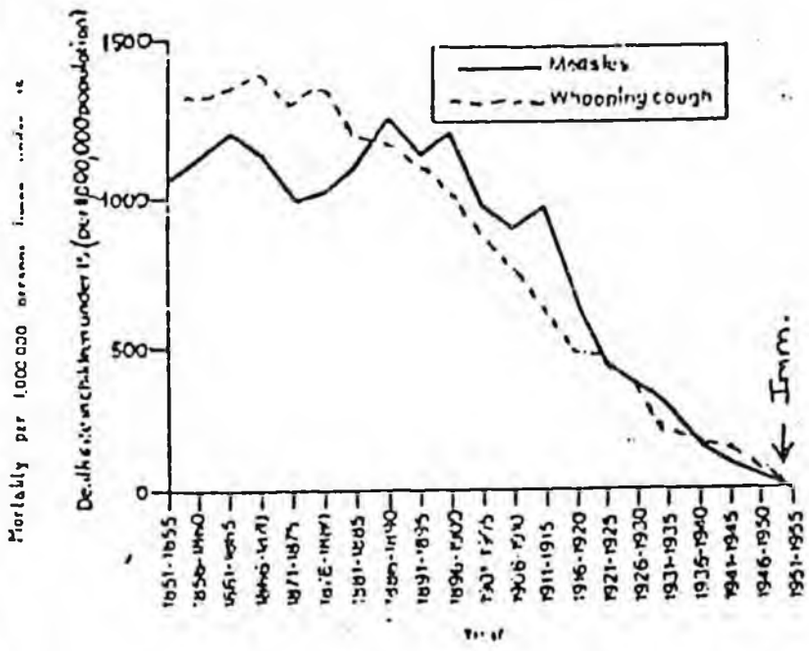


Fig. 2 Decline in deaths from whooping cough and measles (England and Wales). (Reg. Gen. Stats)

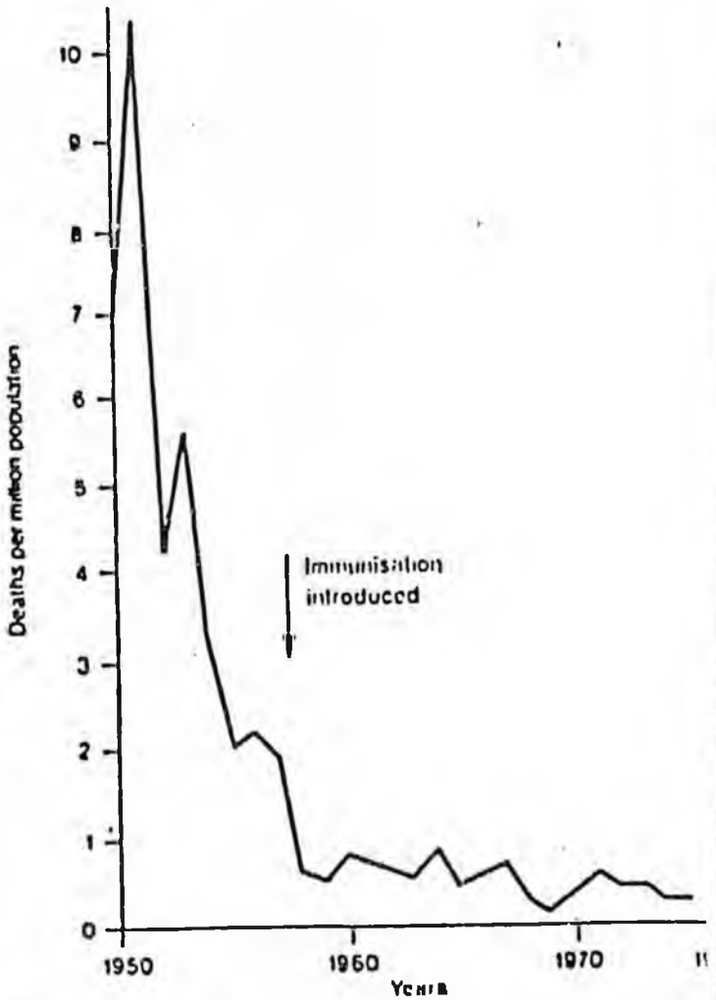
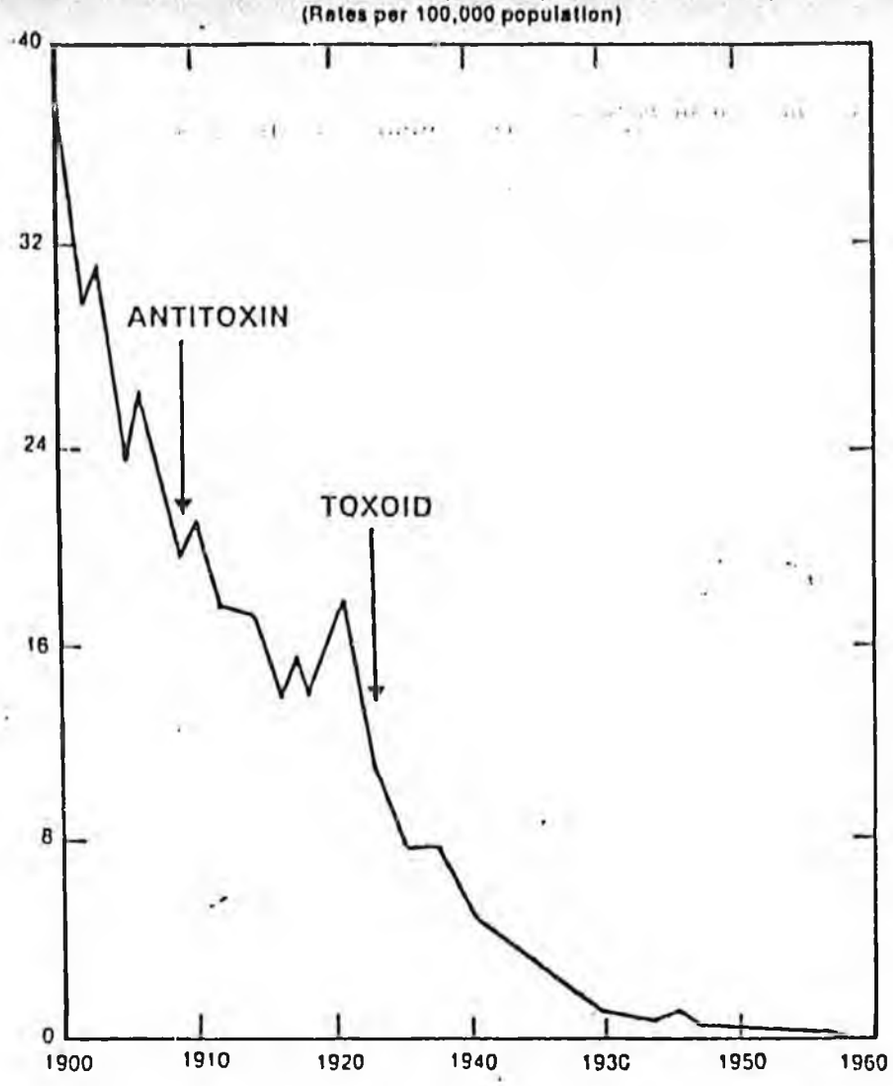


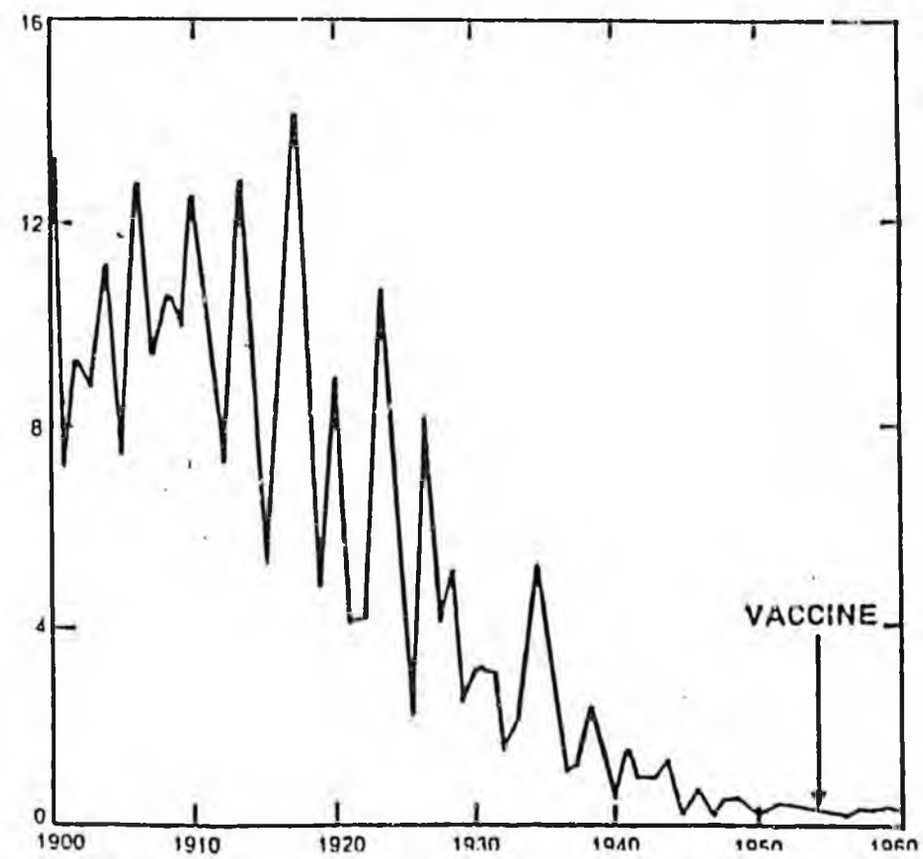
Fig. 4 Whooping cough deaths per million population, England and Wales: 1950 to 1976.

DEATH-REGISTRATIONS STATES, 1900-32, & UNITED STATES, 1933-60
(Rates per 100,000 population)



1900-60.
Vital Stats of USA in DHEW - USPHS No 1677, 1968.

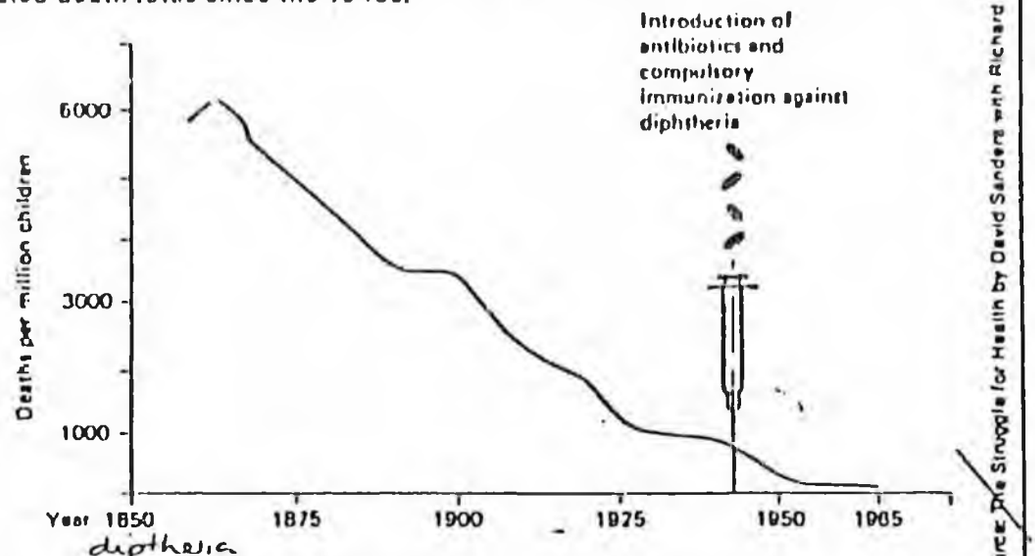
FIGURE 2
DEATH RATES FOR MEASLES:
DEATH-REGISTRATION STATES, 1900-32, & UNITED STATES, 1933-60
(Rates per 100,000 population)



Measles
US

Decline in infectious diseases in the industrialized world

Substantial health improvements have occurred mainly due to better public sanitation, housing and nutrition. Medical intervention has only significantly affected death rates since the 1940s.



Source: The Struggle for Health by David Sanders with Richard Carver

diptheria

Decline in ~~tuberculosis~~ related deaths before and after effective drugs treatment introduced, England and Wales

Nov. 1986.
"New Internationalist"

The fundamental causes of ill-health are beyond the control of doctors and their drugs. Yet recognizing this would mean questioning the validity of expensive medical care. It is not in the interests of the medical profession to be examining or confronting the social roots of illness. Anyway, they are not trained to be social workers or revolutionaries. They are trained to be scientists.

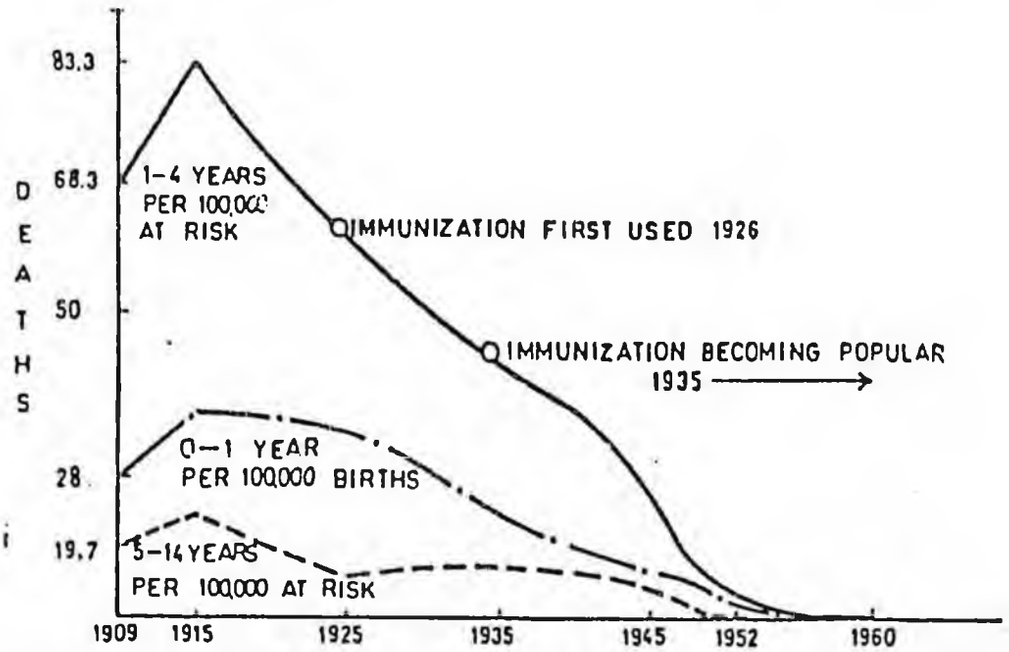


Fig. 18. Deaths from diphtheria, males, Australia, 1909–60. (Graph by H. Silverstone, Department of Social and Preventive Medicine, University of Queensland. Data from H. O. Lancaster.)

Diphtheria (males) Australia

NVIC FINDS DOCTORS ARE REFUSING TO REPORT VACCINE REACTIONS

After following up on 21 of the many severe vaccine reactions reported to the National Vaccine Information Center (NVIC) in 1990, the NVIC found that doctors are refusing to report reactions to state and federal health authorities as is required by Public Law 99-660 (*The National Childhood Vaccine Injury Act of 1986*). The Center discovered that pediatricians are refusing to report reactions because they are being told by vaccine policymakers in the Centers for Disease Control (CDC) and American Academy of Pediatrics (AAP) that the pertussis vaccine does not cause permanent brain damage and death.

