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School Immunization Law

Funding and Policy Issues

A Report to the 1999 Minnesota Legislature

1500 Highway 36 West
Roseville, Minnesota 55113
(651) 582-8452

MINNESOTA
DEPARTMENT OF
*Children,
Families
&
Learning*

Disease Prevention and Control/Acute Disease Prevention Services
717 S.E. Delaware Street, PO Box 9441
Minneapolis, Minnesota 55440-9441
(612) 676-5237
December 1998



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Art. 2 Sec. 107

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School Immunization Law Funding and Policy Issues

December, 1998

For more information, contact:

Acute Disease Prevention Services Section
Minnesota Department of Health
717 S.E. Delaware Street, P.O. Box 9441
Minneapolis, Minnesota 55441

Phone: (612) 676-5237

Fax: (612) 676-5689

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The School Immunization Law – Funding and Policy Issues

Executive Summary

The 1998 Legislature charged the Minnesota Department of Health (MDH) and the Minnesota Department of Children, Families and Learning (DCFL) with developing recommendations on how to provide ongoing funding to school districts to implement Minnesota's School Immunization Law. MDH and DCFL convened a work group to identify costs, issues, and funding options.

Key findings of the work group include:

- Immunization is one of the greatest success stories of public health and preventive medicine in the U.S. The School Immunization Law assures high levels of immunizations in school children.
- Enforcing the School Immunization Law is increasingly complex and time-consuming for schools.
- Responsibilities for schools to assure required immunizations have increased over the last several years. No funding has ever been specifically provided for this purpose.
- Enforcing the School Immunization Law diverts school nurses from fulfilling a growing number of other student health concerns.
- Immunization issues are growing more complex. New technology such as immunization registries, offers possibilities to improve immunization rates and potentially reduce the burden on schools.

Accordingly, the Work Group recommends the following:

1. Funding should be identified for schools to support school activities to achieve compliance with the School Immunization Law (M.S. 121A.15). Because this is a public health issue, the work group recommends any funding considered for including in the Health and Human Services budget be distributed to schools through the Minnesota Department of Children, Families and Learning. This appropriation should be part of a larger immunization package supporting local and statewide public health immunization activities.
2. Funds awarded to schools for the School Immunization Law should be used for review of immunization records to determine compliance, assistance to students in obtaining documentation of previously received immunizations, and assistance to students in getting additional needed immunizations.
3. Funds granted to schools should use a formula based on total student population and immunization rates as measured by the MDH Kindergarten Retrospective Survey or other appropriate tool that assesses immunization rates. An annual report of activities supported by the funding should be required.
4. Long-term strategies to improve immunization rates for Minnesota children should be supported by collaboration and funding. These long-term strategies include: public/private collaboration, coordination of school and public health activities, continued development of community immunization registries, and assistance to child care providers in meeting requirements of the Immunization Law.

Comprehensive School Health

It has long been recognized that the health of the student directly impacts their educational success. The original focus of school health services dates back to the 19th century when schools began to address communicable diseases and resultant school attendance problems.¹ Over the years, the role of the school's health services has grown increasingly complex.

All in a Day's Work

A 5-year-old student with diabetes arrives at school on the first day. Along with determining entering students' immunization status the school nurse must plan for this child's blood sugar checks, insulin shots, and mid-day snacks. All school staff, including the bus driver, need to be trained about possible diabetic reaction symptoms and the necessary response in order to insure this student's safety.

Today, school health services operate within the educational setting with the purpose of reducing health related barriers to learning. Within the past decade the health needs of students have grown significantly. Students with special health care needs such as diabetes, seizure disorders, life threatening allergic reactions, and severe asthma need individually developed and implemented plans, medication management, nursing procedures, and staff training to ensure their safety and to promote their learning.

In addition, today's students have issues of substance abuse, physical and sexual abuse, eating disorders, chronic illness, homelessness, grief and depression. Comprehensive school health programs are necessary to address these issues.

Increased health needs of students and increased immunization demands are challenging limited and dwindling school district resources.

"Short of complete eradication, a reduction in a disease's incidence is temporary and immunization must be continually emphasized." *Healthy People 2000*, U.S. Public Health Service.

School Immunization Requirements in Minnesota

The Minnesota School Immunization Law was first passed in 1967. At that time, many states were encouraged to enact measles requirements as part of a national effort to improve measles control. In the late 1960s and early 1970s, measles was a disease primarily of unvaccinated school-age children. In studies of states without measles immunization requirements, measles incidence rates were from 1.7 to 2.0 times higher than states that had such laws².

Minnesota's School Immunization Law has been amended many times over the years to remain consistent with current immunization recommendations and to address gaps identified through enforcement. To summarize, the various provisions of the law and the year they became effective are as follows:

- ▶ 1967: measles for kindergartners (K)
- ▶ 1973: added rubella (K) and included day care enrollees *
- ▶ 1978: added polio, diphtheria, tetanus, and pertussis (DTP), and mumps (K)
- ▶ 1980: expanded to include all grades, K through 12
- ▶ 1989: expanded to include Early Childhood Special Education (ECSE) children
- ▶ 1992: added MMR#2 (grades 7&12; 7-12 by 1996-97); and Hib (for *Haemophilus influenzae* type b disease, a major cause of meningitis in young children) for children in child care and ECSE
- ▶ 1996: added Td booster (grades 7&12; 7-12 by 1998-99)
- ▶ 2000: added hepatitis B (K only)
- ▶ 2001: expanded hepatitis B (grades K and 7)

Show me the record!

A school nurse attempted to obtain documentation of complete immunization for a student whose family had recently moved into the district from a nearby city. The family's 1st grade child was missing the school booster DTP. After numerous contacts from the school nurse, the mom finally became convinced that documentation of the additional shot would bring the child into compliance with the law; however, neither the child's current clinic nor the parent had a record. Not remembering the name of the child's previous clinic, the mom said she could probably find it if she drove the route that she remembered. Fortunately, this trip provided the necessary documentation of the child's up-to-date status for DTP and no further shots were needed.

In summary, the requirements of the law require that in order to enroll or remain enrolled in any elementary or secondary school, the parent/guardian of a student must have a statement on file with the school administrator that shows that the student is either:

- ▶ completely immunized against diphtheria, tetanus, pertussis, polio, measles, mumps, and rubella, hepatitis B or
- ▶ immunized against measles, mumps, and rubella and has begun, but not yet completed, a schedule of immunizations against diphtheria, tetanus, pertussis, polio, and/or hepatitis B as verified by a physician or clinic, or

* While not the subject of this report, the work group discussed a few issues related to immunization requirements for children in child care as one part of assuring on-time immunizations.

