



Calculating Immunization Rates for Child Cares and Schools

Using the Colorado Immunization Information System

In May 2014, the Colorado General Assembly passed House Bill 14-1288 (HB-1288). Signed by Governor Hickenlooper, HB-1288 took effect on July 1, 2014. Per HB-1288, “each school¹ shall make the immunization and exemption rates of their enrolled student population publicly available, upon request” and the Colorado Department of Public Health and Environment shall, “provide assistance to schools with the analysis and interpretation of the immunization data.”

This guide explains how to use CIIS to calculate an immunization rate for child cares or schools. *Please note: CIIS strictly follows the current Advisory Committee on Immunization Practices (ACIP) recommended immunization schedule. CIIS does not take into account the ACIP catch-up schedules for 0 - 18 year olds.*

In order to run the CIIS Immunization Rates report for your school or child care, your CIIS user account must be associated with the school or child care where you work. After you log-in to CIIS, the home screen will show which facilities your user account is associated with:

WELCOME TO THE COLORADO IMMUNIZATION INFORMATION SYSTEM SCHOOL APPLICATION

If your CIIS account is associated with more than one school or child care, you will be able to select these locations from the drop down menus.

Default Provider/Clinic	
Provider	School District
COLORADO SCHOOL DISTRICT	ASPEN 1
Clinic	School
COLORADO SCHOOL	ASPEN ELEMENTARY SCHOOL

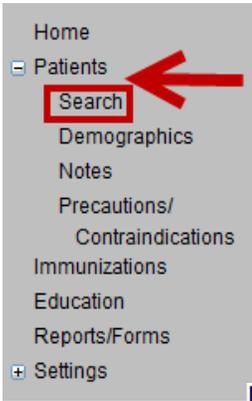
If your account is not associated correctly or is only associated with a generic “Colorado School District” and “Colorado School,” please contact Megan Berry to update your account settings prior to proceeding.

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To run a CIIS *Immunization Rates* report for your school or child care, you must first enroll all your students in your school or child care through the CIIS *Education* module.

¹ Defined as a public, private, or parochial nursery school, day care center, child care facility, family child care home, foster care home, Head Start program, kindergarten, or elementary or secondary school through grade twelve, or a college or university. “School” does not include a public services short-term child care facility as defined in section 26-6-102 (6.7), C.R.S., a guest child care facility as defined in section 26-6-102 (5), C.R.S., a ski school as defined in section 26-6-103.5 (6), C.R.S., or college or university courses which are offered off-campus; or are offered to nontraditional adult students, as defined by the governing board of the institution; or are offered at colleges or universities which do not have residence hall facilities.

Step 1: Student Enrollment



1. Log-in to CIIS at <https://ciis.state.co.us/school>.
2. In the left hand menu, click *Patient* and then *Search* to search for a child.
3. Enter the first few letters of the child's first name and the date of birth in the *Search Criteria* box, then click *Search*.
4. Select the child by clicking on the radio button to the left of his/her name.
5. Click the *Education* button located below the search results.

Search Criteria

Patient ID	Identifier Type	Identifier Value		
<input type="text"/>	<input type="text"/>	<input type="text"/>		
Last Name	First Name	Middle Name	DOB	Gender
<input type="text"/>	KAL	<input type="text"/>	01/28/2000	<input type="text"/>
<input type="button" value="Previous Criteria"/>		<input type="button" value="Clear"/>		<input type="button" value="Search"/>

Search Results - 1 record(s)

	ID	Name	Gender	DOB	School	
<input checked="" type="radio"/>	3856673	TEST, KALI HALLEY	F	01/28/2000		<input type="button" value="?"/>
<input type="button" value="Demographics"/>		<input type="button" value="Precautions / Contraindications"/>		<input type="button" value="Notes"/>		<input type="button" value="Immunizations"/>
<input type="button" value="Education"/>						

6. On the Education screen, click *Add School Enrollment* to enroll a child at your site.

Note: If you enroll a child in a new school or child care, CIIS will automatically un-enroll the child from his/her previous site and add him/her to your site. If you want to see all students enrolled at your site, you can run the Student Roster report located in the *Reports/Forms* module in CIIS. For instructions with this report, please see pages 8-9.

