SCHOOL IMMUNIZATIONS: RATES AND REQUIREMENTS

Immunization Surveillance Coordinator
Division of Disease Control

SCHOOL VACCINATION LAWS ARE THE NORM, IN THE US

Have been in state laws since the 1800s
Since 1980, all 50 states require vaccination prior to school entry

• They are considered an essential part of keeping children safe in school settings
• They help achieve high vaccination rates

NORTH DAKOTA STATE IMMUNIZATION LAW

23-07-17.1. Inoculation required before admission to school.
1. All students through grade 12 must meet a minimum number of required immunizations prior to school entrance.
   • These apply to public, private, and homeschooled students, as well as child care facilities.
   • According to ND Century Code, each institutional authority and district superintendent is legally responsible for excluding non-compliant students.
   • The school district and individual school employees may be liable for harm to students injured if a non-compliant student is allowed to attend school and spreads a vaccine-preventable disease to compliant students as a result of the employees’ failure to comply with state immunization laws.
   • In addition, DPI can impose sanctions on schools that do not exclude non-compliant students ($1000 penalty per occurrence).
2021-2022 SCHOOL VACCINATION REQUIREMENTS

<table>
<thead>
<tr>
<th>Vaccine Type</th>
<th>Kindergarten – Grade 6</th>
<th>Grades 7-10</th>
<th>Grade 11-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTaP/DTP/DT/Tdap/Td</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>IPV/OPV</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>MMR</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Varicella (Chickenpox)</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Meningococcal (MCV4)</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Tdap</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

COMMUNITY IMMUNITY
AKA HERD IMMUNITY

Disease Type R<sub>_0</sub> HIT

Herd Immunity Threshold and Reproduction Rate for Some Vaccine-Preventable Diseases

<table>
<thead>
<tr>
<th>Disease</th>
<th>Type</th>
<th>R&lt;sub&gt;_0&lt;/sub&gt;</th>
<th>HIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphtheria</td>
<td>Droplet</td>
<td>6-7</td>
<td>85%</td>
</tr>
<tr>
<td>Pertussis</td>
<td>Droplet</td>
<td>12-17</td>
<td>92-94%</td>
</tr>
<tr>
<td>Mumps</td>
<td>Droplet</td>
<td>4-7</td>
<td>75-86%</td>
</tr>
<tr>
<td>Rubella</td>
<td>Droplet</td>
<td>5-7</td>
<td>83-85%</td>
</tr>
<tr>
<td>Polio</td>
<td>Fecal-oral</td>
<td>5-7</td>
<td>80-86%</td>
</tr>
</tbody>
</table>

Source: NIAID

Fine et al, 1993; CDC
Many Rely on Herd Immunity

- Contraindications
  - Anaphylactic Allergy
  - Immunosuppressed
  - Age
  - Vaccines are not 100% effective

WHY SCHOOL VACCINES ARE IMPORTANT

Measles
- Each case of measles can infect up to 18 susceptible people, making it one of the most contagious diseases.
- Measles is a very serious illness. In recent outbreaks, nearly half of children have required hospitalization.
- For every 1000 measles cases, 1-2 will die
- Over 100,000 people, mostly children, die from measles every year
- The Herd Immunity Threshold for measles is 95%

Disease | Exclusion Period
--- | ---
Chickenpox | Until blisters have dried and no new blisters have started for 24 hours-usually takes about 5-6 days.
Measles | Until 4 days after rash appears. Unvaccinated students 21 days from last measles case in school.
Influenza | Until child is fever free for 24 hours without the use of fever reducing meds.
Meningococcal Meningitis | Until at least 24 hours after antibiotic therapy was started.
Mumps | Until five days after parotitis onset.
Pertussis | Until five days after appropriate antibiotic therapy was started or 21 days after symptoms onset.
Rubella | Until seven days after rash onset.
SCHOOL EXCLUSION DUE TO ILLNESS

- Students may claim exemptions to vaccination requirements.
- Personal Belief (philosophical, moral, religious)
- History of Disease (requires health professional signature)
- Medical (requires health professional signature)

In the event that there is a case of measles in a school:
- Students who do not meet the vaccination requirements will be excluded for 21 days after the last case of measles.
- Based on the incubation period of seven to 21 days.
- Student will be excluded beginning on the fifth day after exposure.

EXEMPTIONS

- **Medical**: Requires certificate signed by physician.
- **History of disease**: Requires a certificate signed by a physician.
- **Available for varicella, MMR, and hepatitis B**
- **Personal belief & religious**: Requires certificate signed by parent/guardian.

EXCLUSION DUE TO NON-COMPLIANCE

- Parents of students who are not up to date with required immunizations or do not have an immunization record on file should be notified of the missing record or of which immunizations their children need to receive at the start of school.
- Parents have until **October 1st** to comply with requirements.
- After this, the child should be excluded from school.
- It is the school's responsibility to enforce the vaccination requirements and exclusion.
School Survey

SCHOOL SURVEY

- Each year, the North Dakota Department of Health gathers school immunization rates through the school survey.
- Determines the percent of children attending school who are up to date on school required vaccines.
- These rates are self-reported by schools and participation is mandatory.
- The NDDoH validates the survey by collecting a random sample of school immunization records and reviewing them to determine immunization and exemption rates.
- If validated data is within a 2% confidence interval, then self-reported data is reported to CDC.
- North Dakota is required to report kindergarten results to the Centers for Disease Control (CDC).