-
- ▶ legally exempt to one or more of the required immunizations, as evidenced by either a statement of medical exemption signed by a physician or a notarized statement of conscientious exemption signed by the parent or guardian of the student.

The Growing Complexity of Enforcing Immunization Requirements

Immunization recommendations are issued by national advisory groups such as the U.S. Public Health Service Advisory Committee on Immunization Practices (ACIP) and the American Academy of Pediatrics (AAP) Committee on Infectious Diseases. Recently, the MDH Immunization Practices Task Force has taken an active role in adopting and refining these recommendations for children, adolescents, and adults who reside in Minnesota.

Can you translate “Zauški”?

“We have foreign exchange students who are never current on the Td or MMR requirements to meet our law. The records are difficult, if not impossible, to decipher and take a lot of time.”

The initial recommendations for vaccination of infants and children called for vaccines to prevent diphtheria, tetanus, and pertussis (i.e., whooping cough). These “baby shots” were joined by polio vaccines, first developed in the 1950s, and then vaccines to prevent measles, mumps, and rubella, developed in the 1960s.

Since that time, the number of new vaccines and changes in immunization scheduling have been accelerating at a fast pace. During the 1970s, there were no changes and in the next nine years, 1980-1988, there was only one change. But during the five-year period of 1989-93, 12 new vaccines or scheduling changes occurred, and in the five years since then, there have been 14 additional changes. As a result of these changes, the delivery of immunization services and effective record-keeping has become increasingly complex.

For schools, the job of enforcing the School Immunization Law has grown as the immunization schedule has evolved. Not only that, but records are more difficult to track down and read because there are more foreign students whose records need translation and who are almost always in need of additional immunizations. Over 2% of Minnesota students move to Minnesota from another state during the school year. Many of those students will have had immunizations required by the Minnesota law; however, having documentation that accompanies the student usually requires considerable school effort. An additional 8% of Minnesota students move from one school district to another during the year. Again, most of these students will be up-to-date on their immunizations. Most schools, however, spend hours each year tracking the information from clinics and schools. Getting information from health clinics is complicated by the increasingly complex health care system and an estimated 20% of the metro residents who change health plans each year. Finally, school staff often must inform and educate health care providers, as well as parents, of the current recommendations of the immunization schedule and School Immunization Law requirements as they change and grow more complicated.

Immunization Registries

In response to the growing difficulty of maintaining accurate, up-to-date immunization records, the U.S. Centers for Disease Prevention and Control, health care provider groups, health insurance plans, and public health agencies nation-wide are developing better methods to more easily keep track of what immunizations were given. These immunization registries help parents and providers know when immunizations are needed and provide reports for child care, schools, children's camps, and sports events. In Minnesota, immunization record management and improving immunization rates in preschoolers is being supported by the community immunization registry. This is a collaborative regional venture by public health agencies, private providers, and schools to share their immunization records and create a consolidated immunization record for each child in that region. That way, no matter where a child went for shots or where they will go in the future, both the parents and their health care provider will have access to a complete and accurate record. These registries contain only immunization data and the minimum individual information needed to correctly identify a child. They do not use this information for any purpose than immunization assessment and to improve immunization services to families.

Immunization registries are an evolving tool being implemented across the country to support immunization activities and improve immunization rates. In Minnesota, community immunization registries are partially or fully operational in at least 50 Minnesota counties as of September 1, 1998. Four community registries are near completion or being expanded to include more counties. When complete, these four registries will include over 70% of births and over half of the state's immunization providers.

Further development of community immunization registries depends on continued investment of public health leaders, health care providers, health care plans, and community support.

The Future of Immunizations

There are currently three vaccines recommended for children that are not part of the School Immunization Law requirements: varicella (chickenpox), influenza, and hepatitis A. Children in child care facilities could benefit from the recently licensed vaccine to prevent rotavirus, the most common cause of severe diarrhea in young children, which is recommended for routine administration in all infants. Two other vaccines, one to prevent Lyme disease and another to prevent invasive pneumococcal disease, are anticipated to be licensed in 1999. With these many developments in biotechnology and immunology comes the promise of many additional vaccines in the near future to protect against diseases old and new, ranging from malaria to acquired immunodeficiency syndrome (AIDS).

Along with the development of new vaccines has come the issue of assuring their full use in infants and children. The present schedule calls for a minimum of 13 separate injections to completely vaccinate a child from birth to 6 years of age. Some clinic visits may call for three or four injections to be given on the same visit. This has led the vaccine industry to propose

combining various vaccines. At least three different combination vaccines have been licensed in the last several years (e.g., DTP/Hib, DTaP/Hib, Hib/HBV) and many more are in development. While this represents a much awaited strategy for reducing additional injections, it also adds to the confusion faced by providers and parents. Ultimately, the long-term goal for childhood vaccination is the dream of a single oral dose of vaccine, given at birth, to protect against all childhood diseases³. This dream, however, will be long in coming, if ever. In the meantime, parents, health care providers, and schools must deal with the growing number and complexity of the recommended immunizations.

The Legislative Charge

A bill to provide categorical aid for student health services was developed by the School Nurses Association of Minnesota and introduced in the 1998 Minnesota legislature. The bill requested \$50 for every student enrolled in 1st grade (a total of \$3,150,000) which would then be used to support the costs of implementing the state's School Immunization Law.

Call Waiting?

A metropolitan school nurse made 281 phone calls to parents from her home during evening hours to try to obtain immunization documentation for students. Evening hours seemed to work better because her day was already too full with other student health needs and often parents weren't home to take calls until evening. Of these calls, she was only able to connect with 102 parents due to language difficulties, wrong numbers, or no one at home.

talked about costs and requested additional information. Minnesota Session Laws, Chapter 407,

Time is money ...

A student in a rural school district needed his fourth dose of polio vaccine. The nurse had a 10-minute conference with the parent, a 30-minute home visit, a 20-minute discussion with the parent at school, and spent 50 minutes calling the clinic, urgent care, two public health offices, and a daycare. Five letters were sent to the parent over a two-month period until the parent finally took the child to a clinic for the vaccination.

families, and learning shall consider the recommendations and any draft legislation needed to implement the recommendations shall be submitted to the chairs of the senate health and family security budget division, the house health and human services finance division, the senate K-12 education budget division, and the house K-12 education finance division by December 15, 1998."