Education

Click "View" to see the details of an existing record or "Add School Enrollment" to create a new record.

View TEST, KARA (444393) DOB: 06/07/2006 AG

School District	School	Enrollment Date	Unenrollment Date	FERPA Date	
Aspen 1	ASPEN COMMUNITY CHARTER SCHOOL	07/26/2013		07/26/2013	<input type="button" value="?"/> <input type="button" value="View"/>

If a child is already enrolled at a school or child care, please do not add a new enrollment location, unless the child no longer attends the old facility.

7. Select the school or child care the child attends from the drop down menus and enter the date the child was enrolled at this site in the Enrollment Date box. Complete the other fields if the information is available.

Add TEST, KALI (3856673) DOB: 01/28/2000 AGE: 14Y 4M 20D

Create Cancel

School District
 ASPEN 1

School
 ASPEN ELEMENTARY SCHOOL

Author
 LORIN SCOTT-OKERBLOM

Student ID Enrollment Date Unenrolled Date Grade Level
 225671 06/17/2014 [calendar icon] [calendar icon] 8

Comments

FERPA Consent

Date Method Relationship

Create Cancel

Note: Schools are required to follow the Family Education Rights and Privacy Act (FERPA) regulations when entering information into CIIS. The FERPA fields can be used to record consent information. *Child cares do not need to complete this section.*

8. Click the *Create* button to save this enrollment information. If you are ready to enroll another child at your school or child care, return to Step 2 in this process. Continue these steps for each enrollment until all of your students are enrolled in your school or child care.

Step 2: Run the *Immunization Rates* Report

Once you have enrolled all the children at your school or child care, you can run the Immunization Rates report.

- Home
- + Patients
- Immunizations
- Education
- Reports/Forms**
- + Settings

1. Click on the *Reports/Forms* link in the left-hand menu.
2. In the School Nurse section, click on the *Immunization Rates* link.

School Nurse

- Immunization Rates** ←
- Student Grade Advancement
- Student Roster

3. Complete the *Report Selection Criteria*.
 - a. Select your school or child care location from the drop down menu.
 - b. Select *Appropriate Statistics Summary* for *Report Type*.

Report Selection Criteria

School District
 CHILDREN'S DAY CARE

School
 CHILDREN'S DAY CARE

Report Type

Appropriate Statistics Summary

Patients not Properly Immunized Detail

4. Choose the age range you would like to review; enter this information in the *Age Range* boxes. Make sure you choose the correct *Unit of Measurement (UOM)*. You can enter the age in months or years.
 - c. If you are a school with grades K-12, please enter information in the *Grade Range* filter and *Age Range* filter.
5. In the *As of Date Range*, enter the date you are running the report in both the *From* and *Through* boxes. This will calculate the immunization rate for your site between these dates.

Age Range			As Of Date Range		
From: <input type="text" value="16"/>	Through: <input type="text" value="18"/>	UOM: <input type="text" value="MONTHS"/>	From: <input type="text" value="10/19/2015"/>	Through: <input type="text" value="10/19/2015"/>	
Grade Range					
From <input type="text"/>	Through <input type="text"/>				

6. Using the Immunization Rates Chart below, review the number of required doses for each vaccine for your selected age range.

Example: If you are reviewing children 16, 17 and/or 18 months of age from the chart, 2 doses of Hep B, 3 doses of DTaP, 2 doses of Polio, 1 dose of MMR (and so on) are required for the child to be considered up- to-date. *Be sure to review the entire row from left to right so you capture all required vaccines.*

See chart on next page.