Responding to an increasing number of reports of reactions leading to death and permanent injury following DPT vaccinations, Ann Millan, NVIC Director of Administration, contacted 21 parents who had written NVIC telling of their child's suspected DPT reactions and asking if there was any kind of federal reporting system. She learned that 18 out of the 21 doctors who gave the vaccines, refused to report reactions and the majority refused to give parents the manufacturer's name and lot number when requested by the Center, despite the legal requirement to do both.

In most cases, the doctors often justified their lack of reporting the vaccine reactions, and subsequent deaths and injuries, by claiming the DPT shot had nothing to do with the child's death or injury. The doctors often cited information given out by the CDC and AAP that the vaccine is completely safe as proof. All but a few of the 21 reactions were eventually reported by the parents themselves to the Food and Drug Administration (FDA) or CDC, but only after five months of assistance from the NVIC.

"The behavior of these doctors toward parents, who were only trying to have their child's reactions reported to health authorities, is not only professionally irresponsible but is also inexcusable," said Mrs. Millan. "These mothers and fathers were trying to cope with what had happened to their children and, at the same time, had to make repeated phone calls to their doctors and beg them to provide the vaccine manufacturer's name and lot number. Some of the doctors told parents they 'forgot' to record the information, others gave parents false manufacturer's names and lot numbers, and one parent had to retain a lawyer to obtain the information. After five months, all but a few of the 21 reactions were reported by the parents themselves to the proper government agencies."

After finally obtaining identifying information about the DPT vaccine associated with the 21 reactions, the NVIC discovered that two seizures and two deaths were reported to have followed receipt of DPT vaccine from Lederle Lots 256-957/959/960/965; one death and two seizures involved DPT vaccine from Connaught Lot 0B11061; and two seizures and one reaction involved vaccine from Connaught Lot number 8F01010.

Formal Protest Lodged

In a September 16 report to the National Vaccine Advisory Committee (NVAC), a federal vaccine policy advisory committee established under Public Law 99-660 and administered in the Department of Health and Human Services, NVAC committee member Barbara Loe Fisher, Executive Vice President of the National Vaccine Information Center, asked, "How many more deaths and injuries following vaccination occur each day and are never acknowledged or reported by physicians?" She asserted that the government's new adverse reaction reporting system is "a cruel joke" and will remain useless if doctors continue to refuse to report reactions. "There will be no way to draw scientifically valid conclusions about the relationship between vaccine reactions and long term consequences unless physicians abandon their biased attitude that there is no "cause and effect" and obey the law by reporting vaccine reactions without having to be coerced by parents and the National Vaccine Information Center," said Ms. Fisher.

Blaiming the lack of reaction reporting on the CDC and AAP for sending out a "no cause and effect" message to public and private pediatricians, she suggested the solution to physicians refusing to obey the law is to urge Congress to pass legislation applying legal sanctions against doctors who fail to report vaccine reactions or keep vaccination records.

Ms. Fisher asked the FDA to answer questions about whether the FDA has (1) looked at the production records of the lots associated with the 21 vaccine reactions the Center documented to determine whether there are any especially toxic pertussis batches that are causing the DPT lots to be highly reactive; (2) follow up to determine how many reactions, injuries and deaths have been associated nationwide with these lots; or (3) recalled one or more of the lots.

The FDA has still not made a formal reply to these questions.

(A copy of the 16-page report submitted to the Committee can be obtained for $3 from the NVIC.)

L.A. Times: 3-24-90

UCLA Researcher to Clarify Ties to Drug Manufacturer

Medicine: Journal will follow doctor's editorial on vaccines with statement that he is a paid consultant to a firm that makes them.

By JANNY SCOTT
TIMES MEDICAL WRITER

A prominent UCLA researcher, who wrote an editorial dismissing the likelihood of neurological illness from pertussis vaccines, will publish a clarification noting that he omitted mentioning he is a paid consultant to a vaccine manufacturer.

Dr. James D. Cherry, a professor of pediatrics, agreed to the clarification after the Journal of the American Medical Assn. learned that he failed to make the kind of financial disclosure required of journal authors since last October.

"Dr. Cherry's financial disclosure was incomplete, and we will be publishing his statement of clarification in the next available issue of JAMA," John Hammarley, science news editor for the American Medical Assn., said Thursday.

Cherry, a longtime vaccine researcher, is a consultant to Lederle Laboratories, one of two U.S. manufacturers of the diphtheria-tetanus-pertussis (DTP) vaccine. He has also received hundreds of thousands of dollars worth of research grants from Lederle and other firms.

In the editorial, published Friday in the journal, Cherry endorsed the conclusions of a paper published elsewhere in the issue in which researchers at Vanderbilt University studied 38,000 vaccinated children and found no increased risk of seizures. One of the authors of that paper also failed to disclose his ties to Lederle.

Cherry said he chose not to mention his ties to Lederle in the disclosure statement he submitted to the journal. In an interview Thursday, he said he believed such a disclosure was not necessary since the editorial concerned DTP vaccines in general, not one in particular.

"This particular editorial relates in no way to a specific manufacturer, it relates to pertussis vaccine," Cherry said. "Anybody who has done any research in fields like this has done contract studies with various companies.

"When I signed this thing, I actually thought about it, and I read it sort of carefully because I know this is a sensitive area," he said. "As it turns out, I did think about this. I thought this is generic, not really specific."

The issue arose this week when a reporter for a Boston television station learned of Cherry's ties to Lederle and his failure to declare them. The reporter, with WHDH-TV, contacted Cherry, who says he then contacted the journal.

Since October, the journal has required all authors to identify "any affiliation or financial involvement that may be considered a conflict of interest."

Disclosed information may or may not be published along with the author's paper.

Dr. Edward A. Mortimer Jr., a co-author of the Vanderbilt paper, acknowledged Thursday that he, too, failed to disclose he is a paid consultant to Lederle. As with Cherry, he said Lederle pays his university, and the money goes back into research, not into his pocket.

Mortimer, whose case has not been brought before the JAMA editorial board, pointed out that most experts in the field have ties to companies. He said the U.S. Food and Drug Administration had recommended that Lederle enlist academic researchers as vaccine consultants.

THE NATIONAL VACCINE INFORMATION CENTER

Dissatisfied Parents Together (DPT)
128 Branch Road, Vienna VA 22180
(703) 938-DPT3

Contact: Barbara Loe Fisher
703-938-DPT3

for release after May 13, 1990

PARENT GROUP CHARGES IOM VACCINE STUDY COMMITTEE BIAS - CALLS ON HHS AND CONGRESS TO ACT

WASHINGTON, D.C. -- Dissatsified Parents Together (DPT), a national organization representing vaccine injured children and their parents, is calling on the Secretary of Health and Human Services (HHS) to stop funding a vaccine study being conducted by a committee appointed by the Institute of Medicine (IOM) until apparent conflict of interest issues in the committee can be resolved.

The parent group charges that the IOM Committee to Review the Adverse Consequences of Pertussis and Rubella Vaccines is not impartial, pointing out that committee member Marie Griffin, M.D., is financially supported by Burroughs Wellcome, one of the largest pertussis vaccine manufacturers in the world. The parent group is calling for Griffin's resignation and asking Congress to conduct an independent assessment of the IOM study procedures and conflict of interest issue.

The IOM review of the scientific literature associating the pertussis and rubella vaccines with permanent brain damage and

-more-

death is being funded by HHS under the National Childhood Vaccine Injury Act of 1986. The vaccine injury legislation set up a no-fault compensation system for individuals who died or were permanently injured by mandated childhood vaccines.

DPT, which operates the National Vaccine Information Center and was a major supporter of the vaccine injury legislation, publicly asked the IOM to respond to a list of questions about the committee members' possible bias at a January 10 IOM workshop. A major question was whether any of the committee members received grant money or other financial support from vaccine manufacturers. In a recent IOM letter to DPT, the IOM did not answer the question, citing the need for "confidentiality."

"Public money is being spent on this study and the public has a right to know if committee members may be biased," said DPT spokesman Jeff Schwartz. "Although one committee member has already been removed for apparent conflict of interest, the IOM has failed to adequately respond to the problem. This is a critical scientific examination of the link between several mandated vaccines and death and brain damage - a link which has been established in the medical literature for decades and which helps document the need for the federal vaccine injury compensation system. Unless IOM commmittee members are truly impartial and the review is conducted properly, the public will have no reason to have confidence in their findings."

Griffin is a Burroughs Wellcome Scholar in Pharmaco-epidemiology at Vanderbilt University. She was the principal author of a pertussis vaccine risk study recently published in the Journal of the American Medical Association (JAMA), which disputed the link between the pertussis vaccine and permanent damage.

Her study prompted JAMA to publish an editorial calling for an end to the federal vaccine injury compensation system on the grounds that the pertussis vaccine does not cause permanent brain damage. The author of the editorial, James Cherry, M.D., of UCLA, is a paid consultant for Lederle Laboratories, the largest American manufacturer of pertussis vaccine. Cherry, who also has obtained large research grants from Lederle, failed to disclose his financial ties to the drug company to JAMA readers.

The federal vaccine injury compensation system, which is administered in the U.S. Claims Court in Washington, D.C., has awarded more than $30 million in 60 cases of vaccine injury and death. The majority of the cases involved the pertussis vaccine.

November 12, 1987

SUMMARY OF SEVERE ADVERSE REACTIONS TO STATE MANDATED IMMUNIZATIONS

Data collected by: Dissatisfied Parents Together, Alaska Chapter

Dates of survey: October 1986-October 1987

Method used: Alaska "DPT" vaccine adverse reaction questionnaire

Number of subjects (reactions) - 25: 24 DPT
1 MMR

Range of survey: State of Alaska

1- College, AK.	1- Anchorage, AK.
1- Gustavis, AK.	1- Anchor Point, AK.
1- Sterling, AK.	1- Homer, AK.
4- Kenai, AK.	3- Fairbanks, AK.
2- Juneau, AK.	7- Soldotna, AK.
1- Palmer, AK.	2- Kasilof, AK.

Ages of subjects at date of response:

2- 4 months	1- 4 years
1- 6 months	2- 5 years
1-10 months	3- 6 years
1- 14 months	1- 8 years
1- 18 months	1- 17 years
5- 2 years	1- 20 years
4- 3 years	1- 23 years

Return to: Dissatisfied Parents Together
Box 1746
Soldotna, AK 99669
Shannon Kohler 262-3825

DPT SHOT REACTION QUESTIONNAIRE

Directions: Please place an "X" before the answer(s) you select or fill in the spaces when appropriate.

1. Before your child received his DPT shot(s), did a health professional inform you of the possible serious reactions to the shot?

   5 Yes (1) 19 No (2) 1 Don't Know (3)

2. Did the health professional who gave your child the DPT shot(s) tell you to look for and report severe reactions such as a high temperature, excessive crying or high pitched screaming, excessive sleepiness, etc.?

   6 Yes (1) 18 No (2) 1 Don't Know (3)

3. Before giving your child the DPT shot(s) did a health professional tell you when the shot should not be given (i.e. if the child has an active infection or a fever, if the child reacted severely to a previous DPT shot, etc.)?

   6 Yes (1) 16 No (2) 3 Don't Know (3)

4. Did you sign a consent form containing information about the DPT shot and its possible reactions before your child received his DPT shot?

   2 Yes (1) 15 No (2) 8 Don't Know (3)

5. Before your child received his DPT shot(s), did a health professional question you about your family's and your child's medical history?

   ____ Yes (1) 23 No (2) 2 Don't Know (3)

6. Do you believe your child reacted severely to any of his DPT shots? (Answer yes only if the reaction was more serious than a low fever, mild crying, or slight redness or puffiness around the site of the shot)

   25 Yes (1) ____ No (2) ____ Don't Know (3)

If you answered yes to question #6, please answer the rest of the questionnaire. If you answered no to question #6, skip the rest of the questions and fill in your name, address and telephone number at the end of the questionnaire.

7. After the DPT shot that caused your child to react severely, did he have:

   most children had more than one symptom of reaction

   4 convulsions (1)
   16 fever of more than 103 degrees (2)
   13 excessive crying or high pitched screaming for long periods (3)
   6 extreme sleepiness (4)
   ____ collapse or shock (5)
   5 loss of muscle control (temporary or pemanent paralysis) (6)
   ____ death (7) 1-nerve damage deafness 1-severe allergies + eczema 2-permanent partial paralysis 1-chronic cold sores
   ____ other (please explain) 1-severe congestion 1-whooping-like cough (8) 1-severe leg swelling 1-severe swelling of arm 1-severe swelling of glands in head

8. How long after the shot did the reaction begin to occur?

24 Within 24 hours after the shot (1)
1 24-48 hours after the shot (2)
___ 2 days - 7 days after the shot (3)
___ 1 week - 2 weeks after the shot (4)
___ more than 2 weeks after the shot (5)

9. After which DPT shot did your child react severely? Some children reacted to more than 1 shot

15 First shot (1)
4 Second shot (2)
3 Third shot (3)
2 Fourth shot (4)
___ Fifth shot (5)
1 all shots

10. How old was your child when he was given the DPT shot that caused the severe reaction?

8 2-3 months old (1)
6 4-5 months old (2)
4 6-7 months old (3)
3 8-12 months old (4)
1 13-18 months old (5)
1 19-24 months old (6)
___ 25 months - 3 years old (7)
___ over 3 years old (8)
1 all
1 Dont Know

11. How old is your child now?

See 1st page attachment

12. Did you report your child's severe reaction to the DPT shot to a health professional?

21 Yes (1) 4 No (2) ___ Don't Know (3)

13. If you did not report your child's severe reaction to the DPT shot, was it because you were not aware that the reaction was serious and should have been reported?

4 Yes (1) No ___ (2) ___ Don't Know (3)

* 14. If you did report your child's severe reaction to the DPT shot to a health professional, did that person report your child's severe reaction orally or in writing to: NO: 10

___ drug manufacturer (1)
___ federal government (2)
3 state health department (3)
___ any local health agency (4)
8 Don't Know (5) none of these parents had an official MSAEFI form completed

15. Was your child's severe reaction to the DPT shot written on his medical record?

6 Yes (1) 8 No (2) 11 Don't Know (3)

16. After your child reacted severely to a DPT shot, was he given another shot that contained the pertussis vaccine?

6 Yes (1) 17 No (2) 1 Don't Know (3) 1 n/a mink shot

17. Was your child mentally and physically normal before he received the DPT shot to which he reacted severely?

25 Yes (1) ___ No (2) ___ Don't Know (3)

18. Prior to the DPT shot to which your child reacted severely, did your child have a history of convulsions or neurologic disease?

____ Yes (1) 24 No (2) 1 Don't knows

19. Does your family have a history of convulsions or neurologic disease?

1 Yes (1) 23 No (2) 1 Don't Know (3)

20. Did you or your husband ever have whooping cough?

1 Yes (1) 22 No (2) 2 Don't Know (3)

21. Is there a significant history of allergies in your family or has your child ever been diagnosed as having allergies?

9 Yes (1) 12 No (2) 4 Don't Know (3)

22. If your child has allergies, were the allergies apparent before or after the DPT shot to which he reacted severely?

3 Before (1) 5 After (2) N/A 17

23. At the time your child had a severe reaction to the DPT shot, was he primarily bottle-fed?

9 Yes (1) 11 No (2) 5 Both

24. Has your child had a continuing physical or mental health problem since the DPT shot that caused the severe reaction?