The bill was heard by the House K-12 Education Finance Committee but was not passed by the full legislature. Also during the 1998 session, requirements for completion of a three-dose series of hepatitis B vaccination were added to the School Immunization Law for kindergartners starting with school year 2000-01 and 7th graders starting in school year 2001-02. During discussions of this issue, the Health and Human Services Budget Conference Committee

1998, Article 2, Section 107 was subsequently enacted, stating: "The commissioner of health, in consultation with the commissioner of children, families, and learning, representatives of school nurses, and other interested parties, shall develop recommendations on how to provide ongoing funding for school districts to implement the provisions of Minnesota Statutes, section 123.70 (recodified as 121A.15). These recommendations shall specify any statutory changes needed for their implementation. The commissioners of health and of children,

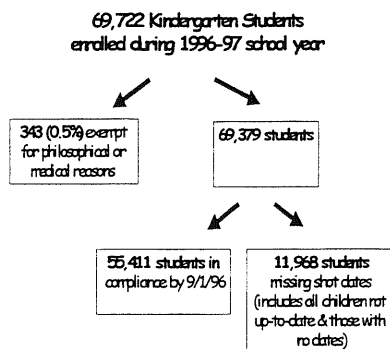
School Immunization Law Funding Work Group

During the summer and fall of 1998, MDH and DCFL convened an ad hoc work group to respond to the legislative charge and to help formulate the costs of implementation of the state's School Immunization Law for elementary and secondary schools. The work group was comprised of staff from schools, local public health agencies, the Minnesota Department of Human Services, local immunization registry developers, school boards, the Minnesota Council of Health Plans, the Minnesota Nurses Association, the School Nurses Organization of Minnesota and the University of Minnesota college health service, among others. A complete listing of the participants can be found in the attachments.

Some of the key issues that the work group addressed included:

- ▶ What are the successes that have come from having school immunization requirements in the last 30-plus years?
- ▶ What are the necessary elements of ensuring adherence to the state's immunization requirements?
- ▶ What are the costs to schools to administer the law?
- ▶ How can and should immunization registries be used to aid in enforcement?
- ▶ Who should bear the responsibility for enforcement?
- ▶ Is the present system of enforcement adequately supported (e.g., funding, policy, etc.)?
- ▶ If funds were appropriated, what would be the best way to distribute them to schools?

Immunization Status of Minnesota Children



MDH, in collaboration with schools and local public health agencies, conducted a survey of all children (n=69,772) in kindergarten during the 1996-97 school year to determine their immunization status from birth to time of entry to school. The majority of these children were born in either 1990 or 1991. Results from this survey indicate:

- ▶ 68% of kindergartners in Minnesota had completed their primary series of vaccinations: four doses of diphtheria, tetanus and pertussis (DTP), three doses of polio, and one measles, mumps, and rubella (MMR) by 24 months.
- ▶ Vaccine coverage levels varied with the child's age—coverage levels dropped as age in months increased because more doses of vaccine were required to be up to date.

-
- ▶ In every county/city area surveyed there were geographic “pockets of need”—areas where a high percentage of children were inadequately immunized.
 - ▶ White students had higher average immunization levels than all non-white student averages.
 - ▶ 15% of students were not fully immunized on their first day of kindergarten.

It is important to remember that focusing on the percent of children who were “up-to-date” at any one age point can be misleading because it doesn’t represent the actual number of children who are behind. For example, 79% of children in Washington County were up-to-date at 24 months, however, there were still over 500 children who were not age-appropriately immunized there. Consequently, a significant risk of disease transmission still exists in this community. In comparison, while the rate for Mahnomon County (in rural northwest Minnesota) was much lower (64%), there were only 35 children who were behind. Finally, it is important to remember that 68% of children up-to-date statewide translates to over 22,300 children *not appropriately* immunized by age 24 months. A listing of immunization levels in each Minnesota county can be found as attachment B.

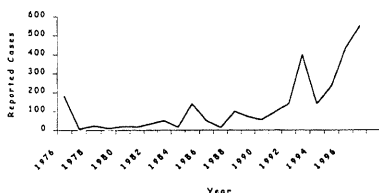
The primary purpose for collecting these data was to retrospectively measure immunization coverage levels for two-year-olds. Fortunately, it is also possible to look at older age points, and to quantify the number of children not in compliance with the immunization school law. The figure to the left shows how many children statewide were up-to-date with the doses required by law for kindergarten entry by September 1, 1996. As was demonstrated with the data on two-year-olds, there were pockets of need within every school district and the actual number of kindergartners not in compliance tended to be greater in large districts.

There is much interest in knowing the vaccination status of students who will be required to show documentation of hepatitis B vaccination when the amended law takes effect. The vaccine, licensed in 1981, was initially recommended for persons with certain risk factors. When this strategy failed to have significant impact on the incidence of disease, national recommendations were issued to routinely vaccinate all infants as well as assessing and vaccinating adolescents. It has taken several years for this recommendation to become generally accepted by physicians and parents. Many providers hesitate to adopt routine vaccination as part of the standard of care until it has been incorporated into the School Immunization Law. Although national surveys have shown recent improvements in hepatitis B immunization levels for Minnesota children who were 19 to 35 months of age (25% in 1994; 77% in 1997), these rates lag behind other vaccinations that are included in the law. As a consequence, many children entering kindergarten in 2000-01 as well as students entering 7th grade in 2001-02 school year will not have completed this three-dose series.

Vaccine-Preventable Disease in Minnesota

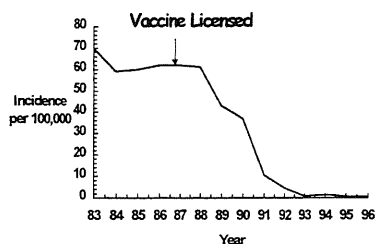
High vaccination levels among school children are important for the control of vaccine-preventable diseases. Four points summarize why vaccination of school children is important.

Reported Pertussis in Minnesota
1976 - 1997



- ▶ Vaccine-preventable diseases can result in serious disease, and at times death. For example, during an outbreak of measles in Minnesota in 1990, 462 cases were reported, and three deaths occurred.
- ▶ In 1997, 547 cases of pertussis (whooping cough) were reported in Minnesota. Thirty-five children (61% of the 57 affected infants less than 6 months of age) were hospitalized. National data indicate a 1.3% case fatality rate among infants with pertussis. During the last six years in Minnesota, there have been three infant deaths attributable to pertussis. Older children can serve as a reservoir for transmission to the younger age groups and controlling pertussis among school children is a public health priority.