VALIDATION PROCESS

- The NDDoH validates the survey by collecting a sample of school immunization records selected by the CDC and reviewing them individually to determine immunization and exemption rates.
- If validated data is within a 2% confidence interval, then self-reported data is reported to CDC.
HISTORICAL SCHOOL IMMUNIZATION RATES

HISTORICAL TREND: KINDERGARTEN IMMUNIZATION RATES 2020-2021

- MMR  93.32%
- Polio  93.27%
- DTaP  93.09%
- Hepatitis B  94.99%
- Chickenpox  93.22%
National Kindergarten Entry Rates Compared to North Dakota Rates, 2020-2021

HISTORICAL TREND: PERSONAL BELIEF EXEMPTIONS

Percent of ND Kindergartners with Personal Belief Exemptions (Philosophical, Moral, and Religious)

7th Grade
HISTORICAL TREND: 7TH GRADE RATES 2020-2021
- Tdap 91.24%
- Meningococcal 90.57%
- Polio 96.17%
- MMR 96.30%
- Hepatitis B 96.60%
- Varicella 96.00%

HISTORICAL DATA: 11TH GRADE RATES 2020-2021

2021-2022 SCHOOL IMMUNIZATION RATES
Kindergarten Immunization Rates and Trends 2021-2022

- MMR: 92.23%
- Polio: 92.28%
- DTaP: 92.01%
- Hepatitis B: 94.17%
- Chickenpox: 91.88%
MAP OF COUNTY MMR RATES

- 95-100%
- 90-94%
- 0-89%

Range: 75.00% - 100%

Kindergarten MMR Rates, by County

EXEMPTION RATES

- Philosophical/Moral Exemption: 3.34%
- Religious Exemption: 1.26%
- Medical Exemption: 0.19%

Kindergarten Exemption Rates

KINDERGARTEN EXEMPTION RATES 2021-2022
- Philosophical/Moral Exemption: 3.34%
- Religious Exemption: 1.26%
- Medical Exemption: 0.19%
PERSONAL BELIEF EXEMPTIONS

PRIVATE SCHOOL VS. PUBLIC SCHOOL

Public School – 92.56%
Private School – 85.44%

PUBLIC VS. PRIVATE
PRIVATE SCHOOL VS. PUBLIC SCHOOL

Public School – 4.22%
Private School – 8.48%

Kindergarten MMR Personal Belief Exemption Rates by School Type

7TH GRADE RATES 2021-2022

- Tdap 89.48%
- Meningococcal 88.82%
- Polio 94.88%
- MMR 94.44%
- Hepatitis B 94.60%
- Varicella 94.63%
11th Grade Coverage Rates for all Required Vaccines

EXCLUDING VS. NON EXCLUDING
PERCENT OF NORTH DAKOTA SCHOOLS EXCLUDING STUDENTS FOR NON-COMPLIANCE, DURING THE 2021-2022 SCHOOL YEAR

2021-2022 RATES FOR EXCLUDING SCHOOLS VS. NON EXCLUDING SCHOOLS

2021-2022 MMR IMMUNIZATION STATUS OF KINDERGARTEN STUDENTS
What Can I Do to Increase Rates?

REMINDER/RECALL
- Recall letters for children who are not up to date on immunizations.
- Reminders for children who will need immunizations.

School Module
- School Student List Report
- School Coverage Rate Report
- School Student Exemption Report
- School Student Not Up-to-Date Report
- School Student Immunization Record Report
ACTIVITY PHYSICALS

- Be sure to give MCV4, Tdap, HPV, and any other necessary vaccines at sports physicals!
- This is a great way to catch students that may not have an appointment to get vaccinated.
- If you can’t vaccinate at these appointments at least check if up-to-date in NDII and print out forecaster.

SCHOOL LOCATED IMMUNIZATION CLINICS

- Local Public Health Units and private providers throughout North Dakota hold immunization clinics in schools.
- Great way to get students in school up to date on immunizations!
- Usually offer flu and seventh grade immunizations.
- Some offer kindergarten immunizations.
- Nurses from Local Public Health Units or local clinics come to the schools.
- Often the best way to reach children in rural areas.
- Many times during flu clinics adults can be vaccinated there as well.

WHERE CAN I FIND THIS DATA?

- [https://www.health.nd.gov/immunize/schools-and-childcare](https://www.health.nd.gov/immunize/schools-and-childcare)
• Post-test
  • Nurses interested in continuing education credit, visit https://ndhealth.co1.qualtrics.com/jfe/form/SV_3pXJTWXzwEiQELeS
  • Successfully complete the five-question post-test to receive your certificate
  • Credit for this session available until June 7, 2022
  • This presentation will be posted to our website: www.health.nd.gov/immunize

NORTH DAKOTA IMMUNIZATION PROGRAM

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