12 Yes (1) 12 No (2) 1 dont know yet

If you answered yes to question #24, please answer the rest of the questions.

25. Is your child now:

1 experiencing motor delay
____ mentally retarded (1)

4 physicially handicapped (2)

3 experiencing convulsions (3)

4 exhibiting learning difficulties (4)

____ in an institution (5) 1-nerve damage deafness 1-epilepsy

____ other (please explain) 2-permanent partial paralysis 1-speech problem
2-cerebral palsy 1-severe allergies (6)

26. Has a physician confirmed your belief that your child's present health problems were caused by the DPT shot?

7 Yes (1) 7 No (2)

27. Has your child required special medical treatment, medicine, hospitalization, or therapy since the DPT shot that caused the severe reaction?

11 Yes (1) 14 No (2)

28. The cost of your child's special medical treatment is estimated to have been:

1 Under $2,000 ____ $12,000 - $20,000 (4)

10 $2,000 - $7,000 ____ $20,000 - $40,000 (5)

____ $7,000 - $12,000 ____ Over $40,000 (6)

29. Please feel free to use the back of this page to tell us your story of what happened to your child as a result of his severe reaction to a DPT shot. Try to be as specific as possible, giving names, dates, and places.

Name: See next page for Emergency Treatment Information

Address: _____

Telepone Numbers: _____ (home) _____ (work)

Date:

+ visit to emergency room
2 telephone conduct only

B) 2nd parent
C) 3rd parent
D) 4th parent
E) 5th parent
F) 6th parent

30. Emergency room treatment of adverse reaction, if applicable

a) What hospital did you go to?
a) Central Pen Gen. Hospital
B) Kenai Emergency medical Clinic
c) Central Peninsula Gen Hospital
D) Tanana Alaska
e) Central Pen. Gen. Hospital
f) Homer South Peninsula General Hospital

b) Did you call the emergency room?
5 yes a) B) C) D) e) 1 no f)

c) Did you go to the emergency room?
4 yes a) B) D) f) 2 no c) e)

d) How were you treated? (if more room needed, use back of sheet)
a) told not to worry; give cold bath & tylenol
B) O.K.
C) told not to worry; give cold bath & tylenol
D) hospital did not even record visit
e) give cold bath & tylenol
f) good

e) Were you advised to tell your doctor of reaction?
___ yes 6 no a) B) C) D) e) f)

f) Were you advised to tell Health Dept. of reaction?
___ yes 6 no a) B) C) D) e) f)

31. Was your child hospitalized?
1 yes f) 5 no a) B) C) D) e)

a) Where? Homer South Peninsula General Hospital

b) For how long? 3 days

c) How was reaction treated? not treated as vaccine reaction

VACCINE INJURY COMPENSATION PROGRAM

Status Report as of April 5, 1990

TOTAL NUMBER OF PETITIONS FILED: 263

Vaccine	Number Filed
DT	3
DTP	216
MMR	15
Rubella	4
Measles	6
OPV	13
IPV	5
Smallpox	1

10/1/88

Pre-legislation cases filed: 254
Post-legislation cases filed: 9

TOTAL NUMBER OF AWARDS: 60

TOTAL $ OF AWARDS: $31.5 Million

RANGE OF AWARDS: $86,000 - 2.8 Million

MEAN OF AWARDS: $550,967.00**

**3 out of the 60 awards were for attorney fees/costs only--the petitioner received no award. These awards were not included when calculating the mean.

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4001 Nebraska Avenue, N.W.
Washington, D.C. 20016 202-885-4000

TRANSCRIPT

DPT: VACCINE ROULETTE

BROADCAST

APRIL 19, 1982

8:00-9:00 PM

WRC TV

WASHINGTON, D. C.

PARTICIPANTS

Dr. Robert Mendelsohn
Pediatrician, Author

Dr. Edward Mortimer
American Academy of Pediatrics

Dr. Gordon Stewart
British Epidemiologist

Dr. John Robbins
FDA, Bureau of Biologics

Marge Grant
Scott's Mother

Jim Grant
Scott's Father

Dr. Larry Baraff, UCLA
Whooping Cough Researcher

Dr. Alan Hinman
Centers for Disease Control

Dr. Bobby Young
Microbiologist

Evelyn Gaugert
Polly's Mother

Dr. Jerome Murphy
Pediatric Neurologist

Conley Yankovich
Abra's Father

Emily Yankovich
Abra's Mother

Gail Browne
Reynaldo's Mother

Lorenzo Browne
Reynaldo's Father

Alan McDowell
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West Virginia Attorney

Barbara Syska
Silver Spring

Lea Thompson
NewsCenter Four

THOMPSON DPT. The initials stand for Diptheria, Pertussis, Tetanus. Three diseases against which every child is vaccinated.

For more than a year we have been investigating the "P", the Pertussis part of the vaccine. What we have found are serious questions about the safety and effectiveness of the shot.

The overriding policy of the medical establishment has been to aggressively promote the use of the vaccine. But it has been anything but aggressive in dealing with the consequences. While there has been active study and debate in other countries on this subject, there has been a general void of information in the United States.

Our objective in the next hour is to provide enough information so that there can be an informed discussion about this important subject. It affects every single family in America.

It's a fact of life. All children must get four DPT shots to go to school. Shots we are told will keep our children healthy. Shots we are told will protect every child from a dread disease: Pertussis. It's Whooping Cough. But the DPT shot can also damage to a devastating degree.

MENDELSOHN It's probably the poorest and most dangerous vaccine that we now have.

MORTIMER The benefits of the vaccine, in my view, far outweigh the risks.

STEWART I believe that the risk of damage from the vaccine is now greater than the risk of damage from the disease.

ROBBINS Despite its limitations, Whooping Cough vaccine is something that should be given to children.

THOMPSON — Since 1933, studies have shown that the Whooping Cough or Pertussis vaccine causes brain damage. The controversy isn't really over the fact that it happens, but how often it happens, and whether it happens often enough to deem the vaccine more dangerous than the disease itself.

You don't have to ask the Grants of Beaver Dam, Wisconsin that question.

SCOTT GRANT
AGE: 21
REACTION: Harsh cry, infantile spasms
Severely Disabled and retarded

MARGE GRANT — We had a child up to 4 months of age that was developing beautifully well. The doctor explained that he was giving Scott his first DPT shot. Between 12 and 14 hours he gave an outburst of a very hard cry. What we learned later were infantile spasms, it was determined at the Mayo Clinic after a group of doctors conferred and indicated that it was indeed the DPT shots that injured Scott. I went home and cried, Jim cried. We couldn't believe that we could possibly have such a black future.

JIM GRANT — I had to start into business for myself. I had to be near the home all the time in regards to helping lift him, care for him and take care of his many needs. It is quite a big job. We have not had a vacation in 21 years. We simply can't go away. It's impossible to go away.

THOMPSON — It's important to remember, however, most children who get the DPT shot have minor reactions like swollen arms or fussiness. But there are more serious reactions that doctors should be watching for and worrying about.

The Pediatric Redbook, written by the American Academy of Pediatrics, lists high fever, collapse, shock-like collapse, unconsolable crying, convulsions and brain damage as reactions to the DPT vaccine. Those complications are associated with varying degrees of retardation ranging from severe brain damage...like Scott's, to learning disabilities which may never be connected to the shot.

The Physicians Desk Reference, prepared by manufacturers, says the "P" part of the vaccine is a possible link to Sudden Infant Death Syndrome.

This is for sure, the Whooping Cough, or Pertussis vaccine, is the most unstable, least reliable vaccine we give our children.

Dr. Gordon Stewart, epidemiologist and pediatrician Univ. of Glasgow, Scotland. A member of the British government's Committee on the Safety of Medicines.

STEWART — Pertussis vaccine is a crude brew...literally...of those bacteria and all their growth products.

THOMPSON — Dr. Robert Mendelsohn of Chicago, author, lecturer, and former head of Pediatrics Departments at the University of Illinois Medical School and the Michael Reese Hospital in Chicago.

MENDELSOHN — The statistics of this country are wrong, and that the danger is far greater than any doctors here have ever been willing to admit.

THOMPSON — Dr. Larry Baraff of the UCLA Medical Center in Los Angeles. He did a study of reactions to the Whooping Cough vaccine.

BARAFF — I don't think that this is the type of vaccine that would be produced today. If this vaccine were produced in 1980 instead of in the 1930's and 40's, there'd be a different type of technology available and we would make a more purified vaccine.

THOMPSON — The Bureau of Biologics bacterial program, it's part of the Food and Drug Administration, exists to make sure our bacterial vaccines are effective and safe.

Dr. John Robbins, head of that program, conceded the vaccine is not perfect, but...

ROBBINS — Much more is to be gained by immunizing the children with the current vaccines with its limitations, than by allowing our children to be exposed to contracting Pertussis.

THOMPSON — Dr. Edward Mortimer of Case Western Reserve Univ. here in Cleveland, Ohio, is considered by the government to be a leading expert in the field of childhood disease, especially Whooping Cough and its vaccine.

He has served on numerous FDA panels and speaks as well for the American Academy of Pediatrics.

MORTIMER — Whooping Cough is a bacterial disease. It's a disease that goes on for a long time. Some people used to call it "100 day fever", even though there isn't much fever associated with it. Two weeks of minor respiratory symptoms with the beginning cough, followed by two weeks of an increasing cough with the characteristic whoop (whoop) like that. At the end of the coughing spell, the poor kid often vomits. That child essentially ends up retaining little or no nutrition. With the damage to the lining of the bronchial tubes, the child is much more susceptible to pneumonia, and they incur lack of oxygen during the coughing spells. And in a young baby with a developing brain, lack of oxygen isn't necessarily a very good thing. The disease itself, for reasons that are not entirely clear, sometimes produces what is called encephalopathy--brain damage.

THOMPSON — Dr. Alan Hinman, chief of the immunization division at the Centers for Disease Control in Atlanta.

HINMAN — For the individual who has Whooping Cough it is a serious disease. It certainly is not as fatal a disease as it was in the 30's nor is it as common.

THOMPSON — In fact, Whooping Cough in this country is almost gone. There are less than 2,000 cases a year. During the 1930's, though, Whooping Cough struck over 195,000 people. 4800 people died from the disease annually. Then, the disease plummeted. By the early 50's when the vaccine was in mass usage, the cases of Whooping Cough were down to 37,000 and 270 deaths. Today, with cases under 2,000, there are an average of about 9 deaths a year, almost all in tiny infants.

As you can see, the disease was already in decline before the vaccine was widely used, and there are a number of reasons for that...

MORTIMER — Better nutrition maybe, maybe better means of handling these kids when they got in the hospital. Maybe a change in the organism. That is not unknown.

THOMPSON — Dr. Bobby Young, a microbiologist. For 12 years he studied and researched vaccines at both the Bureau of Biologics and the Univ. of Maryland. He told us before his death last summer he believed the disease is now easily treated.

YOUNG — These days when we have bacterial antibiotics, when we have chemotherapy, death from pertussis is a relatively rare event.

STEWART — When children die of Whooping Cough it is because they are disadvantaged in some other way...a completely well child doesn't often die of Whooping Cough.

End of Segment

STEWART — In this country and in the United Kingdom Whooping Cough has not been a killing disease for a very long time.

THOMPSON — In 1974, the majority of British parents quit using the DPT shot. In the process of researching this story, we were told over and over again by US officials that the result was a major epidemic and that hundreds of thousands of people suffered and hundreds of people died.

THOMPSON (Interview) — From what you know, the situation in England is that there are more deaths and more hospitalizations now that they are not giving the vaccine.

HINMAN — That's correct.

STEWART — The death rate in the height of that so called epidemic to which a lot of attention has been drawn by your government here, the death rate was the lowest ever. And in Scotland, for example, the hospital admissions continued to fall.

THOMPSON — Dr. Stewart is correct. According to official United Kingdom government figures, here is what happened. The British people became convinced that the vaccine was worse than the disease in 1974 and use of the vaccine dropped from about 80% acceptance to about 30% acceptance. There was an epidemic in 1978. It was not hundreds of thousands of cases, though. In fact at the peak of the epidemic, it was 66,000 cases. Twelve people died.

In 1980, when vaccine acceptance was running about 40%, 21,200 people got Whooping Cough, six people died. In Great Britain, where the shot was once mandated, parents must now ask for it to get it...it is their choice.

DOCTOR Have you thought about the Whooping Cough injection?

MOTHER I have, but I've decided I don't want it.

DOCTOR Why is that?

MOTHER I just think she could be that one in a million that something might happen to. So I just decided to leave it out.

DOCTOR And your other two children didn't have it either.

MOTHER They didn't have it, no.

THOMPSON In this country parents can't say no.

POLLY GAUGERT
AGE 7
REACTION: Fever, convulsions
Undontrolled seizures and Brain Damage

MRS. GAUGERT I said, maybe she should not have this shot. Because it seems to me she's just not quite herself. And he checked her all over, and said, "well, she looks OK to me" and then he gave her the shot. And the next following morning when I was feeding her, she went into a gran mal seizure, which, of course, I didn't know what was happening. I though she was dying in my arms--is what it amounted to.

MURPHY She has seizures, probably one every five or ten minutes.

THOMPSON Polly's neurologist, Dr. Jerome Murphy, until recently head of Pediatric Neurology at Milwaukee Children's Hospital

MURPHY — She has injured herself frequently from these. A very cute little girl, unfortunately has to wear a helmet to prevent any more serious head injuries. I call it a post pertussis encephalopathy. I presently follow four children at least that I know of that the neurologic illness that started shortly after a DPT immunization. All four children have delay in their development and have seizures.

THOMPSON (Interview) — Is her condition permanent?

MURPHY — I doubt she will ever resolve her seizures disorder. I hope that as she grows older we'll be able to control them better. As far as her delay in learning, I think that's a permanent problem.

THOMPSON — The Food and Drug Administration and the Centers for Disease Control have long contended that children like Scott and Polly may not be DPT victims...that it may be a coincidence that they convulsed right after the shot. The government feels their convulsions might have happened anyway. Dr. Murphy disagrees...

MURPHY — There's just overwhelming data that there's an association. I think it's average for the...for Pediatric Neurologists to see such cases. I know it has influenced many pediatric neurologists not to have their children immunized with Pertussis.

THOMPSON — Serious reactions from the polio vaccine...one in four to five million children...and measles and mumps vaccine.. one in a million, are almost unknown. Serious reactions from the Whooping Cough vaccine are common. It could be as low as one in every 700 children.

Medical knowledge about severe reactions from the Whooping Cough vaccine goes all the way back to the early 30's... report after report has been published in medical journals since then. In 1948 two American doctors reported on case histories of many children who had been brain damaged or died from DPT vaccines in Boston. The following year another doctor surveyed pediatricians throughout the country and found still more. Those studies have been forgotten.

THOMPSON Between 1955 and 1958 Dr. Justus Strom surveyed over 200,000 children who got shots in 64 hospitals and clinics in Sweden. Then he looked at the previous ten years of Whooping Cough disease in Sweden. He found three times more brain damage and disorder caused by the vaccine than caused by the disease. He was strongly criticized, so he did another study. The two studies combined show a rate of destructive brain damage or death in one out of every 46,000 children who get the DPT shot.

The Swedish government has now stopped recommending the DPT vaccine. It feels the disease is now mild and the vaccine too reactive. So far, there has been no epidemic in Sweden.

West German studies determined the rate of serious brain damage from the "P" part of the DPT shot to be about one in every 39,000 children. The West German government stopped recommending the shot.

A study shows with only 10% of parents requesting that their children be vaccinated with the Pertussis Whooping Cough vaccine...that there has been no epidemic and no rise in deaths from the disease in West Germany.