Reported *Haemophilus influenzae* type B
Minnesota, 1983-1996



- ▶ The high correlation between vaccination and disease is illustrated by the rapid decline in vaccine-preventable disease following vaccine availability. Significant declines in disease incidence were noted after the widespread use of both polio and measles vaccines. In 1983, before vaccination was readily available, 235 cases of *Haemophilus influenzae* type b disease, a major cause of meningitis in young children, were reported in Minnesota children less than 5 years of age. By the early 1990s less than 30 cases were reported in children each year due to widespread use of the Hib vaccine, and in 1997, only two cases were reported. Conversely, resurgence of vaccine-preventable diseases has been observed when vaccination rates have declined in a population. For example, over 125,000 cases of diphtheria were reported in the early 1990s in the New Independent States of the former Soviet Union. This outbreak was associated with a decline in public health infrastructure and the subsequent decline in vaccination rates.

School Outbreak:

In 1997, an outbreak of pertussis occurred in a K-12 school in Minnesota. Thirty cases were identified; 23 of the cases were students in the school. No cases occurred in children up through 5th grade since most of these children were fully vaccinated; however, six cases occurred in grades 6-8 and 17 cases occurred in grades 9-12, the age group where the vaccine is less effective. This outbreak illustrated that high vaccination rates protected younger students. Adolescent boosters (once appropriate vaccine formulations are available) will be recommended so that older students can be protected.

- ▶ High vaccination rates are needed within school settings due to the relatively close and prolonged contact of students. In the school-age population, the pertussis vaccine is most effective for children between 5 and 12 years old. After age 12, immunity to pertussis wanes and most adolescents are susceptible.

Expenditures for Health Services in Schools

Reported 1996-97 public expenditures for health services from public school districts totaled \$29,418,680; those for non-public schools who requested services from the school district totaled \$2,302,327. This amounts to an average of \$34.84 per public school student and \$28.22 for non-public school students. The range of funding was from \$0 to \$115.44. It is important to note, however, that 59 public school districts, representing 17% of districts and 5% of students spent less than \$10 per student and 56 private schools, representing 26% of private schools and 6% of private school students spent less than \$10 per student. On the other hand, 15 school districts spent more than \$50 per student, representing 4% of districts and 30% of students. Only one private school spent more than \$50 per student.

School health expenditures are not specifically identified in school funding. Each school district can make decisions about how funds are to be spent and in what proportion for school health activities. Schools, however, must comply with Minnesota Statutes 121A.21 which describe school health services. It states:

- (a) Every school board must provide services to promote the health of its pupils.
- (b) The board of a district with 1,000 pupils or more in average daily membership in early childhood family education, preschool handicapped, elementary, and secondary programs must comply with the requirements of this paragraph. It may use one or a combination of the following methods:
 - (1) employ personnel, including at least one full-time equivalent licensed school nurse or continue to employ a registered nurse not yet certified as a public health nurse as defined in section 145A.02, subdivision 18, who is enrolled in a program that would lead to certification within four years of August 1, 1988;

(2) contract with a public or private health organization or another public agency for personnel during the regular school year, determined appropriate by the board, who are currently licensed under chapter 148 and who are certified public health nurses; or

(3) enter into another arrangement approved by the commissioner.

As changes to the School Immunization Law continue into the future, schools will continue to struggle with providing a full range of school health services while also assuring compliance with the law. With the addition of new vaccines, and especially vaccines that are recommended for school-age children, school involvement in implementation of the School Immunization Law will only increase. Increasing amounts of educational resources are being spent to achieve compliance with the law. At the same time, schools are challenged to provide emergency care plans, medication management, and staff training.

Costs of Implementing the Law

The work group carefully examined the many tasks involved in achieving full enforcement of the law, such as reviewing student immunization records, following-up with missing information, and making certain that documentation of additional immunizations is submitted for children who are not in compliance with the law's requirements. To do this, data were obtained from DCFL reporting systems to determine the numbers of students that would be governed by the law in a given year. These enrollment data were separated into cohorts that represented different groups of students (e.g., transfer students, students entering 7th grade, etc.) that would require additional contacts to determine compliance.

The number and percent of students in the various groupings that would be in need of additional follow-up, such as for missing documentation or for additional immunizations, was determined based on assessment data submitted to MDH from schools statewide (e.g., annual reporting on compliance levels for students in grades K-12, retrospective surveys of K enrollees) as well as from experience in other states. Cost information was determined by multiplying the time spent on all of these activities by an average hourly wage of \$18 for a school staff member.

The complete analysis showed that costs to schools are nearly \$5 million (\$4,983,963) to fully support the all activities for implementing and enforcing the School Immunization Law. This analysis can be found as attachment C.

Recommendations of the Work Group

The work group made recommendations in five areas to respond to the charge of assessing current costs, developing a funding strategy, and considering immunization issues for the future.

Recommendation #1: Funding should be identified for schools to support school activities to achieve compliance with the School Immunization Law (M.S. 121A.15). Because this is a public health issue, the work group recommends any funding considered for inclusion in the Health and Human Services budget be distributed to schools through the Minnesota Department of Children, Families and Learning. This appropriation should be part of a larger immunization package supporting local and statewide public health immunization activities.

Rationale: Schools provide an important public health service by assuring children meet immunization requirements. Without the oversight and investment of schools in assessing all children for their compliance with the School Immunization Law and helping those who need additional shots, many children would be un-immunized and thus in danger of being infected with a vaccine-preventable disease. The public health protections of the School Immunization Law should be continued and new, proven vaccines should be continually evaluated by the Minnesota Department of Health through its Immunization Practices Task Force to determine if new vaccines should be added to the requirements.

Nearly 900,000 student immunization records were reviewed to determine compliance with the School Immunization Law for the 1997-98 school year.

Although schools' responsibilities and time investments in assessing and achieving compliance with the School Immunization Law have grown -- particularly in the past few years -- funding for these activities has not. Schools spend increasing amounts of school health resources for achieving compliance

with the School Immunization Law, and are therefore reducing time spent on other health programs. Because the benefits of high immunization rates for school children also support community public health goals, the funding for school activities related to the School Immunization Law are appropriately funded through the state's health budget.