Note: The Immunization Rates Chart is used **ONLY** to calculate the immunization rates using the minimum required doses for children to be up to date. In order for a child to be protected from disease, make sure the ACIP Immunization Schedule is followed. Please visit this website for more information on the immunization schedule: <http://www.cdc.gov/vaccines/schedules/easy-to-read/index.html>

Age of Child	Hep B <i>Hepatitis B</i>	DT, DTP, or DTaP, Tdap <i>Diphtheria, Tetanus, & Pertussis</i>	IPV <i>Inactivated Polio Vaccine</i>	MMR <i>Measles, Mumps, & Rubella</i>	Varicella <i>Chickenpox</i>	Hib <i>Haemophilus influenzae type b</i>	PCV7 or PCV13 <i>Pneumococcal Disease</i>
	Minimum # of required doses	Minimum # of required doses	Minimum # of required doses	Minimum # of required doses	Minimum # of required doses	Minimum # of required doses	Minimum # of required doses
0 , 1 or 2 months	1	0	0	0	0	0	0
3 or 4 months	2	1	1	0	0	1	1
5 or 6 months	2	2	2	0	0	2	2
7-15 months	2	3	2	0	0	3 [^]	3 [°]
16-18 months	2	3	2	1	1	4 [^]	4 [°]
19-47 months	3	4	3	1	1	4 [^]	4 [°]
4-6 years	3	5* SEE NOTE	4	1	1	4 [^]	4 [°]
7-12 years	3	3* SEE NOTE	4+	2	2	0	0
13 - 18 years	3	1 Tdap* SEE NOTE	4+	2	2	0	0

*Five doses of pertussis, tetanus, and diphtheria vaccines are required at school entry in Colorado unless the 4th dose was given at 48 months of age or older (i.e., on or after the 4th birthday) in which case only 4 doses are required. There must be at least 4 weeks between dose 1 and dose 2, at least 4 weeks between dose 2 and dose 3, ideally six months (but at least 4 months) between dose 3 and dose 4, and at least 6 months between dose 4 and dose 5. The final dose must be given no sooner than 4 years of age (dose 4 may be given at 12 months of age provided there is at least 4 months between dose 3 and dose 4). Once a student turns 7 years of age, the student must show evidence of 3 appropriately spaced tetanus/diphtheria containing vaccines (DT, DTaP, Td, Tdap). Once a student turns 13 years of age, the student must show evidence of at least one tetanus/diphtheria containing vaccine (Tdap) in addition to the primary series.

[^]The number of Hib doses required depends on the child's current age and the age when the Hib vaccine was administered. If any dose is given at or over 15 months, the Hib requirement is met. For children who begin the series before 12 months, 3 doses are required, of which at least 1 dose must be administered at, or over, 12 months. If the 1st dose was given at 12 to 14 months, 2 doses are required. If the current age is 5 years or older, no new or additional doses are required. The number of doses and the intervals may vary depending on the type of Hib vaccine.

[°]The number of doses of pneumococcal conjugate vaccine (PCV13) depends on the student's current age and the age when the 1st dose was administered. If the 1st dose was administered between 2 to 6 months of age, the child will receive 3 doses (2, 4 & 6 months) at least 4 -8 weeks apart, and booster dose between 12 - 15 months, at least 8 weeks after last dose. If started between 7 to 11 months of age, the child will receive 2 doses, at least 8 weeks apart, and a booster dose between 12 to 15 months of age. If the 1st dose was given between 12 to 23 months of age, 2 doses, at least 8 weeks apart, is required. Any dose given at 24 months through 4 years of age, the PCV vaccine requirement is met. No doses are required once the child turns 5 years of age.

The first dose of MMR, vaccine given more than 4 days before the 1st birthday is not a valid dose and cannot be accepted. ACIP recommends that the 1st dose of MMR be given between 12 -15 months of age. The student is out of compliance if no record of MMR at 16 months of age.

Four doses of polio vaccine are required at school entry in Colorado. There must be at least 4 weeks between dose 1 and dose 2, at least 4 weeks between dose 2 and dose 3, and at least 6 months between dose 3 and dose 4. The final dose must be given no sooner than 4 years of age. A fourth dose is not required if the 3rd dose was administered at age 4 years or older and at least 6 months after the 2nd dose.

If a child has had chickenpox disease and it is documented by a health care provider, that child has met the varicella requirement. Varicella given more than 4 days before the 1st birthday is not a valid dose and cannot be accepted. ACIP recommends 1st dose between 12 - 15 months. The student is out of compliance if 1st dose not given at 16 months of age.