Great Britain has done two studies on the Whooping Cough vaccine. The Committee on Safety of Medicines on which Dr. Gordon Stewart served determined one of every 53,000 children vaccinated was severely brain damaged...the National Childhood Encephalopathy study in England determined the rate at about one in every 100,000 children. However, that study only considered children who had convulsions and they had to last more than 30 minutes.

MORTIMER When one has convulsions that last longer than a minute or two, one is much more apt to be dealing with some underlying brain disease.

STEWART The only part of the study they really endorse is the one that supports the conclusions that they'd already formed.

THOMPSON (Interview) But they sponsored yours as well.

STEWART They sponsored ours, and then when ours came up with different conclusions, they more or less disowned it.

THOMPSON It is the National Childhood Encephalopathy study and its rate of one in 100,000 children seriously damaged, that the British government, the US medical community and the US government recognize.

It was American doctors who first alerted the government to reactions back in 1936, but it was not until after British press reports caused people to quit using the vaccine in the United Kingdom that our government decided to take a look. Forty-two years had gone by between the first warning and the time the US government decided to commission its first study.

It was done by Dr. Larry Baraff of the UCLA Medical center.

BARAFF Because the Food and Drug Administration was concerned that this sort of public panic might spread to the United States they wanted to document that the vaccine was in fact safe and not associated with severe consequences.

THOMPSON The UCLA study found more reaction than had ever been seen before. The study estimates that as many as one in every 13 children had persistent or high pitched crying after the shot.

YOUNG This may be indicative of brain damage in the recipient child.

THOMPSON Also, the study estimates one in every 700 children had a convulsion or went into shock.

MURPHY — In most cases it's a single spell, it does not recur, and the child does very well thereafter. But there are many children in whom there is a persistent neurologic deficit.

THOMPSON — Even though it is well known some of the reactions children had in the UCLA study can cause brain damage, there has been no follow-up to find if any of those children suffered long term problems. Why? Because after nearly a half a century of waiting for answers, the only study commissioned in this country ran out of money. Neither the FDA nor the doctors involved have plans to pursue the matter.

THOMPSON (Interview) — This is the only real study that the government has done on the DPT shot in 40 years and you're saying you don't have enough money to go back and check on those children who had reactions.

ROBBINS — The funds for contractual agreements...there are just no funds within the FDA for that now.

THOMPSON (Interview) — They were only follwed for 48 hours. There is some reason to believe that some children develop complications after that. It seems that you have them in your grasp. Wouldn't you like to know what happened to them?

ROBBINS — I think so...sure...it's just not the only thing that's been cut back unfortunately.

HINMAN — Well, one has to be concerned about studies that are fairly careful studies that show rates substantially more frequent than what has previously been reported. I think, however, one also has to take into account the fact that this is one study.

THOMPSON (Interview) Do you know of any other studies which are going to be done to hopefully get to the bottom of all this?

HINMAN I do not know of other studies underway at the present time.

THOMPSON Two children died that were in the UCLA study. They weren't considered as being DPT related.

ROBBINS The deaths that were reported in that study were SIDS. And the association between SIDS and the Whooping Cough vaccination, when we saw the data were just no more than occur by chance itself.

THOMPSON Dr. Hinman at CDC is not that sure.

HINMAN The bottom line is that one cannot be certain that DPT vaccination in some circumstances does not trigger Sudden Infant Death.

BARAFF But the data we have to date suggests that there might be an association.

THOMPSON Even when the Physicians Desk Reference written by manufacturers lists a possible connection between DTP and SIDS deaths, the man in charge of finding out says...

ROBBINS There is no evidence for anything other than a coincidental association.

YOUNG — I was employed at the Bureau of Biologics for several years, and it is my opinion that they very much do not wish to know adverse reactions.

THOMPSON (Interview) — Why?

YOUNG — This will complicate their lives...considerably.

THOMPSON — It is difficult to come up with a definitive answer as to how many children are being severely damaged or are dying from the DPT vaccine. There have been a lot of studies, but no one has ever searched out victims.

However, in the United Kingdom there is a compensation program. In England children may receive compensation if they are 80% disabled and can prove to the government that they were damaged by a vaccine. Dr. Stewart says just under 600 DPT victims have collected. He correlates that to one in every 25,000 children given the shot.

One in every 25,000 children in the US would mean 272 children are being severely disabled and retarded every year.

Dr. Robbins of the FDA just doesn't believe it.

ROBBINS — If these numbers did occur I would be alarmed...I don't know what we would do about it... But I don't think we are having that many cases.

THOMPSON (Interview) — It is possible that there could be more reactions in the United Kingdom than there would be in the United States?

ROBBINS — It is possible...but not probable.

YOUNG — You know, we start off with healthy infants, and we pop 'em not once, but three or four times with a vaccine...the probability of causing damage is the same each time. My greatest fear is that very few of them escape some kind of neurological damage out of this.

THOMPSON (Interview) — You really believe that?

YOUNG — I really believe it. I mean, if the child isn't frankly rendered a vegetable and yet has a fever... and a very large fraction of the children have fever from it, also a large fraction have the screaming syndrome which is surely an irritation of the central nervous system. You add all of this up...how many infants that are receiving this are in some way damaged by the vaccine and how can you prove that they haven't been, or that they have been. All of them are vaccinated.

End of 2nd Segment

Beginning of 3rd Segment

THOMPSON — The major reason we don't know how many children are being damaged by the "P" part of the DPT vaccine is because doctors don't report reactions. The governemnt medical schools and the medical community have done a good job informing doctors of the need for the vaccine. But from what we've found, many are not aware of the risks and the reactiors from the shots.

ABRA YANKOVICH
AGE 2
REACTION: Stopped breathing, seizures
Severely disabled and retarded

MRS. YANKOVICH — When she was four months old she...on the same day she had her vaccination she had her first seizure. She was shaking, and she was turning blue, and she appeared to have breathing problems. By the time we got her to the emergency room she was OK, and we told the doctor that she had had her vaccination that day. Could anything, could that be a link there. He said, "No, she probably was just choking. Just take her home and she'll be fine." But two weeks later she went into a gran mal seizure. She was very near dying.

THOMPSON — The Yankovich's who live in Kenosha, Wisconsin, said they knew it was the DPT shot that damaged Abra, but it wasn't until they found pediatric neurologist, Dr. Gordon Millichap in Chicago, that it was confirmed.

MRS. YANKOVICH — He realized right away that it was the DPT.

MR. YANKOVICH — Dr. Millichap told us about the shot and his feelings about the shot, especially the pertussis in the vaccination. And he said, personally, he wouldn't even give that to his dog.

THOMPSON — They also went to the Mayo Clinic in Rochester, Minn.

MRS. YANKOVICH — Our pediatrician told the doctor the story about Abra. He said that she had seizures stemming from the DPT shot and the doctor interrupted him and said, "Yes, we know exactly what you're talking about. Send her up."

Mr. YANKOVICH — She'll have good days and she'll have bad days. She'll experience hundreds of seizures in a day. And some days we're blessed with only one or two seizures.

MRS. YANKOVICH — She's a joy to be around because she's such a sweet natured girl, but we've been told that she probably will never walk on her own, and she probably will never talk.

THOMPSON — Emily and Conley Yankovich have been close friends with Gail and Lorenzo Browne for some years. They don't live very far from each other in Kenosha. Knowing of Abra's reaction, Gail was very apprehensive when she took her son Reynaldo to the pediatrician for his DPT shot.

MRS. BROWNE — I asked the doctor what the odds are of our child having a similar reaction. And he said that I didn't have anything really to worry about...

REYNALDO BROWNE
AGE 20 months
REACTION: Convulsions
Controlled seizures

MRS. BROWNE — Then he went into a convulsion, and I thought, "Oh, no, not Abra again". And the doctors told us that he just had an ear infection and there was really nothing for us to be upset about. The pediatrician didn't want to admit that the shot was any problem.

THOMPSON — But now Reynaldo's doctor admits he is a victim of DPT. His treatment has been expensive.

MR. BROWNE — We're so far behind because of the expense that we have. All our savings is gone.

MRS. BROWNE — And eventually I just ended up going back to work part time to make the ends meet. We don't know if he'll learn to talk, or what he'll be like as he grows older. It's hard to look forward to even think about another child is the farthest thing from my mind.

TECMPSON The Yankovich's, the Browne's, all the families we have talked to are angry, bitter and frustrated. They say doctors, manufacturers, and the government do not want to admit they exist. Of all the cases we have come to know, only one was reported to the manufacturer and the government. It was Reynaldo Browne, and it was only because Gail Browne forced her doctor to do it.

MRS. BROWNE I wanted them to have accurate records because to me they told me one in 70,000 children react. We had our son and Abra in a town that has not much more than 70,000 people in it. So I thought those figures are obviously not correct figures.

MRS. SCOTT I did a survey of all our immediate physicians in the area in Madison. I didn't get one that said "I record adverse reactions". As far as the reporting in this country is concerned, it is a disgrace, because it just simply isn't done.

TECMPSON It is here at the Centers for Disease Control in Atlanta, Georgia, that all information about the disease and vaccine reactions is stored and analyzed. The problem almost everyone agrees, including the CDC itself, is that the reporting system for vaccine reactions does not work. Part of the problem is a lack of knowledge.

MRS. BROWNE When they would bring the interns on their tours and tell them what was wrong with each child and they would get to Reynaldo, the student doctors would look at each other and say, "I didn't know that could happen."

THOMPSON And there's another reason that keeps doctors from reporting.

BARAFF Physicians in this day and age are always concerned about law suits.

THOMPSON — More and more families of DPT victims are deciding to sue...not only doctors, but manufacturers and the government.

Alan McDowell, an attorney in Chicago, represents a number of them.

MCDOWELL — Some institutions I've seen in this state and in some other states, that I have spoken to certain administrators at those hospitals or at those institutions, who have indicated that they do have children there as a result of the DPT vaccine...brain damaged children.

THOMPSON (Interview) — Do you think some children have been damaged by the DPT shot and their parents don't even know it?

MCDOWELL — Absolutely, I don't think the parents would be aware of it, and normally the pediatrician, or whoever the doctor, or GP, wouldn't tell them.

THOMPSON (Interview) — Do you think doctors are reporting reactions?

MORTIMER — NO

THOMPSON (Interview) — Why not?

MORTIMER — Legally it's not reportable.

THOMPSON — Do you think doctors are warning patients about the risks?

MORTIMER — No.

MRS. YANKOVICH — The only thing they tell you in your pediatrician's office, generally, from the consensus that we've seen, to expect these minor things: the fever, the sleeping, irritability, but nothing about the disasterous things that we've seen with our daughter.

MRS. GAUGERT — I don't think he warns people. They are always so busy...they don't have much time for anyone.

ROBBINS — I think if you as a parent and brought your child to a doctor for a DPT shot and the doctor said to you initially, "Well, I have to tell you that some children who get this vaccine get brain damaged," there's no question what your reaction would be. As a responsible parent you'd say, "I wish not to take this vaccine."

But we do things together as a community to protect each other.

MR. GRANT — I often wonder about those people who do these studies and who ultimately are the directors of them, and so forth, what they would say and how they would feel if it did in fact happen to one of theirs. It's an altogether different ballgame then.

THOMPSON — Kelli Holcomb got her shots through the US Army. Her parents were told nothing of the risk of the DPT vaccine.

KELLI HOLCOMB
AGE 8
REACTION: Persistent cry, stiffness
Spastic Quadriplegic and Brain Damage

MR. HOLCOMB — She received the shot in West Germany at a US health clinic. She had a reaction which now is known as excessive screaming reaction. The third shot was then given again at a US Army clinic in Ft. Belvoir, Va. which is right outside of DC. At that time she then experienced what is known as the post pertussis encephalopathy.

THOMPSON Monty Prieser of Charleston, West Virginia is Kelli's attorney. The Holcombs now live in Puerto Rico.

PRIESER She's 8 years old. She is a total quadriplegic. She can only really understand and blink her eyes "yes" or "no."

MRS. HOLCOMB Are you hungry". I didn't see. Are you hungry? Real hungry? I'm gonna lay you down. Kelly, bring it down.

PRIESER She is in a special education school in Puerto Rico When she is shown things and asked things she does blink "yes" or "no". She can do nothing else for herself. Her mother must bathe her, feed her, of course. She has great problems. She will probably like most quadriplegics develop respiratory problems and kidney problems in the future.

The United States was sued for medical malpractice, so to speak, medical negligence, for not warning the child and not saying when the child had the screaming syndrome, in Germany, for not saying to the mother, "Don't have any more." Then we don't believe that the U.S. properly asked the questions before they gave the third shot. The case was settled for $600,000. $390,000 will be paid by the United States, $210,000 will be paid by Richardson-Merrell.

THOMPSON Kelli was injured eight years ago. If she got the shot in a public health clinic today her parents would probably be given a consent form to sign. It gives the official government risks: Brain damage one in every 100,000 shots. High fever, convulsions, abnormal crying or shock...one in every 7,000 children.

Almost all parents sign the form. Kids can't go to school without their shots.

YOUNG — The doctor knows that this is mandated by regulation.

THOMPSON (Interview) — So he has no choice.

YOUNG — So he has no choice, and indeed the parent has no choice.

THOMPSON — Barbara Syska of Silver Spring, Maryland didn't want her child vaccinated. She took it to court...she lost.

MRS. SYSKA — They do not inform parents of the most important aspects of it. At least not all important aspects to make the informed decision and the more important, the consent is coerced.

THOMPSON — Since January 1979 her child has been taught at home.

MENDELSOHN — I recommend that parents consult a lawyer, or that they go to their state legislators and to their elected representatives and make a fuss about it.

THOMPSON — Marge Grant and a group of parents did just that. They lobbied the Wisconsin legislature until they got a law making vaccines voluntary in the state of Wisconsin.

MARGE GRANT — The law now states that if you for any personal belief or personal conviction do not want your child immunized, you certainly do not have to. I insisted that this law must state that any person who immunizes a student under this law must record and identify the manufacturer and lot number used and the type of vaccine being given. And it is now written in the law. And I feel very good about that.

THOMPSON (Interview) Scottie's Law?

MARGE GRANT I guess you could call it that. It's a little late for him but some other child could benefit, certainly.

THOMPSON Wisconsin isn't the only state that has gone against federal guidelines and decided to allow parents a choice about the DPT shot. So have 19 other states. In Maryland, Virginia and the District you must have the shots to go to school.

End of 3nd Segment

THOMPSON So far we have focused on the government and the medical community. But manufacturers, the drug companies, also have a responsibility to make sure that the DPT vaccine is safe and effective.

PREISER If you're going to put something on the market, you have the ultimate responsibility to find out what that product is doing on the market. Is it safe, is it causing problems?

McDOWELL They are the ones who are making the money. They are the ones who can afford to do the necessary studies and yet they haven't done them.

And it's the children out there who are the innocent parties who suffer.

THOMPSON Attorneys Preiser and McDowell accuse the manufacturers of destroying vaccine records before they can be subpoened for a DPT law suit.

We tried to talk to all of the companies that make DPT but none of them would do an on-camera interview. So we asked the FDA about it.

THOMPSON (interview) Do you know if manufacturers systematically destroy records?

ROBBINS You know, I can't answer you. I'm sure they don't keep records...

THOMPSON Do you have any control over that? Do you require them to maintain records?

ROBBINS All records of adverse reactions must be part of their manufacturing file and are inspected each year as each manufacturing establishment is inspected for its manufacturing and control procedures.

THOMPSON (interview) How long do they have to keep them?