School efforts to achieve compliance with the School Immunization Law will only be successful through overall public and private health efforts to immunize children on time starting at birth. Stable, ongoing funding to the public health system is needed to support health care provider education, information for new and experienced parents about immunizations and the immunization schedule, and coordination of community efforts to identify and reduce barriers to timely immunizations. Funding for school activities in immunizations needs to be seen as part of a package of activities to achieve high immunization levels for all Minnesota children.

The work group evaluated the total amount of time spent on achieving compliance with the school law - estimated to be at least 264,000 hours by school year 2001. The work group

determined that funding is needed by schools to support activities associated with achieving compliance with the School Immunization Law, including record review, documentation follow-up, and assistance to students in obtaining additional needed immunizations. The work group agreed the funding should not be used to support increased immunization clinics in schools as that is not a requirement of the School Immunization Law. Based on the work group assessment, the funding level to support these activities is approximately \$5,000,000.

The School Immunization Law began as a requirement for kindergartners as they entered school and was relatively easy to administer in the early years. Over time, changes to the law have meant that children from birth to age 22 are included. Also, additional vaccines are required in additional grades, increasing numbers of students are from other states or countries with different immunization requirements, and the immunization schedule has grown more complex. Schools spend increasing amounts of time on this important public health activity without corresponding funds. An appropriation reflecting the total costs of achieving compliance would assure all components of the School Immunization Law are addressed. This investment in Minnesota children assures schools have the resources to assist children and families in need of support.

Recommendation #2: Funds awarded to schools for the School Immunization Law should be used for review of immunization records to determine compliance, assistance to students in obtaining documentation of previously received immunizations, and assistance to students in getting additional needed immunizations.

Rationale: The work group identified three primary tasks schools perform and estimated the time each takes as follows:

- RECORD REVIEW** (determining whether the student has the complete documentation for the required immunizations).

These activities include reviewing the immunization record (or request for exemption) of the student and deciding if the student is in compliance with the current School Immunization Law. The work group estimated it takes approximately 10 minutes per student to complete this activity. Supporting activity would include expenses of appropriate school staff education about immunizations, vaccines, and School Immunization Law requirements; computer programming; and data entry.
- DOCUMENTATION FOLLOW-UP** of previously received immunizations (assessing needs and assisting students without complete documentation to obtain confirmation that the required immunization has been given)

Any student who does not have complete documentation of all required immunizations needs additional documentation follow-up. If the parent or provider is sure the immunization has been given, the school may help the parent obtain the documentation. The work group estimated documentation follow-up averages one hour per student. This requires intensive staff time involving activities such as individual tracking, data management, parent contacts and referrals, clinic contacts, and multiple long distance calls to locate missing portions of immunization records. This process is complicated and often duplicated each time students change schools. In addition,

schools must provide resources such as interpreters, AT&T language line, and even transportation.

- ❑ **IMMUNIZATION FOLLOW-UP** to assess and assist those children who are in need of additional immunizations.

Activities in this category include staff time and supportive services for notifying parents and providers of needed immunizations, arranging visits to immunization providers, providing follow-up to the student/provider to obtain confirmation that the immunization has been given, providing reminders about additional shots in a series, use of interpreters or translators and/or the AT&T language line.

Recommendation #3: Funds granted to schools should use a formula based on total student population and immunization rates as measured by the MDH Kindergarten Retrospective Survey or other appropriate tool that assesses immunization rates. An annual report of activities should be required.

Rationale: Because all school districts are required to implement the School Immunization Law, all schools should receive funding without participating in a competitive grant process. The proposed formula would therefore increase funding available to all school districts.

Schools are currently required to submit an annual report describing student immunization rates. That report should be modified to include summary information about implementing the School Immunization Law and use of the funds. The report may include examples of typical activities of the school, unusual or difficult problems encountered, successes in achieving compliance, and new barriers encountered. Schools should be encouraged to gather and report information about the number of records reviewed, the number of students needing assistance in obtaining documentation, and the number needing assistance in obtaining additional immunizations. This information is important to ongoing understanding of difficulties schools have in implementing the School Immunization Law. It's important to note that many of the components of the cost of implementing the School Immunization Law are based on estimates which will need to be supported by documentation in the future.

Recommendation #4: Long-term strategies to improve immunization rates for Minnesota children should be supported by collaboration and funding. These long-term strategies include: public/private collaboration, coordination of school and local public health activities, continued development of community immunization registries, and assistance to child care providers in meeting requirements of the Immunization Law.

Rationale: School efforts for improving immunization rates assist children who fell through the cracks in other systems. Most immunizations occur prior to kindergarten. Successful community-based strategies that improve immunization rates will ultimately reduce the amount of time and effort schools devote to immunization-related activities.

- ▶ **Public/private collaboration:** Over 90% of immunizations are provided by the private sector in

Minnesota. This means physicians, clinic nurses, hospitals, and other immunization providers need accurate, timely, ongoing information about immunization issues. The MDH Immunization Hotline receives over 17,000 calls annually, mostly from health care providers with questions about the immunization schedule. In addition, local public health agency efforts to work with populations faced with barriers of cost, transportation, language differences, and lack of awareness of immunization requirements need to be coordinated with private sector activities. Federal funding was available in the early 90s to support local efforts in these areas. That funding is no longer available and MDH's federal grant is being reduced an additional 28% for 1999, limiting efforts to support collaborative efforts. Stable, ongoing funding for state and local public health immunization programs is needed to assure activities don't start and stop and providers become frustrated with a lack of support for their efforts.

- ▶ **Coordination of school and local public health efforts:** Schools need to be involved with local public health agency activities to achieve higher immunization rates in the community. Local public health agencies need to be aware of school activities and challenges in monitoring compliance with the School Immunization Law. In many communities, this coordination already occurs. Other communities can learn from these successful efforts to build on mutual interests around immunizations. Opportunities to share successful strategies and develop closer collaboration is needed.
- ▶ **Continued development of community immunization registries:** Immunization registries offer a cost-effective and efficient means of streamlining what is now a tedious, arduous, and staff-intensive task. Recent national data suggest registries manage immunization records at one-fourth the cost of clinics managing their paper records.⁴ Such a cost-benefit analysis supports the use of this powerful tool to improve and streamline the secure exchange of immunization records for school entrance.