The Hep B vaccine is the only immunization that can be given as a birth dose. The 2nd dose of Hep B is to be given at least 4 weeks after the 1st dose; 3rd dose to be given at least 16 weeks (4 months) after 1st dose; and last dose to be given at least 8 weeks after 2nd dose at 24 weeks of age or older.

The 4 day Grace Period: there is a 4 day grace period for age and interval. For example, a student should get the 4th DTaP at 4 years of age. Using the 4 day grace period, you can accept a DTaP as long as that dose was given no more than 4 days before s/he turned 4 years of age.

Note: Some children may be up-to-date on their vaccinations, even if they do not have the required number of doses for each vaccine. Please use the above footnotes for more guidance.

7. Based on your review in Step 6, enter the number of required doses for your selected age range in the Doses by Vaccine Series boxes on the Report Selection Criteria screen in CIIS.

- a. Following the example above, you would enter 3 in the DTaP/Tdap box because the chart states the number of required DTaP doses for 16-18 month olds is 3.

8. After you have entered everything in the *Report Selection Criteria*, click the *Run Report* button.

DTaP/Tdap 3	Hepatitis A 0	Hepatitis B 2	HIB 4
HPV 0	Influenza 0	Meningococcal 0	MMR 1
Pneumococcal 4	Polio 2	Rotavirus 0	Varicella 1
Tdap (Or Pertussis Containing) 0			

The system will generate the Immunization Rates - Appropriate Immunizations report as a PDF in a new window. This report will show:

- The total number of children in the age group you selected. (Total Patients)
- The total number of children in this age group who are up-to-date on their immunizations along with the percentage of children who are up-to-date.
- The total number of children in this age group who are NOT up-to-date on their immunizations along with the percentage of children who are not up-to-date.
- A breakdown of up-to-date numbers and percentages by vaccine.



June 18, 2014

Immunization Rates Appropriate Immunizations

School District = Children's Day Care, School = Children's Day Care, DTaP/Tdap Series Count = 4, HepB Series Count = 3, HIB Series Count = 4, MMR Series Count = 1, PCV7 Series Count = 4, Polio Series Count = 3, Varicella Series Count = 1, / 06/11

	Full Data Set	Compliance Criteria Subset
Total Patients	4	
Total INACTIVE Patients	0	
Adjusted Total Patients	4	
Patients GIVEN appropriate number of doses of all indicated antigens	1 (25.00)	()
Patients NOT GIVEN appropriate number of doses of all indicated antigens	3 (75.00)	()
Children Given the following vaccine combinations:		
Patients with at least 4 valid doses in the Tetanus containing/Tdap vaccine series	3 (75.00)	()
Patients with at least 3 valid doses in the Polio vaccine series	3 (75.00)	()
Patients with at least 1 valid doses in the MMR/Measles vaccine series	3 (75.00)	()
Patients with at least 4 valid doses in the Hib vaccine series	3 (75.00)	()
Patients with at least 3 valid doses in the HEPB vaccine series	2 (50.00)	()
Patients with at least 1 valid doses in the Varicella(CPOX) vaccine series	4 (100.00)	()
Patients with at least 4 valid doses in the Pneumo vaccine series	1 (25.00)	()

Total number of children in this age group

Total number of children in this age group that are up-to-date on their immunizations.

As noted in the Immunization Rates Chart on page 5, immunization requirements differ based on the child's age. If multiple age groups attend your facility, you need to run a CIIS *Immunization Rates* report for each age group individually and tally the total for your entire facility.

Example: If you have children aged 4 months through 4 years at your child care center, you will need to run the *CIIS Immunization Rates* report for the following age groups: 3-4 months, 5-6 months, 7-15 months, 16-18 months, 19-47 months and 4-6 years. These reports will show you the number of children who are up-to-date in each age group.

To calculate the immunization rates for your entire facility (all age groups combined):

- Add up the total number of children at your facility.
- Add up the total number of children from each age group who are up-to-date on their immunizations.
- Use the box below to calculate your facility's overall immunization rate.