ROBBINS I don't know. I'm sorry.

MARGE GRANT Our attorneys went to the FDA and asked for the protocols and the testing of the vaccine, and would you believe just several weeks before they lost...they just couldn't find...in fact, the word they used was, "Those records were here, but they vanished."

I have no question about the fact that there is a cover-up. There has got to be.

ROBBINS There is no reason why we should want to hide those records from anyone. I hope it hasn't occurred. The last thing we want to do is to be negligent in our control of this.

THOMPSON (interview) We've known about the reactions to the shot for 40 years. Why only in 1973 did we start to think about it and worry about it?

ROBBINS I think that there has always been interest in pertussis, but, you know, the vaccine was so effective, the scientific community didn't consider it a problem.

THOMPSON But how effective is the DPT vaccine? The official answer from the Center for Disease Control.

HINMAN The fact that a vaccine is, say, 80% effective means that 4 out of 5 people who receive the vaccine would be protected from Whooping Cough if they are exposed to it but one would not.

BARAFF — It doesn't produce life-long immunity. It doesn't produce immunity in all children who receive it. It's possible that a child could get the full series of shots and still get whooping cough. It's also very likely that they could get the full series of shots and 6 or 7 years later get a modified form of the disease.

THOMPSON — Dr. Stewart says the English statistics show less than two-thirds of those vaccinated are protected.

STEWART — In any outbreak of Whooping Cough or pertussis about thirty percent of the children have been fully vaccinated.

THOMPSON (interview) — How long is the DPT shot effective?

STEWART — For two or three years from the time of receiving it.

THOMPSON — The DPT vaccine has never been clinically tested in the United States. The British did clinical tests on the vaccine back in the late '40's and found it to be effective but reactive.

By Congressional mandate in 1973, the Food and Drug Administration set up panels to review all vaccines on the market. While the report on bacterial vaccines has never been published, we were able to get a draft of it under the Freedom of Information Act.

THOMPSON — It shows that very few manufacturers of the DPT vaccine were able to give the panel any documentation that their vaccine was either effective or safe. It shows that the panel went ahead and continued licenses anyway, pending more information. And it shows one DPT vaccine that was O.K.'d on a three to two vote. Dr. Mortimer was a member of that panel.

MORTIMER — Here we've got a highly reputable manufacturer whose manufacturing techniques insofar as we can tell are impeccable, who insofar as we can tell does everything to monitor what happens with that vaccine as best that manufacturer can, and, moreover, a vaccine upon which the public depends. Therefore, it seems entirely appropriate to us to permit that vaccine to be produced for another period of "X" years.

THOMPSON (Interview) — How can a vaccine, which every child in America might be exposed to, be O.K.'d on a three to two vote?

MORTIMER — Because there was circumstantial evidence that it worked.

THOMPSON (Interview) — But a three to two vote?

MORTIMER — That's a far greater majority than we elect presidents on!

ROBBINS — There was no reason, I think, at that time to question the efficacy of the products because they were so successful. The standards of safety and efficacy that we demand for vaccines probably exceed by a great deal those standards that we have for almost everything else that we offer as medicines.

Every lot that the manufacturer makes is tested both at the manufacturer and at the Bureau of Biologics.

THOMPSON (Interview) Is that normal?

ROBBINS No, it reflects our concern for this vaccine.

THOMPSON A General Accounting Office audit in 1979 found the test FDA uses to examine those lots is faulty. An FDA panel also questioned the adequacy of current vaccine tests and noted that they are conducted on the premise that children in this country get three shots... in fact most children get four.

Bobby Young who worked at the FDA's Bureau of Biologics..

YOUNG I believe that scientists at FDA would indicate to you that the mouse protection test that they employ for pertussis vaccine is not adequate.

ROBBINS Our analysis of the vaccine effectiveness by the laboratory test is not as good as we would like, but it certainly can't be too bad since the vaccine has been so effective.

YOUNG They have their own vested interest and their own authorities and experts who are being paid salaries to make this appear to be a very protective and safe vaccine. And anything that mitigates against the safety and protectiveness of a vaccine in essence mitigates against their recommendations.

THOMPSON While the government has said for years that the vaccine is effective and safe...it is working hard to try to develop a new vaccine. In fact, with the FDA's help, the Japanese rushed a new, what they call purer vaccine onto the market after Japanese parents lost confidence in the old shot. That vaccine, however, has never been clinically tested so it may be two to four, maybe ten years before it is determined to be safe enough to use here in the US.

THOMPSON (Interview) If the government had said, "Look, there is a real serious problem with this vaccine," a long time ago, maybe we would have had a new vaccine a long time ago.

MORTIMER That's perfectly possible, but the government has to establish priorities.

THOMPSON The fact is, we may have had a safer shot a long time ago. For many years the Eli Lilly Company produced a different type of DPT vaccine which it called TriSolgen.

ROBBINS It was the impression of the physicians that used the vaccine that this was the safest Whooping Cough vaccine on the market. I don't know if that's real. It's only hearsay evidence. It was never really quantitatively compared.

THOMPSON (Interview) Why, if you thought that the Lilly vaccine might be less reactive and still be effective, wouldn't you have taken a close look at it yourself to determine whether it really was a better vaccine?

ROBBINS We are developing a vaccine, but our primary objective is to try to understand in as precise and as modern terms as we can those components of the vaccine that cause side reactions, and that also might cause immunity.

THOMPSON (Interview) But in the case of the Lilly vaccine, is it possible that we could have let a good one get away?

ROBBINS Oh, I think we have no control over that. That was the decision of the Eli Lilly Company to stop its manufacture.

THOMPSON There are some children who absolutely should not get the DTP shot. There are some children who are at serious risk if they do.

We'll examine that in just a moment.

End of 4rd Segment

THOMPSON The FDA is working on a new vaccine which it hopes will be effective but also a lot less reactive than the one that we have now. The problem is, nobody knows when that vaccine will be available. And, in the meantime parents must decide whether they will or will not give their children the DPT vaccine.

We can tell you this...the disease whooping cough... pertussis...is not a pleasant disease. It lasts a long time. But, from everything we have seen, it is no longer a killer...except in infants who are probably too young to receive the vaccine.

We can also tell you this...some children and some families are much more at risk than others. No one knows more about that than Dan and Mary Resciniti of Binghamton, New York.

ANTHONY RESCINITI
AGE: 19
REACTION: Persistent cry, fever, seizures
Severely disabled and retarded

Tony Resciniti...19 years old...he suffers a convulsion about once a day. The drugs to control his convulsions cost $1200 a year...he has spent part of his life in an institution.

Tony convulsed within 24 hours after getting the DPT shot. Regardless, doctors continued the rest of the shots. After Tony's history with the DPT shot, his brother Leo should never have had the vaccine.

LEO RESCINITI
AGE: 17
REACTION: Fever, convulsions
Severely disabled and retarded

Leo Resciniti...17 years old...Only a few hours after his first DPT shot, Leo too, went into convulsions. His temperature soared...regardless, his pediatrician gave him a second shot.

MORTIMER In terms of the severe complication--encephalopathy-- that information was all anecdote until less than a year ago...until the British study appeared.

ROBBINS — Did he say last couple of years? Two years?

THOMPSON (Interview) — That's what he said. Well he said, since the National Childhood Encephalopathy Study in England.

ROBBINS — I can't speak for the whole medical community. I can only speak for myself. I've always known that whooping cough vaccines do produce some side reactions.

THOMPSON — We discovered while researching this story that many doctors and nurses are not aware of the risks or reactions...or the warning signs that mean the DPT shot should not be given the second time.

Case in point: The District of Columbia Medical Society held a recent seminar on immunizations. When a panel of doctors and scientists was asked if a DPT shot should be given to children who have had a febrile convulsions, no definitive answer was given. In fact, Dr. Saul Krugman, a well known professor of pediatrics at New York University's Medical Center said...A history of convulsions is not a reason to avoid the "P" part of the DPT shot. The people attending that meeting were misinformed.

Convulsions are specifically listed by the American Academy of Pediatrics in the Pediatric Redbook as a contraindication to giving another shot. Here is what that doctor's handbook states as reasons not to give another whooping cough part of the DPT shot to your child:

Had a high fever
Had convulsions
Went into shock
Collapsed
Cried Excessively
Lost awareness or
Showed signs of brain damage.

THOMPSON Manufacturers add that you should not give the shot to children with nervous system disorders, those undergoing chemical therapy or who have had an infection or fever. While the American Academy of Pediatrics does not include it in its guidebook, manufacturers say you should not vaccinate a child who has a personal or family history of central nervous system disorders or convulsions, like the Rescinniti family.

But, what about the children who have already been damaged? Who's helping them? Unless they sue, and many families don't have the money or don't want to do that...nobody is helping them pay the enormous costs that a brain damaged child brings upon a family.

MARGE GRANT I just recently read that it is going to go up to $100 a day if you institutionalize a child like Scott. Those are tax dollars. Now, that's $36,000 a year for one individual. I can keep him home where he really belongs, where we want him, for far less. But surely a child like this deserves to stay out of an institution and unless there is compensation, you simply cannot do it.

THOMPSON At least six nations provide compensation for vaccine related injuries. They are Great Britain--which has made tax free awards of $20,000 each to just under 600 DPT victims, Japan, France, Denmark, West Germany and Switzerland. Only one state in this country has a compensation program: California. It's been in effect since 1979. Its first award...a three month old DPT victim.

The only time the U.S. government has compensated victims was for adverse reactions to the swine flu vaccine. It has, however, commissioned two studies to try to determine the cost of an overall vaccine compensation program. It was determined the cost per DPT victim could be as high as $890,000. No legislation has ever been introduced. The official position...

HINMAN — The position of the Department of Health and Human Services has been that there is not as yet evidence that such a system is needed.

THOMPSON — Thousands of children get the "P" part of the DPT shot and apparently suffer few consequences. However, some children have suffered learning disabilities and severe brain damage as a direct result of the shot.

There is no way of knowing how many DPT victims there are in the United States, but there certainly are far more than the medical community or the government would like to admit. The government has known about serious reactions to the DPT shot for 40 years. Its one and only study in 1978 showed a very high rate of reaction to the shot, but that study has virtually been ignored. So has the evidence that other countries have found that Whooping Cough is probably not the dread disease it used to be and the vaccine may not be as effective as previously thought.

We have found in our investigation of the DPT shot that many doctors and nurses are misinformed about just which children are at risk if they are given the vaccine. We have also found most doctors that see reactions to the shot do not report them to the government or the manufacturers or to parents.

We have found vaccines have been allowed on the market with little effectiveness or safety data, and that the tests for determining those things is faulty in itself.

What is perhaps the most disconcerting about all of this is that states and private doctors have blindly followed the lead of the government in making this shot mandatory, while at the same time, we've found some doctors themselves have chosen not to give the "P" part of the vaccine to their own children, choosing instead to give just the "D" and the "T".

Our objective has been to provide information so there can be an informed discussion about Whooping Cough... The dilemma for parents remains.

BARAFF — I would certainly vaccinate my child...yes.

MURPHY — I would probably advise against it...if the rest of the community were getting the Pertussis.

ROBBINS — Much more is to be gained by immunizing the children with our current vaccines with its limitations, than by allowing our children to be exposed to contracting Pertussis.

MENDELSON — I feel that the vaccine should not be used, because the vaccine today represents a much greater threat than the Whooping Cough itself does.

YOUNG — I recommended in writing to my daughter, so she could take this letter to her pediatrician (we don't normally communicate that formally) that my grandsons receive the "D" and the "T" component of DPT but not the pertussis component.

MORTIMER — I believe it should be given to every child in the United States with the exception of very rare children in which there is a specific reason not to.

STEWART — I believe that the risk of damage from the vaccine is now greater than the risk of damage from the disease.

HINMAN — I don't believe we have reached a stage in this country with pertussis where we have approached the stage where vaccination is more hazardous than the risk of disease.

(Child crying, receiving shot
FATHER of Child — See...it's all gone already.

END OF PROGRAM

Before it's too late, vaccinate

Measles epidemics a warning

By ANN CHANDONNET
TIMES WRITER

Before it's too late, vaccinate.

That's the theme of National Immunization Week, Sept. 22-28, a joint campaign of the Children's Action Network and the American Academy of Pediatrics.

The campaign's message is that recent measles epidemics are a warning that many of America's youngsters are vulnerable to diseases once nearly erradicated, said Dr. Rosalyn Singleton. Singleton is a pediatrician at the Alaska Native Medical Center and a fellow of the American Academy of Pediatrics.

"The whole focus of this campaign is a result of the measles epidemic which started suddenly in 1986," Singleton said. "We thought we had eliminated measles from this country, but then we started to see fairly large epidemics."

After an all-time low of 1,000 reported measles cases in 1988, Singleton said, 1990 saw 26,500 cases reported, with more than 60 deaths.

"The main reason this is occuring is that preschoolers are not getting immunized as much as they were."

Nationally, Singleton said, about one-third of pre-schoolers are not fully immunized. In some inner city areas, half of the preschoolers are not immunized. This has triggered major mea-

sles epidemics in Los Angeles, Chicago and New York.

In fact, in 1990, there were more deaths from measles in the United States than have been seen in any single year since 1970. Most of the deaths were among pre-schoolers.

Parents need not fear vaccines, Singleton said. "Vaccines are 95 percent effective. They could have prevented hundreds of deaths nationally."

One toddler in Alaska died in 1990 from the complications of measles.

The cost of a single vaccination is $15 to $25, putting the total cost of immunizing a baby from two months through kindergarten boosters at $250 to $300.

For parents who can't afford vaccinations through a private physician, there are free public sources, like the Indian Health Service and Municipality-sponsored well-baby clinics.

The cost in terms of dollars is insignificant, Singleton said, "if you look at the cost of grief when your child dies."

Infection can have severe ramifications, Singleton added. "Mumps can cause sterility in males. Rubella in a pregnant women can cause congenital rubella in her child — heart defects, deafness, retardation or death. Polio can cause paralysis. Diphtheria and tetanus can cause death. Whooping cough can cause infants to stop breathing, to have seizures from loss of oxygen, or long-term lung damage."

> 'We thought we had eliminated measles from this country, but then we started to see fairly large epidemics.'

Parents may neglect to have their children vaccinated because they fear side effects, Singleton said. But side effects such as fever, fussiness and tenderness at the injection site are short-lived.

"First-time parents today may never have seen a case of polio or a case of measles," Singleton said. "They don't understand that polio can be devastating. They think of measles as 'a regular childhood disease.' But it can cause pneumonia or encephalitis. We need to alert ourselves that these are important diseases to prevent."

Like Singleton, Janine Schoelhorn, immunization program coordinator for the State of Alaska, is concerned that, for many children, vaccination is put off.

"Kids need to get vaccinated on time. As soon as a child is eligible for vaccination, he should be vaccinated. It should not be postponed. When we see vaccine-preventable disease, often we see it in children who are old enough to be vaccinated — but the parents have postponed it. Unfortunately, those are the children most severely affected. Our goal in the state is 90 percent immunization by age two."

By age two, children should have had the following vaccinations:

- 4 DPT (to prevent diphtheria, tetanus and pertussis or whooping cough)
- 3 OPV (oral polio vaccine)
- 1 MMR (measles, mumps, rubella)

Earlier this month, the American Medical Association recommended that a two-dose measles vaccine strategy be implemented in the measles-mumps-rubella vaccine, to make vaccination a simplified procedure.

These immunizations are an absolute requirement for day care entry, Schoelhorn said.