Community immunization registries gather information about the immunizations of children in a community. This information is available to parents, schools, and providers to identify the children needing assistance to be in compliance with the School Immunization Law, and provide accurate documentation for school records. In addition, the community immunization registry will help parents and providers improve immunization levels in infants and toddlers - the primary target group for immunizations. If children are immunized according to the recommended immunization schedule, schools will see a considerable reduction in time spent on activities related to the School Immunization Law.

Community immunization registries are in the early stages of development, and most will not have complete records on 5- to 6-year-olds for several years. Also, they do not exist in every region of the state at present because they are created locally, based on local needs and resources. That means the benefits to all schools would not be realized for some time. Lastly, registries will not be able to assist with out-of-state or out-of-country transfer students until registries across the country are able to securely exchange information with each other.

The work group believes the issues of consent and data privacy must be addressed to assure parents are appropriately involved in the decision to enroll their child in a community immunization registry and that the data must be used only for improving immunization rates. Legislation addressing these concerns is needed in the near future to assure the momentum of developing community immunization registries is continued.

The work group supports funding for local public health efforts to develop community immunization registries, improve access to immunizations in their communities, and increase immunization levels - particularly for infants and toddlers. The work group also recommends funding for the Minnesota

Department of Health to support efforts of local public health agencies, provide technical assistance to the development of community immunization registries, and assist schools in achieving compliance with the School Immunization Law. This is necessary to assure the immunization safety net is working in Minnesota.

- ▶ **Assistance to child care providers in meeting requirements of the Immunization Law:** Although the work group recognized the contribution of child care providers in achieving high immunization rates and compliance with the Immunization Law, the work group did not have the time or information to adequately assess the needs of these providers or the children in child care. As children are increasingly cared for in locations in which they are in contact with many other children, the need for high immunization rates in infants and toddlers becomes even more important. The changing needs of child care providers, many of whom have little or no information about the immunization schedule and the requirements for assessing compliance with the immunization law, needs to be addressed in the near future. The work group recommends the Minnesota Departments of Health, Human Services, and Children, Families, and Learning develop a plan to address this unmet need. The departments will need to consult with community representatives as well as child care providers and parents as these needs are considered and possible solutions are developed.

As new vaccines are introduced to the schedule or new populations are recommended for boosters of existing vaccines, schools may see their activities move in new directions or increase. The work group recommends this issue be continually evaluated.

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Attachment A

School Law Funding Work Group

Minn Dept of Children, Families & Learning
1500 Highway 36 West
Roseville, MN 55113-4266

Debbykay Peterson
Early Childhood, Family & Community Support
Screening/Learning Readiness
651/582-8426
email: debbykay.peterson@state.mn.us

Mary Thissen-Milder, Ph.D., Director
Coordinated School Health
651/582-8452; FAX 651/582-8495
email: mary.thissen-milder@state.mn.us

Minnesota Department of Health
717 Delaware Street SE
P.O. Box 9441
Minneapolis, MN 55440-9441

Aggie Leitheiser, R.N., M.P.H., Director
Disease Prevention & Control
623-5363; FAX 623-5666
email: aggie.leitheiser@health.state.mn.us

Kristine Moore, M.D., M.P.H., Med Director
Disease Prevention & Control and
Assistant State Epidemiologist
623-5414; FAX 623-5743
email: kristine.moore@health.state.mn.us

Martha Arnold, School Nurse
School Nurses Organization of Minnesota
Chisago Lakes Area Schools – ISD 2144
114811 Kost Dam Road
North Branch, MN 55056
(home) 651/583-2722; (ofc) 651/213-2515
FAX: 651/213-2550
email: mjarnold1@aol.com

Carol Berg
UCare Minnesota
2550 University Avenue West, Suite 201-S
St. Paul, MN 55114
651/603-5363; FAX: 651/603-0650
email: cberg@ucare.org

Deb Corhouse
MN School Board Association
1900 West Jefferson
St. Peter, MN 56082
333-8577; 507/931-2450
email: dcorhouse@msba.mnmsba.org

Jodi Eiesland
Metro Immunization Registry
3335 Humboldt Avenue South
Minneapolis, MN 55408
612/824-9268; FAX 612/348-6239
email: jodi.eiesland@co.hennepin.mn.us

Ed Ehlinger, M.D., Work Group Chair and Director
Boynton Health Service
University of Minnesota
410 Church Street Southeast
Minneapolis, MN 55455
612/625-1612; FAX 612/625-1434
email: eehlinger@vax.bhs.umn.edu

Ann Hoxie
School Nurses Organization of Minnesota
St. Paul Schools – ISD 626
360 Colborne Street
St. Paul, MN 55102
(home) 651/698-6834; 651/228-4711; FAX 293-5415
email: ahoxie@mail.stpaul.k12.mn.us

Dale Jensen, Don & Eric Ewald
MN Assoc of School Administrators
1884 Como Avenue
St. Paul, MN 55108
651/645-6272

Rep Alice Johnson
539 State Office Building
St. Paul, MN 55155
(home) 786-2025; (ofc) 296-5510; FAX 296-4165
email: rep.Alice.Johnson@house.leg.state.mn.us

Tom Kelleher
Capitol Hill Associates
525 Park Street
St. Paul, MN 55101
293-0229; FAX 293-1709

Sen Jane Krentz
14177 Paris Avenue North
May Township (Wash Co), MN 55082
430-2983; (ofc) 296-7061
email: sen.jane.krentz@senate.leg.state.mn.us

Bob Meeks
MN School Board Association
1900 West Jefferson
St. Peter, MN 56082
333-8577; 507/931-2450
email: bmeeks@msba.mnmsba.org

Pat Mielke
Benton County Public Health
1646 Highway 23E
St. Cloud, MN 56304
320/253-8440; FAX 320/253-7274

Colleen Olson
Minnesota Dept of Human Services
Performance Mngmnt & Quality Improvement
444 Lafayette Road North
St. Paul, MN 55155-3865
651/282-6648; FAX 215-5754
email: colleen.olson@state.mn.us

Rep Alice Seagren
9730 Palmer Circle
Bloomington, MN 55437
(home) 612/835-6721; (ofc) 651/296-7803
FAX 651/296-8803
email: rep.Alice.Seagren@house.leg.state.mn.us

Sue Stout and Diane O'Connor
Minnesota Nurses Association
1295 Bandana Square, Suite 140
St. Paul, MN 55108
646-4807; FAX 647-5301
email: susanstout@mnnurses.org

Gloria Tobias, PHN
Countryside Public Health
422 5th Avenue, Suite 305
Madison, MN 56256
320/598-7313; FAX: 320/598-7730
email: none