Up-to-Date Immunization Rate:

$$\begin{array}{r} \text{Total number of children up-to-date: } \underline{\hspace{2cm}} \\ \div \\ \text{Total number of children: } \underline{\hspace{2cm}} \\ = \underline{\hspace{2cm}} \times 100 = \boxed{\hspace{2cm}}\% \end{array}$$

Currently, there is no way for schools or child cares to calculate exemption rates in CIIS. To calculate exemption rates for your facility:

- Add up the total number of children at your facility.
- Add up the total number of children that have exemptions.

Exemption Rate:

$$\begin{array}{r} \text{Total number of children with exemptions: } \underline{\hspace{2cm}} \\ \div \\ \text{Total number of children: } \underline{\hspace{2cm}} \\ = \underline{\hspace{2cm}} \times 100 = \boxed{\hspace{2cm}}\% \end{array}$$

Student Roster Report Instructions

You can run the Student Roster report to see enrolled students in CIIS.

1. Click on the *Reports/Forms* link in the left-hand menu.
2. In the *School Nurse* section, click on the *Student Roster* link.

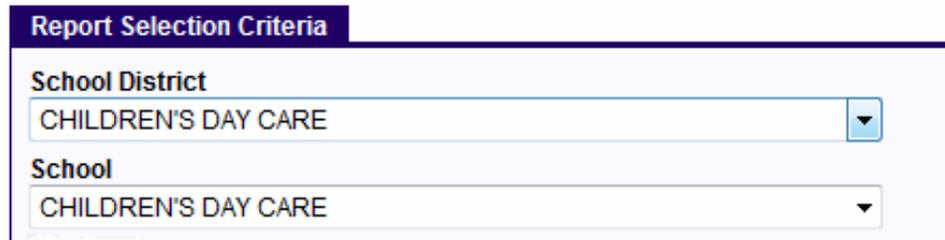


Home
+ Patients
Immunizations
Education
Reports/Forms
+ Settings



School Nurse
Immunization Rates
Student Grade Advancement
Student Roster

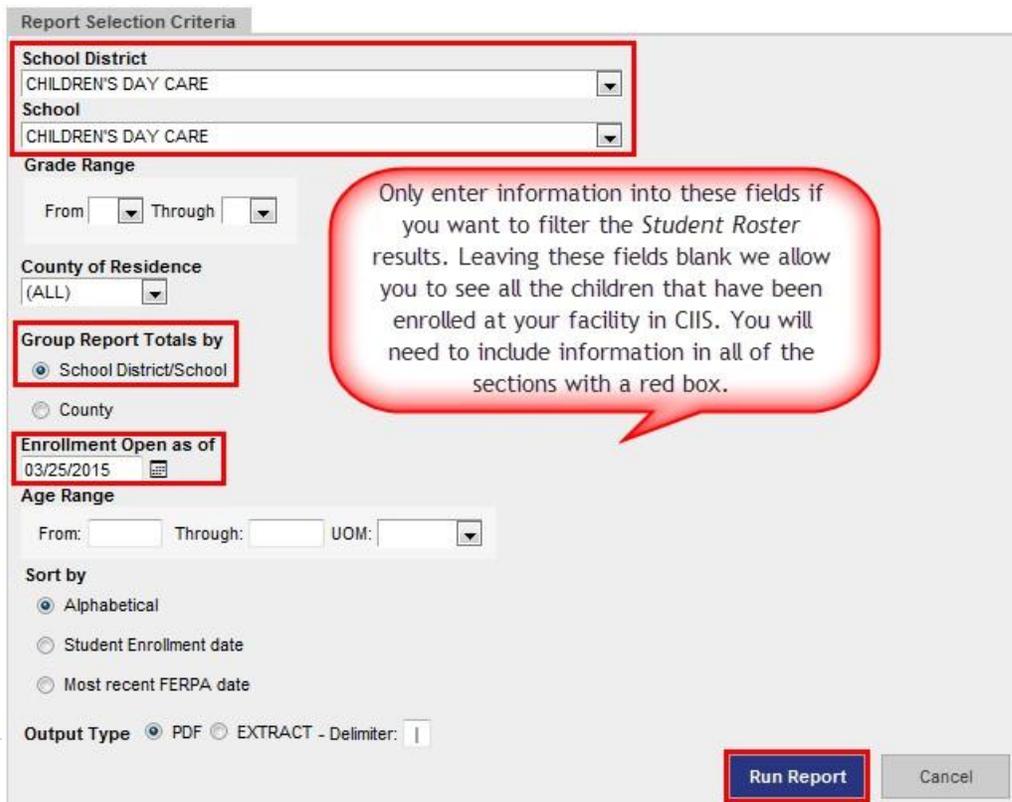
3. Select your facility name from the School District and School drop down menus.