Ironically, children who are cared for at home, whose mothers do not work for their first two years or longer, are among those at high risk for not receiving the proper vaccines by age two. Therefore, when these children *do* venture out into the general population, they are ripe for all sorts of infections.

Schoelhorn cited a state-wide

See Shots, page E2

Shots

Continued from page E1

sample of kindergartens, which found that among kindergarteners last year, fewer than 60 percent had been fully immunized by age two. "So we have quite a few children out there who are at risk."

"Because we have been able to reduce the incidence of disease, people start thinking the vaccine is more dangerous than the disease. And that's just not true," Schoelhorn said.

"Some people think vaccine-preventable diseases are extinct; that there's no chance of them getting them," Schoelhorn said. "Actually, we do have imported disease in Alaska. We have a lot of travel between Alaska and other places, and they are at risk particularly for pertussis, measles and rubella." These diseases can kill.

Measles is so infectious that onlookers sitting in an emergency room or a pediatrician's office can catch it from an infected person's just passing through.

During the national immunization week, Alaska's radio and television stations will be running messages about the importance of immunization, and clinics across the state will state their own local campaigns.

"Alaska has good laws," Singleton said, "so we have some of the best immunization rates for vaccination for school-age children in the nation. But preschoolers are falling through the crack. They usually get the first shots, but don't get the measles at 15 months and the DPT at 18 months. This puts them at risk."

Phone Numbers

The Municipality of Anchorage has a 24-hour recording on immunizations; call 343-4734.

For information about well child clinics, call the Municipal Health Department at 343-4800.

Native American parents whose children are behind in their immunization schedules should call the Alaska Native Medical Center to make appointments. That number is 257-1103.

The national number for free vaccination and health care information through the mail is 800 525-6789.

The latest vaccination

HIB is a special protection for kids

By ANN CHANDONNET
TIMES WRITER

Most parents are familiar with DPT and MMR, but they may never have heard of the latest in vaccinations — HIB.

HIB is short for haemophilus influenzae type B. In Alaska, vaccination with HIB vaccine is not required for day care or kindergarten attendance, said Nina Davidson, a registered nurse who is a nurse specialist with the basic immunizations and HIB program at the Alaska Native Medical Center.

However, it is important for many children to have this special protection, especially Native American children.

"Alaska Natives have about 10 times the rate of influenza as the general population," Davidson said.

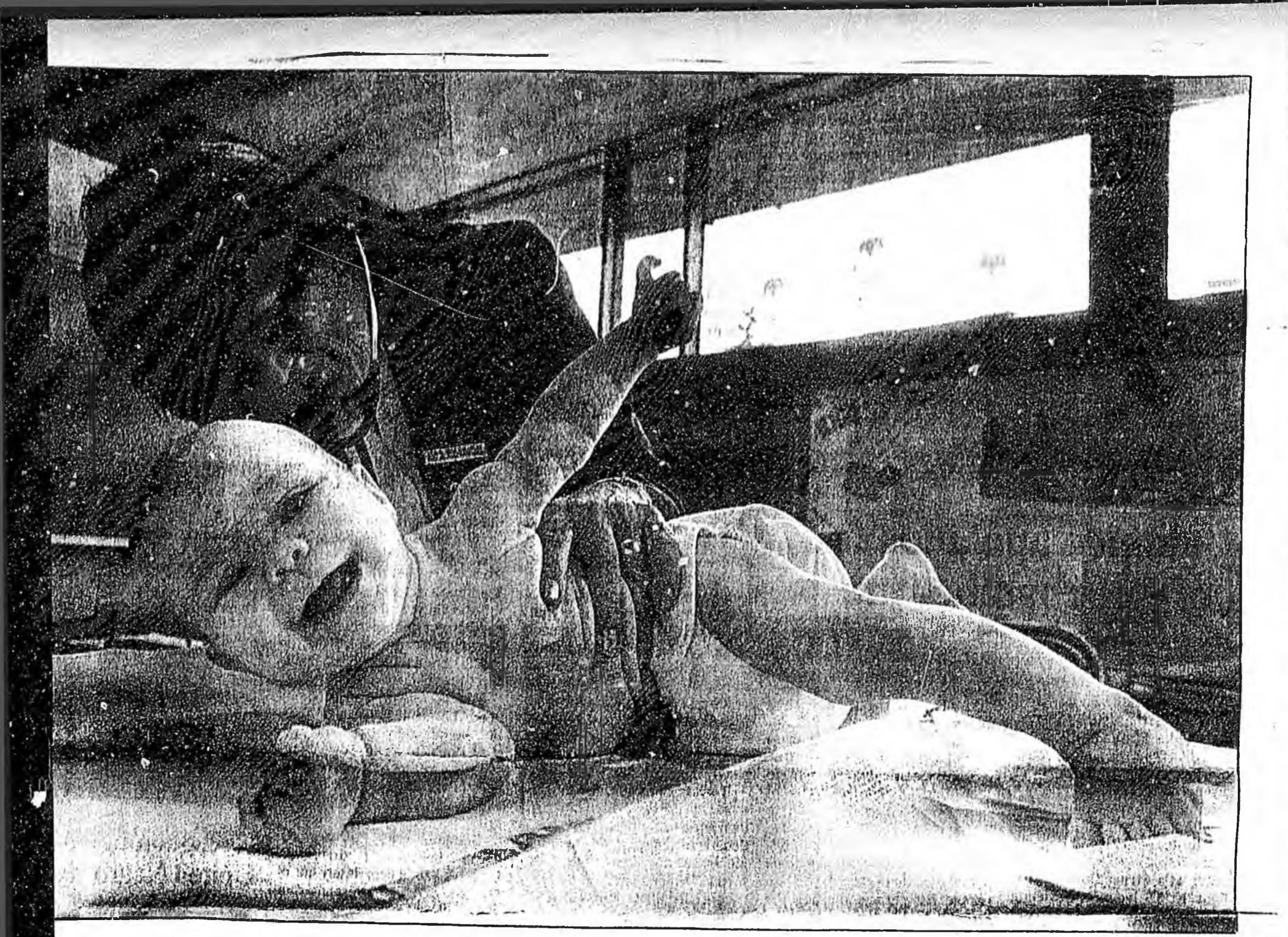
The HIB vaccine has been in distribution only since 1985. The initial vaccine developed was not as effective as the vaccine that has been available in the last year, Davidson said.

HIB needs to be given at the age of two months, Davidson advised.

"Up until the last year, HIB could only be given at 18 months, and most of the disease occurred in kids under that age," Davidson said. "So it's a real leap forward to have a vaccine that can be given to this younger group of children."

The peak incidence of haemophilus influenza is between four and six months.

HIB needs to be prevented because it is the major cause of 80 percent of meningitis cases. Children who are given the HIB vaccine receive two different vaccines, one in a series of three shots and one in a series of four.



Times photo by RUSS KENDALL

nica Bell, 5½ months old, is examined recently by Jean Baker, R.N., just before Veronica is immunized.

Anchorage Daily News Tuesday, May 21, 1991

Parents, doctors express doubts over vaccinations

By SUE CHASTAIN
Knight-Ridder Newspapers

It was more than 10 years ago, but every detail of the day is burned into Barbara Fisher's memory.

She'd taken her 2½-year-old son, Christian, to the pediatrician for some routine shots. A few hours later, she looked in on him.

"He was staring into space, white as a sheet," the suburban Washington mother recalled. "All of a sudden I saw his eyes roll back. His little head went down on his shoulders, and he was out. I carried him to bed, and he didn't wake up for six hours."

Fisher was uneasy, but convinced herself it was just fatigue, or a relapse of a recent flu bout. "If I'd known then what I know now, we would have been in the emergency room."

The boy's problems were only beginning.

"He just deteriorated over the next couple months," said Fisher. "He stopped eating, stopped growing." A lively, precocious toddler who had been speaking in complete sentences, Christian "no longer knew the alphabet or his numbers. He couldn't concentrate — he'd just sit and stare and drool."

Frantic, Fisher took him from doctor to doctor. No one could explain what was wrong, though one suggested maybe it was "just a stage."

It was not until a year and a half later, when she watched a TV show that linked the pertussis (whooping cough) vaccine to cases of brain damage and death, that Fisher began to wonder. Had the "routine" vaccinations — Christian's fourth dose of a shot known as DPT, for diphtheria, pertussis and tetanus — somehow caused his baffling decline?

After reading all the medical literature she could find about reactions to the vaccine, Fisher was no longer just suspicious. "I saw exact descriptions of what I had witnessed that day," she said. "I was furious nobody had warned me. How many children have to be injured, or die, before somebody does something?"

CHILDHOOD VACCINATIONS

To the public health establishment, they're a bulwark against deadly epidemics. To many pediatricians, they're the cornerstone of the practice. So entrenched is the concept of "getting your shots" that the recent measles deaths of nine Philadelphia-area children caused public outrage and a full-force campaign to bring the recalcitrant into compliance.

But a growing number of parents are unconvinced. They believe that some of the required vaccines are far more dangerous, and less effective, than public health authorities say they are. And they are demanding the right to choose — to let their children have some shots, to reject others.

Fisher, with a handful of other parents who believed their children had been hurt or killed by the pertussis vaccine, formed Dissatisfied Parents Together (DPT) in 1982. The Vienna, Va., group, which runs an information clearinghouse and lobbies for safer and more effective vaccines, said it has support and donations from 35,000 people. Requests for information have gone up 50 percent in the last two years, Fisher said.

Knight-Ridder/Tribune News

Barbara Fisher talks to her son, Christian, who she says has "multiple learning disabilities" as a result of a routine childhood vaccination.

These are not people who resist vaccinations for religious reasons — unlike the members of several fundamentalist churches here, whose objections came to light during the measles outbreak.

"Before people write us off as crazies, they should know most of us truly believe, on medical grounds, that some vaccines are dangerous," said Fisher, who co-authored a 1985 book on the pertussis vaccine, "A Shot in the Dark," now in its third printing. "It's not like giving your child an aspirin. We're not against "all" vaccinations — we just want to be able to say no."

Still, vaccinations remain "the closest thing to a religious sacrament we've got in this country," said Richard Moskowitz, a Boston family practitioner who has studied the issue for the last decade and believes that there are so many unanswered questions about the risks of vaccination that giving every child the full complement of shots is "very reckless."

Although he acknowledged that his views are not shared by most doctors, he's seen an increase in "passive support" among colleagues in recent years. "A sizable number share the concerns but are not willing to say so publicly," he noted.

Moskowitz traces the beginnings of vaccination protests to 1976, when the federal government backed an ill-fated mass-immunization drive against swine flu — an epidemic that never materialized. The effort was finally halted when some people contracted Guillain-Barre syndrome, a rare paralyzing disease, after being inoculated.

"That showed people that the so-called medical authorities didn't always know what they were doing," said Moskowitz.

THE MAIN OBJECTION

Although the anti-vaccine contingent is most critical of the pertussis shot — Fisher called it "the oldest and crudest" in use — the primary objection is that any shots should be required for a child to attend school.

Though immunization requirements vary from state to state, they have generally become more comprehensive since the early 1970s, said Walter Orenstein, director of the division of immunization of the Centers for Disease Control (CDC). All states allow medical exemptions; 22, including Pennsylvania, allow philosophical exemptions, and all but two, West Virginia and Mississippi, allow religious exemptions.

"The school laws play a major role in assuring public and community protection," Orenstein stressed. "With a high level of immunization, you break the chain of transmission. If the laws were ever abandoned, we'd see a massive resurgence of disease."

Orenstein said he was aware of the DPT group, which pushed through Congress a 1986 act setting up a national system to compensate parents for vaccine-related injuries or deaths.

It's time for the baby's first DPT shot. Or polio booster. Or MMR vaccination (measles, mumps and rubella). Will the shots really protect your child against the diseases?

According to the conventional wisdom, yes.

Most of the common vaccines "are 95 percent or more effective," said Orenstein. The rate drops to 70 to 90 percent for pertussis, but Orenstein calls that "a pretty good range."

The very fact that no vaccine is 100 percent effective shows why high immunization levels are critical, he said. Children who are unprotected by the vaccine "receive some indirect protection" if every other child they are in contact with "has" been successfully immunized.

A SERIOUS QUESTION

But Moskowitz, who took a year's sabbatical to study the issue in 1982, said effectiveness is "a very serious question."

Studies of numerous disease outbreaks, including the current nationwide measles epidemic, have shown that "at least 50 percent of the victims have been vaccinated — some quite recently," he said. "Many articles in the pediatric literature show that re-vaccination — which public health authorities claim is sometimes necessary to 'restimulate the immunity' — doesn't work."

Nor is there agreement on whether vaccines really wipe out diseases, or whether diseases wax and wane for unrelated reasons. Public health officials credit the pertussis vaccine with nearly eradicating whooping cough, which killed almost 8,000 people at its peak in 1934.

But Moskowitz noted that the

disease "had already begun to decline precipitously long before the vaccine was introduced" in the 1940s. "It's much the same with diphtheria and tetanus," he said.

Even more hotly debated: How safe is it to inject viruses and bacterial toxins into very young children?

Orenstein characterized the common vaccines, including pertussis, as "highly safe — the benefits far outweigh the risks." Claims that the pertussis vaccine can cause brain damage or death have not been proved, he said, adding that recent studies suggest an even weaker link to brain damage than had been thought.

"I'm not ready to say it absolutely doesn't cause brain damage, but if it does, it's extremely rare," he said.

Orenstein also said that, because the first pertussis vaccine is given at age 2 months, it is extremely difficult to separate its effects from "coincident events."

"That's about the same time Sudden Infant Death Syndrome (SIDS) peaks, and too early to assess neurological normality," he said. "Because B follows A doesn't mean A caused B."

Fisher argues that the CDC greatly underestimates the problem by classifying many vaccine-caused injuries as unrelated neurological abnormalities, and many deaths as SIDS. From interviews with more than 500 parents and information gleaned from her research, Fisher estimates "a minimum of 12,000 injuries (from vaccines) each year, from learning disabilities to severe and profound retardation, and another 600 to 900 deaths, with most of those written off as SIDS."

BEING INFORMED

Fisher also believes that the public should know about factors that her group maintains put children at risk for a severe reaction to the pertussis vaccine — for instance, a low birth-weight, a recent illness or a family history of allergies. "Doctors don't want to scare people," she said, "but keeping the public ignorant just contributes to the number of injuries and deaths."

Moskowitz contends that vaccination can cause the very disease it is designed to prevent "but in an atypical form, often quite difficult to recognize — a much deeper, more dangerous illness with more complications and new symptoms."

He also has noted that more of his young patients are getting chronic illnesses — ear infections, allergies, eczema, asthma, "the whole gamut." He speculated that the widespread use of both vaccines and antibiotics seems "to be promoting chronic rather than acute responses, infections which don't heal themselves as well as they used to, immune system breakdowns." Vaccines, Moskowitz has concluded, could be creating a generation of the chronically ill.

Rather than trying to eradicate diseases with vaccines, he suggests a return to an old-fashioned notion — exposing children to generally benign childhood diseases such as measles, mumps and rubella when they are young, allowing them to acquire permanent immunity and protecting them from getting more serious forms of the diseases later.

This is less dangerous "than trying to beat nature at her own game," he said.

Orenstein, however, believes that "takes the natural-unnatural argument too far. These are not insignificant diseases — I wouldn't want to put my child through one of them, just to get 'natural' immunity. "Death" is very natural — we used to see a lot of it from these diseases."

To vaccinate or not? The answer is no longer automatic, at a time when few patients accept the notion of medical infallibility.

Fisher's group urges pediatricians to provide parents with information, and to encourage them to ask questions. "Most of the pediatricians don't like to take the time," she said. "But others are very responsible."