Robyn Widley
Minnesota Dept of Children, Fam & Learning
Early Childhood Special Education
303 Capitol Square, 550 Cedar Street
St. Paul, MN 55101-2273
651/296-5007; FAX 651/296-5076
email: robyn.widley@state.mn.us

Nancy Wille
Community Health Service of Goodhue Co
419 Bush Street
Red Wing, MN 55066
612/385-6464; FAX:

Liz Zeno, LSN
Health Service Area Leader
Minneapolis Public Schools
4336 Lyndale Avenue North
Minneapolis, MN 55412
612/588-8083
email: lzeno@mpls.k12.mn.us

Laura Plummer Zrust
Minnesota Department of Human Services
Division of Licensing
444 Lafayette Road
St. Paul, MN 55155-3842
651/296-3024
email: Laura.Zrust@state.mn.us

Sue Zuidema and Allain Hankey
Hennepin County Community Health Dept.
525 Portland Avenue
Minneapolis, MN 55415
348-6753; FAX
email: Sue.Zuidema@co.hennepin.mn.us

Additional Guests in Attendance

Esther Tatley, LSN, MPH
North St. Paul Maplewood Oakdale School District

Marty Randle, Sara Mullett, Cecelia DuPlessis Erickson,
Minneapolis School District

Paddy Danaher, Washington County Public Health

Other invited participants and guests:

LaDonna Bergeson, School Nurse
Worthington School District
13885 Center Drive
Spirit Lake, Iowa 51360
712/336-4023

Cyndy Silkworth
White Bear School District
Central Middle School
4857 Bloom Avenue
White Bear Lake, MN 55110
651/653-2901; FAX 651/653-2885
email: silkworth@compuserve.com

Nancy Moyer
South St. Paul School District
Kaposia Education Center
1225 1st Avenue South
South St. Paul, MN 55075
451-9844
email: nancy_moye@sostpaul.k12.mn.us

Mary Swanson (98-99 SNOM President)
Robbinsdale School District
Armstrong High School
10635 36th Avenue North
Plymouth, MN 55441
504-8809; FAX 504-8831
email: mswanson@eta.k12.mn.us

Barb Stahl, PHN
Early Childhood Directors Association
450 No. Syndicate, Suite 5
St. Paul, MN 55104-4125
603-6853

Donna Forster, President
Mn Licensed Family Child Care Providers
1910 West County Road B, Room 147
Roseville, MN 55113
636-1989

Don Genereux
MN Elementary School Principal Assoc.
4505 Robin Circle
Minneapolis, MN 55422
537-2570 (home)

Joann Knuth, Principal
Highland Park Senior High
MN Assoc of Secondary School Principals
1015 South Snelling Avenue
St. Paul, MN 55116
293-8934; (home) 786-8468

Jim Koppel, Director
Children's Defense Fund of Minnesota
550 Rice Street, Suite 104
St. Paul, MN 55113
227-6121; FAX 227-2553

James Nordin, M.D., Co-Chair
MN Council of Health Plans Imm Task Force
HealthPartners, 205 South Wabasha Street
St. Paul, MN 55107
293-8166; FAX
email: James.D.Nordin@HealthPartners.com

Sen Martha Robertson (R-45)
2000 Indian Road
Minnetonka, MN 55305
545-3715; (ofc) 296-4314
email: sen.martha.robertson@senate.leg.state.mn.us

Rep Nora Slawik (DFL-57A)
1142 Marnie Court
Maplewood, MN 55119
738-7099; (ofc) 296-7807; FAX 296-4165
email: rep.Nora.Slawik@house.leg.state.mn.us

Steve Williams
Especially for Children
(Minnesota Child Care Association)
5223 West 73rd
Edina, MN 55439

MDH Staff:

Kelli Johnson, Executive Office
Marty LaVenture, Disease Prevention & Control
Susan Ersted, Acute Disease Prevention
Mary Manning, Disease Prevention & Control
Bill Brand, Acute Disease Prevention
Jan Forfang, Epidemiology Field Services
Jane Harper, Acute Disease Prevention
Alan Lifson, Acute Disease Prevention
Cheryl Norton, Acute Disease Prevention
Diane Peterson, Acute Disease Prevention
Cheryl Smoot, Family Health Division
Claudia Miller, Acute Disease Epidemiology
Cara Macken-Atchison, Family Health Division

Special Advisors:

- Don Gemberling
Department of Administration
- Terry O'Brien
Attorney General Office
- Barry Sullivan and Tom Melcher
DCFL

December 15, 1998

Retrospective Kindergarten Immunization Survey, 1996-97

County/City	Kindergarten Enrollment	Goal 1 % UTD* 4 Mos	Goal 2 % UTD* 6 Mos	Goal 3 % UTD* 8 Mos	Goal 4 % UTD* 17 Mos	Goal 5 % UTD* 20 Mos	% UTD* 24 Mos
Aitkin	154	88	77	66	65	50	63
Anoka	4,586	93	86	78	68	56	67
Becker	377	87	77	66	55	50	67
Beltrami	662	86	69	57	54	46	62
Benton	555	93	85	74	68	59	73
Big Stone	81	90	63	53	62	48	74
Bloomington	987	93	86	80	70	53	65
Blue Earth	786	96	88	82	78	70	80
Brown	430	93	85	77	73	64	78
Carlton	536	91	81	69	65	56	72
Carver	1,003	97	91	85	76	63	77
Cass	414	86	70	55	51	49	63
Chippewa	128	88	76	59	57	45	67
Chisago	680	91	81	71	65	53	68
Clay	718	91	81	71	63	55	65
Clearwater	121	79	71	58	51	46	59
Cook	56	98	88	73	66	57	75
Cottonwood	173	85	68	64	57	49	65
Crow Wing	786	89	78	66	62	54	69
Dakota	5,488	95	89	82	72	63	76
Dodge	268	90	81	68	64	53	66
Douglas	434	87	75	63	59	49	67
Edina	686	95	93	88	75	59	73
Faribault	223	91	79	66	61	60	74
Fillmore	351	83	73	64	58	64	72
Freeborn	345	87	74	66	57	45	62
Goodhue	643	92	84	73	64	57	73
Grant	76	90	74	57	62	51	70
Hennepin [not including Mpls.]	7,846	94	89	83	77	60	73
Houston	304	95	85	77	64	57	75
Hubbard	183	90	73	56	51	42	60
Isanti	379	90	83	70	59	48	61
Itasca	561	91	77	68	59	55	69
Jackson	152	86	53	61	63	49	62
Kanabec	195	89	74	61	54	43	57
Kandiyohi	570	91	80	70	62	53	66
Kittson	71	80	73	63	61	51	70
Koochiching	232	86	74	59	47	45	60
Lac Qui Parle	87	94	83	63	62	43	58
Lake	142	87	75	59	58	44	61
Lake of the Woods	60	95	78	53	62	33	73
LeSueur	326	88	77	68	63	48	66
Lincoln	43	88	77	67	54	63	72
Lyon	425	94	81	69	58	54	74
Mahnomen	97	88	77	67	68	56	64
Marshall	136	92	81	65	59	43	64
Martin	309	91	77	64	60	46	65
McLeod	537	89	76	61	59	49	65