Report Selection Criteria
School District
CHILDREN'S DAY CARE
School
CHILDREN'S DAY CARE

If you would like to filter the *Student Roster* results,

- Grade Range: =filter results by grade.
 - Age Range = filter results by age.
4. Under the Group Report Totals By, select the radio button next to School District/School.
 5. In the Enrollment Open as of field, enter the date you are running the report.
 6. The Sort by section will allow you to choose how you want the report results to be sorted. Select the radio button next to the order in which you would like your results sorted.
 7. After you have entered the above information, click the *Run Report* button.



Report Selection Criteria

School District
CHILDREN'S DAY CARE

School
CHILDREN'S DAY CARE

Grade Range
From: [] Through: []

County of Residence
(ALL)

Group Report Totals by
 School District/School
 County

Enrollment Open as of
03/25/2015

Age Range
From: [] Through: [] UOM: []

Sort by
 Alphabetical
 Student Enrollment date
 Most recent FERPA date

Output Type PDF EXTRACT - Delimiter: []

Run Report Cancel

Only enter information into these fields if you want to filter the *Student Roster* results. Leaving these fields blank we allow you to see all the children that have been enrolled at your facility in CIIS. You will need to include information in all of the sections with a red box.

The system will generate the *Student Roster* report as a PDF in a new window. This report will show:

- A list of children enrolled in the selected facility.
- Age or Grade of the child depending on what the *Report Selection Criteria* page.
- Child's Date of Birth.
- Enrollment Date: when the child was enrolled at your facility in CIIS.
- Un-enrollment Date: when the child will leave your facility (if applicable).
- Most recent FERPA Date: the date when school staff received FERPA consent and entered it into CIIS.
- Total number of patients in the selected age group at you facility.



Search criteria is listed at the top of the report.

Student Roster

March 25, 2015

School District - Children's Day Care, School - Children's Day Care, County - (ALL), Enrollment Date - 03/25/2015, Sort By - Alphabetical

School District/School: Children's Day Care / Children's Day Care

Name (ID)	Age	Date of Birth	Grade	Enrollment Date	Un-Enrollment Date	Most Recent FERPA Date	Religious Exemption
TEST, KAIT (3856685)	0Y 7M 25D	07/28/2014		06/17/2014			No
TEST, KAITLIN (3856680)	6Y 6M 1D	09/24/2008	K	06/12/2014			No
TEST, KALAMITY (3856682)	3Y 1M 25D	01/28/2012		03/12/2015			No
TEST, KALIE (3856676)	1Y 1M 25D	01/28/2014		06/17/2014			No
TEST, KALYNN (3856678)	3Y 1M 25D	01/28/2012		06/18/2014			No
TEST, KARLY (3938076)	1Y 0M 10D	03/15/2014		03/12/2015		03/12/2015	No
TEST, KASSIE (3856677)	3Y 1M 7D	02/18/2012		06/17/2014			No
TEST, KATY (445125)	4Y 1M 22D	02/03/2011		06/17/2014			No
TEST, KAYE (3800489)	9Y 9M 18D	06/07/2005		10/08/2014		10/08/2014	No
TESTER, KARY (3856683)	2Y 1M 7D	02/18/2013		06/17/2014			No
TESTING, KARL (3800488)	2Y 1M 24D	02/01/2013		06/17/2014			No

Children's Day Care / Children's Day Care Patient Totals:	11
Report Patient Totals:	11