Rachel Mueser's first child, Jacob, 8, got every shot in the book. "I didn't really think very hard about immunization then," said the Bala Cynwyd, Pa., mother. "I just did what the pediatrician recommended."

But because her second, Anna, was too sickly to be vaccinated on the usual schedule, Mueser found herself with more time to think over the issue. "The longer I thought about it the more concerned I became," she said.

Mueser has evolved into a classic "pick and choose" parent. She left a pediatrician who tried to scare her into giving shots and sought out one who didn't insist. She did some reading and decided to authorize polio and tetanus vaccinations for both Anna, now 4, and Benjamin, 9 months.

But she decided against the pertussis vaccine ("Anna's practically too old to get it anyway, and I know too many children who've had severe reactions") and diphtheria ("You don't hear about it much anymore").

Anna was due for MMR at 15 months, but Mueser canceled that ("I'd like to give her the opportunity to have the diseases, and get lifelong immunity"). She changed her mind about the measles part of the shot because of the ongoing epidemic, but hasn't yet decided whether Benjamin should get it when he's old enough.

Knowing Anna and Benjamin aren't vaccinated against some diseases bothers her sometimes. "Every time they get sick I'm very scared," she said. "I probably worry more. I'm very vigilant. I give them vitamins every day, and herbal tinctures to support their immune systems. But basically they're strong and healthy, and I like to think it's because they "don't" have all those shots in them."

Making a "truly informed decision" is impossible, she said. "But that doesn't mean you don't have the responsibility to make a decision."

TOUGH DECISIONS

Barbara Fisher's son, Christian, is now 13 and has slowly recovered his physical health. But he is left with "multiple learning disabilities," according to his mother. He's two years behind in reading, has trouble concentrating and gets confused if the teacher puts more than one instruction in the same sentence.

"He knows he's different, and that makes him frustrated and angry," said Fisher. "He asks me, 'Mom, why did you let them give me that shot?' All I can say is, at the time I didn't know."

State of Alaska Epidemiology **Bulletin**

Department of Health and Social Services
Theodore A. Mala, MD, MPH, Commissioner

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Bulletin No. 35, November 20, 1991

GUIDE TO CONTRAINDICATIONS (VALID AND INVALID) TO CHILDHOOD VACCINATIONS

Parents are often blamed for poor immunization levels among children under age two; however, evidence suggests that the health care system must assume substantial responsibility for missed opportunities to vaccinate children. Missed opportunities occur when a child brought to a clinic for immunization is not vaccinated because of inappropriate contraindications such as a minor illness. Several conditions or circumstances that are often inappropriately considered contraindications to vaccination are listed in the table above, along with the conditions that constitute valid contraindications for each vaccine. This table incorporates the most recent information on contraindications for DTP vaccine. Four conditions previously considered absolute contraindications are now considered "precautions" by the Immunization Practices Advisory Council (ACIP).

Vaccine	Valid Contraindications		Invalid Contraindications
General For All Vaccines:	An immediate anaphylactic reaction following vaccine		Local reaction (soreness, redness, swelling) following a dose of DTP or MMR vaccine
	Moderate or severe febrile illnesses		Mild acute illness with or without low-grade fever
DTP TOPV IPV MMR HIB HBV			Mild diarrheal illness or gastrointestinal tract disturbance in otherwise well child
			Current antimicrobial therapy
			Convalescent phase of illness
			Prematurity: Same dosage and indications as normal, full-term infants
			Recent exposure to an infectious disease
			A history of penicillin or other nonspecific allergies or relatives with such allergies
DTP	Encephalopathy occurring within 7 days of immunization		Temperature of <40.5 C (105 F) following a previous dose of DTP
	Precautions*	Fever of ≥40.5 C (105F) within 48 hours of vaccination	Family history of convulsions
		Collapse or shock-like state (hypotonic-hyporesponsive episode) within 48 hours	Family history of sudden infant death syndrome
		Seizures within 3 days	
		Persistent, incontrollable crying lasting ≥ 3 hours, occurring within 48 hours of vaccination	Family history of an adverse event following DTP immunization
TOPV	Infection with HIV		Breastfeeding
	Pregnancy		
	Known altered immunodeficiency (hematologic and solid tumors; congenital immunodeficiency, and chronic immunosuppressive therapy)		
	Immunodeficient household contact		
IPV	Anaphylactic reaction to NEOMYCIN or STREPTOMYCIN		
MMR	Anaphylactic reaction following egg ingestion or to NEOMYCIN		Tuberculosis or Positive PPD
	Pregnancy		Pregnancy in mother of recipient
	Known altered immunodeficiency (hematologic and solid tumors; congenital immunodeficiency; and chronic immunosuppressive therapy)		Breastfeeding
			Immunodeficient family member
	Recent (within 3 months) IG administration		Infection with HIV
			Non-anaphylactic reactions to eggs or neomycin

*The events listed as precautions, while not contraindications, should be carefully reviewed. The benefits and risks of administering a specific vaccine to an individual under existing circumstances should be considered. If the risks to the individual are believed to outweigh the benefits, the immunization should be withheld. If the benefits are believed to outweigh the risks (for example, during an outbreak), the immunization should be given.

Melissa

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Bulletin No. 34, November 19, 1991

90% IMMUNIZATION LEVELS BY AGE 24 MONTHS-- CAN ALASKA ACHIEVE THE "YEAR 2000" GOAL?

Introduction: National Health Objectives for the Year 2000 include increasing basic immunization series levels to **at least 95% for school children and children in licensed childcare facilities** and **to at least 90% for children under age two.** Basic immunization series completion levels of greater than 95% among Alaska school children and children attending licensed childcare facilities have been maintained since 1984 and 1986, respectively. In order to estimate Alaska's progress toward achieving 90% vaccination levels among children under age two, the Alaska Immunization Program conducted a state-wide retrospective study of vaccination histories of Alaskan kindergartners.

Results: 494 of 859 (57.5%) Alaska kindergartners surveyed during the 1990-91 school year had completed the basic immunization series (4 DTP, 3 OPV, and 1 MMR) by their 24-month birthday. Vaccination levels for separate vaccines were highest for MMR (79.3%) and lowest for DTP-4 (61.7%). Of kindergartners surveyed, 640 (74.5%) had received OPV-3 by age 24 months. Regional immunization levels by 24 months of age were highest for the Southwest Region (76.4%) and lowest for the Gulf Coast (38.7%) (Table 1).

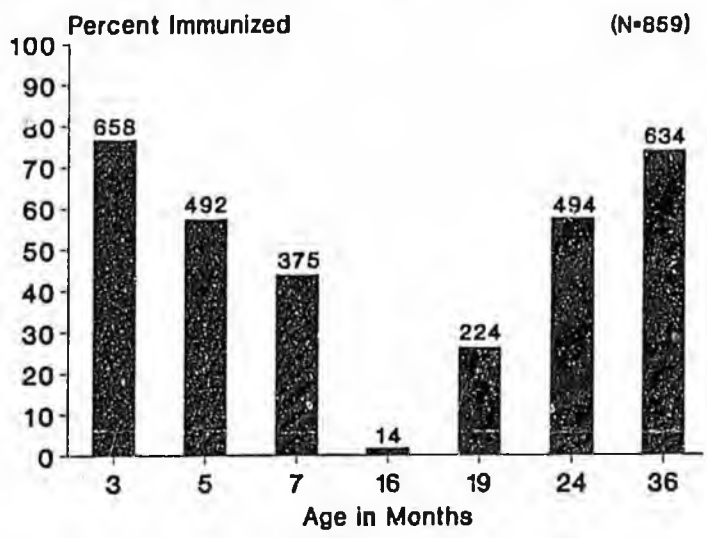
TABLE 1: Percent of Children Completing Primary Series by 24 Months of Age, Alaska Retrospective Survey, 1990-91.

Region	Number Surveyed	4 DTP by Age 2		3 OPV by Age 2		MMR by Age 2		4 DTP 3 OPV 1 MMR by Age 2	
	n	n	%	n	%	n	%	n	%
Anchorage/ Mat-Su	393	236	60.1	289	73.5	299	76.1	214	54.5
Southeast	101	70	69.3	81	80.2	88	87.1	68	67.3
Gulf Coast	75	33	44.0	42	56.0	55	73.3	29	38.7
Southwest	106	82	77.4	94	88.7	97	91.5	81	76.4
Interior	135	78	57.8	95	70.4	101	74.8	74	54.8
Northern	49	31	63.3	39	79.6	41	83.7	28	57.1
All Surveyed Regions	859	530	61.7	640	74.5	681	79.3	494	57.5

Age-appropriate vaccination levels were highest at 3 months of age (76.6%). The level of full, age-appropriate immunization declined gradually after the 3-month vaccination due date, dropped sharply at 16 months (1.6%), increased to 57.5% by 24 months and to 73.8% by 36 months of age (Figure 1).

Two hundred thirty (35%) of 658 kindergartners who were adequately immunized by three months of age were lost to on-time vaccination follow-up by 24 months of age. Eighty-nine (36%) of 246 children who received MMR on or after their 18-month birthday, and were due for DTP-4 at the time of MMR vaccination, missed an opportunity for DTP-4 vaccination at the time MMR was administered.

Figure 1. Age-Appropriate Immunization Levels, Alaska Retrospective Survey, 1990-91.



Summary: Fully one-fifth of Alaskans two years old and younger who are eligible for vaccination, may be unprotected against measles infection. Over 40% may lack one or more vaccinations that could lower their risk of acquiring common childhood diseases.

Recommendations: Alaska health care providers can help to improve the level of protection against vaccine-preventable disease among children under age two.

1) **Implement patient-tracking systems for on-time vaccination of 0-2 year olds and reminder-recall notification of parents.**

2) **Review current data about adverse events associated with vaccination and educate parents about the risks and benefits of vaccination.**

3) **Screen a child's vaccination history carefully at all office or clinic visits, regardless of the reason for the visit. Administer all vaccines for which a child is eligible simultaneously.**

4) **Review conditions inappropriately regarded as routine contradictions for vaccination.**

5) **Eliminate barriers to the receipt of vaccinations--including excessive administration costs, physical examination requirements, and limited clinic hours during which vaccinations are given.**

(Contributed by Janice Schoellhorn, MS, MPH, Section of Epidemiology. Thanks to Gladys Decker, RN, and Deanne Harms, RN, Section of Epidemiology)

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Bulletin No. 18 July 26, 1991

1991 Semi-Annual Infectious Disease Report
Number of Cases by Region

	Southeast		Southcentral		Northern		Total	
	1991	1990	1991	1990	1991	1990	1991	1990
AIDS	1	1	10	11	0	0	11	12
Amoeba	1	1	4	2	0	1	5	4
Anthrax	0	0	0	0	0	0	0	0
Botulism	2	0	2	0	3	0	7	0
Botulism - infant	0	0	0	0	0	0	0	0
Brucellosis	0	0	0	0	0	0	0	0
Campylobacter	12	6	19	18	7	0	38	24
Cholera	0	0	0	0	0	0	0	0
Diphtheria	0	0	0	0	0	0	0	0
Diphyllobothrium latum	0	0	0	1	0	0	0	1
Encephalitis	0	0	0	3	2	1	2	4
Enchinococcus	0	0	0	0	0	0	0	0
Enterotoxigenic E. coli	0	0	0	0	0	0	0	0
Giardia	28	18	37	51	1	3	66	72
Gonorrhea	8	17	300	517	62	69	370	603
Hepatitis A	4	5	78	75	2	10	84	90
Hepatitis B	2	5	16	27	2	5	20	37
Hepatitis non-A non-B	3	1	8	1	1	0	12	2
Hepatitis unspecified	0	0	0	0	1	0	1	0
Legionnaires' disease	0	0	0	0	0	0	0	0
Leprosy	0	0	0	0	0	0	0	0
Leptospirosis	0	0	0	0	0	0	0	0
Malaria	0	1	0	0	0	1	0	2
Meningitis - aseptic	1	3	10	9	5	3	16	15
Meningitis - hemophilus	1	2	7	8	1	4	9	14
Meningitis - meningococcal	0	1	6	5	1	1	7	7
Meningitis - unspecified bacterial	2	3	4	7	0	4	6	14
Mumps	4	0	5	1	1	0	10	1
Paralytic shellfish poisoning	3	1	7	12	0	0	10	13
Pertussis	0	0	8	0	2	0	10	0
Plague	0	0	0	0	0	0	0	0
Polio	0	0	0	0	0	0	0	0
Psittacosis	0	0	0	0	0	0	0	0
Rabies (Animal)	0	0	1	11	2	14	3	25
Reye syndrome	0	0	0	1	0	0	0	1
Rheumatic fever	1	0	0	0	0	0	1	0
Rubella	0	0	0	0	0	0	0	0
Rubeola	0	45	1	20	0	15	1	80
Salmonella	3	4	47	22	3	10	53	36
Shigella	0	3	9	3	0	1	9	7
Smallpox	0	0	0	0	0	0	0	0
Syphilis	3	1	10	8	3	4	16	13
Tetanus	0	0	0	0	0	0	0	0
Trichinosis	0	0	0	0	0	1	0	1
Tuberculosis	1	3	29	13	4	9	34	25
Tularemia	0	0	0	0	0	0	0	0
Typhoid	0	0	0	0	0	0	0	0
Yellow Fever	0	0	0	0	0	0	0	0
Yersinia enterocolitica	1	2	0	7	1	0	2	9

Since only a portion of all reportable illnesses are reported, these figures represent trends rather than actual incidence. More complete reporting of cases to the Division of Public Health will result in more accurate statistics. The above figures represent both military and civilian reporting.

Estimated Total Population 1990:

Southeast	68,989
Southcentral	369,563
Northern	112,491
Total	550,043

CONSTITUTIONAL LAW

By Jennifer Trahan and Susan M. Wolf

Rights of State and Family Clash In Forced-Immunization Cases

THE RECENT measles outbreak in Philadelphia among children of members of the Faith Tabernacle Congregation and the First Century Gospel Church has focused attention on the power of the state to require the hospitalization and immunization of children. Members of these churches oppose immunization and medical treatment on religious grounds.

Six of the congregations' children have died of measles or related infections, and to prevent further deaths, the Philadelphia Health Department obtained an order from Family Court Judge Edward R. Summers requiring the hospitalization of four severely ill children. The city also obtained family court orders requiring the immunization of six other children who had not yet contracted measles.[1]

The state's Superior Court[2] and Supreme Court[3] have refused to stay the family court's immunization orders, and five of the children have since been immunized.[4] These proceedings raise constitutional and state law questions.

Courts have long recognized that the First Amendment's free exercise clause and the 14th Amendment's due process clause protect the rights of parents to freely exercise their religion and to control their children's upbringing without unwarranted state intervention.

In *Wisconsin v. Yoder*,[5] the U.S. Supreme Court held that a criminal conviction of Amish parents who refused to send their children to school beyond the eighth grade on religious grounds violated the parents' First Amendment rights. Similarly, in *Meyer v. Nebraska*, the court — in deciding that a state may not prohibit the teaching of foreign languages to children — determined that the term "liberty" in the 14th Amendment embraces the right of individuals to "establish a home and bring up children."[6] In *Stanley v. Illinois*, the court further recognized that "[t]he rights to conceive and to raise one's children have been deemed 'essential,' [and] 'basic civil rights of man.'"[7]

NONETHELESS, the U.S. Supreme Court has also recognized that there is a limit to the protection afforded by the First and 14th amendments. When the health or welfare of a child is jeopardized, the state can exercise its parens patriae[8] power to protect the child's interests.