Retrospective Kindergarten Immunization Survey, 1996-97

County/City	Kindergarten Enrollment	Goal 1 % UTD* 4 Mos	Goal 2 % UTD* 6 Mos	Goal 3 % UTD* 8 Mos	Goal 4 % UTD* 17 Mos	Goal 5 % UTD* 20 Mos	% UTD* 24 Mos
Meeker	283	89	75	64	63	49	67
Mille Lacs	477	87	72	58	57	43	58
Minneapolis	5,129	72	59	48	43	34	45
Morrison	500	86	71	59	59	58	71
Mower	483	85	72	55	52	48	65
Murray	118	85	53	64	59	48	65
Nicollet	197	94	88	79	76	67	77
Nobles	282	86	59	68	67	61	73
Norman	102	80	67	60	52	45	59
Olmsted	1,703	94	89	79	79	70	81
Otter Tail	697	93	81	71	60	42	58
Pennington	173	88	72	53	47	38	57
Pine	304	86	69	54	48	37	54
Pipestone	194	94	79	67	59	52	71
Polk	495	89	75	61	54	50	66
Pope	125	86	73	58	54	41	59
Ramsey [not including St. Paul]	3,190	94	88	80	74	65	78
Red Lake	63	86	67	48	46	37	65
Redwood	313	92	79	66	69	60	76
Renville	169	90	77	64	68	59	74
Rice	637	93	80	69	61	56	70
Richfield	418	93	85	79	74	54	71
Rock	130	93	90	78	72	68	79
Roseau	282	83	67	50	58	37	64
Scott	1,446	95	89	82	73	62	78
Sherburne	1,212	93	85	74	69	57	70
Sibley	209	86	75	63	64	60	69
St. Louis	2,402	91	82	70	67	55	69
St. Paul	4,811	78	64	54	53	43	57
Stearns	1,708	92	84	74	68	63	77
Steele	533	87	80	71	64	57	71
Stevens	120	89	82	67	53	51	65
Swift	219	88	73	58	56	46	60
Todd	295	87	71	55	55	41	60
Traverse	55	78	58	47	49	42	60
Wabasha	308	94	85	70	62	57	73
Wadena	237	93	77	61	59	43	63
Waseca	265	92	82	72	64	53	72
Washington	2,596	95	89	81	75	65	79
Watsonwan	188	86	67	61	53	44	56
Wilkin	110	83	69	54	52	41	54
Winona	632	92	83	72	64	62	75
Wright	1,454	92	84	74	67	56	71
Yellow Medicine	106	86	75	65	59	50	71
Statewide	69,772	90	80	71	65	55	68

Attachment C

Projected Costs of Schools for Implementation of the Minnesota School Immunization Law Based on Requirements for DTP/Td, Polio, MMR, and Hepatitis B

	A	B	C	D	E	F	G	H	I	J	L	M
1	Group	Number of Students	Record Review (1)		Documentation Follow-Up (2)				Immunization Follow-Up (3)			
2			Percent Assessed	No. of Records	% given follow-up	No. of Students	No. of contacts	Total no. contacts	Percent needing follow-up	No. of students	No. of contacts	Total no. of contacts
3												
4	ECSE: 0-2 yrs	2,800	100%	2,800	25%	700	1	700	19.8%	554	1	554
5	ECSE: 3-5 yrs	11,100	100%	11,100	20%	2,220	1	2,220	18.0%	1,998	1	1,998
6	Children entering kindergarten	71,000	100%	71,000	15%	10,650	2	21,300	15.0%	10,650	2	21,300
7	Students entering grade 7	73,930	100%	73,930	30%	22,179	2	44,358	42.0%	31,051	2	62,101
8	Transfer from within state - day #1	30,800	100%	30,800	25%	7,700	1	7,700	1.5%	462	1	462
9	Transfer from within state - year	42,000	100%	42,000	25%	10,500	1	10,500	1.5%	630	1	630
10	Transfer from out-of-state - day #1	11,600	100%	11,600	80%	9,280	1	9,280	50.0%	5,800	1	5,800
11	Transfer from out-of-state - year	11,200	100%	11,200	80%	8,960	1	8,960	50.0%	5,600	1	5,600
12	Out-of-country transfers	4,400	100%	4,400	100%	4,400	2	8,800	98.0%	4,312	2	8,624
13	Total	258,830		258,830		76,589		113,818		61,057		107,070
14	Average cost per unit of activity:			\$3.00				\$18.00				\$18.00
15	Total Cost of Activity			\$776,490				\$2,048,724				\$1,927,253
16	Records management for all K-12 (4)	925,983	\$0.25	\$231,496					Total projected cost:			\$4,983,963
17	(1) Record review: physically reviewing records and determining whether student is in compliance or not (@\$18/hr x 10 minutes/record)											
18	(2) Documentation follow-up: contacting parents, clinics, schools both in- and out-of-state, etc. to find student's record (@\$18/hr x 1 hour/contact).											
19	(3) Immunization follow-up: making referrals, tracking three times for completion of series, getting info from clinics, assessing imm needs,											
20	contacting parents, etc. (\$18/hr x 1 hour/contact).											
21	(4) Records Management: completing AISR for MDH (@ \$0.25/student record).											
22	Column B: rows 6, 7, & 16: 1997-98 enrollment and non-public based on the number requesting health services for 96-97; rows 8-12: 1994-95 enrollment data (public only)											
23	Column E: estimated											
24	Column I: I4-I6: 1996-97 retrospective kg imm study; I7: experience of state of Florida; I8 & I9: 1997-98 statewide imm status report to MDH.											