For instance, in *Prince v. Massachusetts*,[9] the Supreme Court upheld the conviction of a Jehovah's Witness for allowing her ward to sell religious literature in violation of a state child-labor statute. The court ruled that neither the First Amendment nor the 14th Amendment protected the adult's actions, reasoning that "[p]arents may be free to become martyrs themselves. But it does not follow they are free, in identical circumstances, to make martyrs of their children before they have reached the age of full and legal discretion when they can make that choice for themselves."[10] The court, in dicta, also declared that "[t]he right to practice religion freely does not include liberty to expose the community or the child to communicable disease or the latter to ill health or death."[11]

The Supreme Court reached a similar result in *Jehovah's Witnesses v. King County Hospital*.[12] In that case, a district court upheld two state statutes that permitted children of Jehovah's Witnesses to be declared wards of the court in order to authorize blood transfusions over parental objection. Relying on *Prince*, the District Court for the Western District of Washington held the statutes were constitutional despite the limitations they placed on parental First Amendment and 14th Amendment rights.[13] The Supreme Court affirmed the district court's opinion in a one sentence per curiam opinion, in which the court cited *Prince*.[14]

Accordingly, although parents possess both 14th Amendment rights to family autonomy and First Amendment rights to follow religious beliefs in caring for their children, the state's interest in safeguarding the health of children can outweigh these rights in some circumstances. The crucial question then becomes: When does a threat to the health of a child justify state intervention?

IN THE RECENT situation in Philadelphia, the family court ordered the hospitalization of four measles-stricken children. Because the children were clearly ill and several other children had already died because of their parents' refusal of treatment, the court's order seems consistent with constitutional precedent and state law.

Both *Prince* and *Jehovah's Witnesses* indicate that a state has the power to protect a child from a life-threatening situation, despite parents' constitutional claims. In addition, state courts have consistently held such intervention justified.[15] As one court said: "[T]o deny one's child medical care necessary to save his life because of one's own religious views, falls within the kind of conduct which is not protected by the guaranty of religious freedom."[16]

> The state's interest in safeguarding the health of children may outweigh parents' First and 14th amendment rights. The question is: When does a threat to a child's health justify state intervention?

Even if a child's life is not immediately endangered, courts have generally ordered treatment when the child's condition is nonetheless serious.[17] For instance, in a recent Pennsylvania decision, *In re Cabrera*,[18] the Superior Court ordered blood transfusions for a child with sickle-cell anemia over parental religious objection, even though the child was not in "imminent danger of death." The court ruled that "a patient [need not] be at death's door before medical intervention [is] allowed to alleviate (or even minimize) the likelihood of a patient sustaining a debilitating or even fatal injury." Thus, the family court's order in the measles cases, requiring the hospitalization of children who were seriously ill and possibly in imminent danger, seems clearly supported by case law.

The family court's hospitalization order is also arguably correct under Pennsylvania statutory law. A Pennsylvania law provides that a child will not be deemed an abused child if his or her parent fails to provide medical treatment in the practice of religious beliefs.[19] Another Pennsylvania statute, however, provides that the state may protect a child who lacks "proper parental care...necessary for his [or her] physical...health."[20] The city of Philadelphia argued that, although the children were not "abused" children, intervention was proper.

Other states have enacted clearer child-protection laws by combining into one statute what Pennsylvania has placed in two separate statutes. For example, Florida's child-protection law provides:

> [A] parent...legitimately practicing his religious beliefs, who by reason thereof does not provide specified medical treatment ...may not be considered abusive or neglectful for that reason alone, but such an exception does not ...[p]reclude a court from ordering, when the health of the child requires it, the provision of medical services by a physician.[21]

This statute, while recognizing parents' First Amendment rights, nonetheless clearly permits state intervention when the health of a child requires it. Courts in Pennsylvania might be given better guidance if the state Legislature were to amend state law and adopt such a provision.

THE FAMILY court orders that require the immunization of the six children are more debatable. Because these children were not yet ill, the health risk to them was more attenuated than the risk to the children whom the court ordered hospitalized. Accordingly, it is less clear that the state's interest was sufficiently compelling to outweigh the parents' constitutionally protected rights.

The U.S. Supreme Court recognized that states have the power to require vaccination in *Jacobson v. Massachusetts*.[22] In this case the court upheld the constitutionality of a state compulsory-vaccination law against challenges that it interfered with personal liberty. All states, including Pennsylvania, have since enacted legislation requiring proof of immunization before a child enters school.[23] Nonetheless, Pennsylvania is among the states that grant a religious exemption. A Pennsylvania statute provides that "[the requirement that school age children be immunized] shall not apply in the case of any child whose parent or guardian objects in writing to such immunization on religious grounds."[24]

In the current situation, the city argued that the local measles crisis was so severe — with more than 900 cases and six deaths reported — that the parents' First Amendment rights were outweighed. The city also claimed that immunization was the least intrusive method to protect the children's health, since the alternative was continual monitoring of the children.

The city further argued that Pennsylvania's statutory exemption of school-age children from immunization was inapplicable because the children involved were preschool-age. Finally, the city maintained that it was empowered to act under another statute that says, "All departments of health...shall have full power, and shall make...such rules and regulations, which in their judgment may be proper and necessary, for the protection of public health."[25]

THE CITY'S argument that the threat to the children was serious enough to justify intervention in the absence of actual illness led the family court into uncharted territory. Although there are dicta in *Prince* suggesting that a state has power to protect the community and children from "communicable diseases" despite parental religious claims,[26] at least one court, under different circumstances, has explicitly refused to allow state intervention over parental religious objections when the children were not actually ill.

In *In re Appeal in Cochise County/Juvenile Action No. 5666-J*,[27] a child had died of an intestinal rupture that the mother allowed to remain untreated because of her religious views. The state sought to declare the mother's other children "dependent" on the grounds that the mother said that she would not provide medical care for them either if they were to become ill.[28] The Arizona Supreme Court, however, refused to declare the other children "dependent" because they were still in good health. The court found the state's interest in the health of the children insufficient to outweigh the mother's constitutional rights to raise a family and to exercise her religious beliefs.[29] The court noted that if any of the other children were to become ill, the state would then have sufficient justification to intervene.[30]

Although the *Cochise* court showed a reluctance to authorize state intervention in the absence of the actual illness of the children, the facts of that case seem distinguishable from the Philadelphia situation. In Philadelphia, the measles epidemic posed a specific and current threat to the children. Moreover, if any of the non-immunized children contracted measles, their lives could have been seriously jeopardized before the city realized that intervention was required. Finally, immunization is arguably less intrusive than the relief sought in *Cochise*.

The family court's immunization order also appears to be justifiable under Pennsylvania statutory law, although other states have more clearly empowered intervention in such situations. For instance, a provision in Maryland law indicates that when the state's secretary of health declares an emergency or epidemic, children may be immunized over parental religious objections.[31] The Pennsylvania Legislature could provide clearer guidance by specifying that in an emergency or epidemic, both school-age and preschool-age children may be immunized notwithstanding any religious exception.

Accordingly, the family court's immunization order plausibly construes Pennsylvania law and appears to be a constitutionally defensible exercise of the state's parens patriae authority, given the gravity of the measles epidemic in Philadelphia.

When constitutionally protected parental rights endanger the lives of children, courts consistently intervene. The rationale is most clearly stated in *Prince*: Parents are not free to deprive their children of the chance to reach majority and to decide then whether to embrace the parents' religion. The family court acted well within that tradition in ordering the hospitalization of ill children. The immunization orders were an extension of that doctrine, arguably mandated by the nature of the disease, the imminence of the threat of infection and the lack of adequate alternatives.

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(1) In re W.E., 304813-01 (March 6, 1991); In re K.E., 304813-02 (March 6, 1991); In re R.E., 304813-03 (March 6, 1991); In re E.S.H., 304813-01 (March

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Before a firm institutes a work force reduction, it should consider whether cost-cutting measures may be instituted in other areas. Reducing the size of a summer associate program, for example, could limit the firm's rate of growth without the risk of liability inherent in terminating current employees. Similarly, cost-cutting needs may be met by training an associate in another practice area rather than releasing the associate. In addition, the firm may make lateral hires based only on immediate need rather than on a perceived future benefit.

If the firm has decided that it must reduce its work force immediately, it should plan the involuntary reduction program paying close attention to adrealizes, for example, that most of the employees to be let go are minorities, it risks a discrimination claim.

One objective selection criterion often used in work force reductions is lack of seniority. A virtue of using length of service with the firm as a selection criterion is that the U.S. Supreme Court has held that seniority-based layoff is an absolute defense to claims of discrimination.[1] Even if a work force reduction based on employees' junior status affects a "disproportionate" number of protected employees, criteria promulgated by the Equal Employment Opportunity Commission provide that the negative impact will not constitute illegal discrimination.[2]

Generally, all a business has to do to implement a layoff based on seniority is to compare hire dates. A law firm may, instead, wish to compute seniority based on number of years of practice — an especially appropriate criterion in a firm with a large number

evaluations are based on a standard, graded form, a firm would be able to justify laying off those associates with the lowest grades.

If less standardized criteria are used, the firm should carefully review all personnel, performance and training records to make certain that it can clearly show why one associate was selected over another. Associate evaluations serve a dual purpose. Not only do they form the basis for determining advancement or compensation, but they also act as evidence in the event of an employment discrimination suit.

A firm may develop whatever selection criteria meet its needs. But if the selection process disparately affects a protected class, the firm's criteria must be demonstrated to be a business necessity.[3] In other words, the criteria must be demonstrably job-related.

Law firm economics, including partner-to-associate ratios, may heavily influence which attorneys are to be released. Partners are not immune from termination — and a firm may consider formally evaluating its partners just as it evaluates its associates. If partners are to be terminated, a firm should be prepared to justify its actions based on objective, quantifiable criteria — such as length of service, productivity, ability to train associates or ability to attract business.

Contractual Relationship

Although most attorneys are "at-will" employees — not employed pursuant to an employment contract — handbooks, manuals, policies, rules or other materials that have been distributed may form the basis for a claim that a contractual relationship has been formed. These documents should be reviewed to ensure that they contain no contractual commitments. For example, if an employee handbook disavows any contractual intent but states "In the event of layoffs, all terminations will be based on seniority" — and then the firm implements performance-based terminations — fired employees may base a breach of contract claim on the statement.

Other actions by firms may give rise to reliance-based contractual claims. For example, if an attorney resigns a position after being promised long-standing employment at another firm, employment relationship is not terminable at will. Although the existence of an oral contract may be difficult to prove, the firm should avoid making statements that could be interpreted as enforceable promises.

Severance Benefits

A firm may consider providing benefits to assist the terminated attorneys. If severance benefits are provided, the firm should give written notice of precisely what the attorney will receive. Firms should be careful not to otherwise encourage a lawsuit by treating similarly situated attorneys differently with respect to severance benefits. For example, if a third-year male associate is offered a certain amount in the form of severance pay, a terminated female associate in the same class should be offered the same amount.

If the firm intends to provide a terminated attorney severance pay or benefits, it should consider obtaining a waiver and release. A waiver and release bars the attorney from recovering damages. In order to make the waiver and release enforceable, some pay or benefits not ordinarily provided by the firm must be provided.

The critical event that comes between termination and a potential employment-related lawsuit is the dismissal interview. A tactful and positive exit interview may reduce the risk of litigation. Law firm consultants recommend that those conducting the dismissal be honest, give the attorney the full details of the situation, discuss support packages and references, specify time restraints and describe outplacement services if available.

News of terminations may damage the firm's reputation among potential recruits and rival firms. Nevertheless, if a work force reduction is necessary, the firm must consider whether its proposed termination policy would adversely affect members of any protected class and whether it can document non-discriminatory and neutral reasons for its actions. Without adequately guarding against possible liability, the firm ironically may be forced to defend itself against the same associates it trained to litigate.

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(1) 28 U.S.C. 2,000 et seq.

(2) Brotherhood of Teamsters v. U.S., 431 U.S. 324 (1977).

(3) 29 CFR Sec. 1607.4D.

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4, 1991); In re K.J.M., 308817-01 (March 4, 1991); In re J.R.R., 308819-01 (March 4, 1991).

(2) In re K.E., 232 Misc. 16 (March 8, 1991); In re R.E., 233 Misc. 16 (March 8, 1991); In re K.J.M., 234 Misc. 16 (March 8, 1991); In re W.E., 235 Misc. 16 (March 8, 1991); In re E.S.H., 236 Misc. 16 (March 8, 1991).

(3) In re R.E., 45 ED Misc. 1991 (March 8, 1991); In re K.J.M., 46 ED Misc. 1991 (March 8, 1991); In re E.S.H., 47 ED Misc. (March 8, 1991); In re W.E., 48 ED Misc. 1991 (March 8, 1991); In re K.E., 49 ED Misc. 1991 (March 8, 1991).

(4) The sixth child contracted measles and was therefore not immunized.

(5) 406 U.S. 205 (1972).

(6) 262 U.S. 390, 399 (1923).

(7) 405 U.S. 645, 651 (1972) (citations omitted).

(8) "Parens patriae" literally translates as "parent of the country" and refers to the role of the state as sovereign and guardian of persons under legal disability. Black's Law Dictionary 1008 (5th ed. 1979).

(9) 321 U.S. 158 (1944).

(10) Id. at 170.

(11) Id. at 166-67.

(12) 390 U.S. 598 (1968) (per curiam), aff'g 278 F. Supp. 488 (W.D. Wash. 1967).

(13) 278 F. Supp. at 504-05.

(14) Jehovah's Witnesses v. King County Hospital, 390 U.S. 598 (1968).

(15) See, e.g., J.V. v. State, 516 So. 2d 1133 (Fla. Dist. Ct. App. 1987) (blood transfusions to child held proper despite parental religious objections. N.E.2d 769 (Ill.) (same), cert. denied, 344 U.S. 824 (1952).

(16) Levitsky v. Levitsky, 190 A.2d 621 (Md. 1963).

(17) See, e.g., In re Eric B., 189 Cal. App. 3d 996, 235 Cal. Rptr. 22 (1987) (court ordered monitoring of child after chemotherapy completed); In re Sampson, 37 A.D.2d 668, 323 N.Y.S.2d 253 (1971), aff'd, 278 N.E.2d 918 (1972) (rejecting argument that state intervention is permitted only when the life of the child is in danger). But see In re Green, 292 A.2d 387, 392 (Pa. 1972) ("as between a parent and the state, the state does not have an interest of sufficient magnitude outweighing a parent's religious beliefs when the child's life is *not immediately imperiled* by his physical condition").

(18) 552 A.2d 1114, 1120 (Pa. Super. Ct. 1989).

(19) 11 Pa. Stat. Ann. Sec. 2203 (Cum. Supp. 1990).

(20) 42 Pa. Cons. Stat. Sec. 6302 (1989).

(21) Fla. Stat. Ann. Sec. 415.503(8)(f) (West Supp. 1989).

(22) 197 U.S. 11 (1905). See also Zucht v. King, 260 U.S. 174 (1922) (municipality can require a child's vaccination as a condition for attending school).

(23) Comment, "The National Childhood Vaccine Injury Act of 1986: A Solution to the Vaccine Liability Crisis?" 63 Wash. L. Rev. 149, 150 (1988).

(24) 24 Pa. Stat. Ann. Sec. 13-1303a(d) (1989).

(25) 53 Pa. Stat. Ann. Sec. 14-401 (1989).

(26) Prince, 321 U.S. at 166-67.

(27) 650 P.2d 459 (Ariz. 1982).

(28) Id. at 460.

(29) Id. at 463, 465.