



2019-20 School and Child Care Audit Report



Iowa Department of Public Health
Protecting and Improving the Health of Iowans



**Bureau of Immunization and TB
Division of Acute Disease Prevention, Emergency Response, and
Environmental Health (ADPER and EH)
June 5, 2020**

Acknowledgements

Suggested Citation:

Iowa Department of Public Health. Bureau of Immunization and Tuberculosis. *2019-20 School and Child Care Audit*. Des Moines: Iowa Dept. of Public Health, 2020. Web.

<https://idph.iowa.gov/immtdb/immunization/audits>. Access date – day month year.

Gov. Kim Reynolds

Lt. Gov. Adam Gregg

IDPH Director Gerd W. Clabaugh

Report Contact Information:

Bethany Kintigh, Immunization Program Manager

Don Callaghan, Bureau Chief

1-800-831-6293

Table of Contents

List of Tables and Figures	iv
Executive Summary.....	1
Background	4
Vaccination Coverage for Child Care.....	5
Provisional Certificate of Immunization	5
Certificates of Immunization Exemption	6
Under and Un-Immunized	6
Vaccination Coverage for Public, Private and Parochial Schools.....	7
Vaccination Coverage of Students Kindergarten through 12th Grade.....	7
Provisional Certificate of Immunization	8
Certificate of Immunization Exemption.....	8
Under and Un-Immunized	9
Individual Grades	9
Vaccination Coverage for Kindergarten Students.....	10
Provisional Certificate of Immunization	11
Certificate of Immunization Exemption.....	11
Kindergarten Vaccination Coverage by School Type	11
Under and Un-Immunized	12
Vaccination Coverage for 7 th Grade Students.....	13
Provisional Certificate of Immunization	13
Certificate of Immunization Exemption.....	14
Under and Un-Immunized	14
Vaccination Coverage for 12 th Grade Students.....	15
Provisional Certificate of Immunization	15
Certificate of Immunization Exemption.....	16
Under and Un-Immunized	16
Summary	17
Appendix A – Supplemental Maps.....	18

List of Tables and Figures

List of Tables

Table 1 State Immunization Summary by Year, Child Care, Iowa, 2011-12 to 2019-20	5
Table 2 Under-Immunized Children in Child Care, Iowa, 2014-15 to 2019-20	6
Table 3 State Immunization Summary by Year, Kindergarten - 12th Grade, Iowa, 2006-07 to 2019-20	7
Table 4 Under-Immunized Students, Kindergarten - 12th Grade, Iowa, 2014-15 to 2019-20	9
Table 5 State Immunization Summary by Grade, Kindergarten - 12th Grade, Iowa, 2019-20	10
Table 6 State Immunization Summary by Year, Kindergarten, Iowa, 2011-12 to 2019-20	11
Table 7 Kindergarten Vaccine Coverage and Exemptions by School Type, Iowa, 2019-20	12
Table 8 Under-Immunized Students, Kindergarten, Iowa, 2014-15 to 2019-20	12
Table 9 Immunization Certificates by Type 7th Grade, Iowa, 2015-16 to 2019-20	13
Table 10 Under-Immunized Students, 7th Grade, Iowa, 2015-16 to 2019-20	14
Table 11 State Immunization Summary, 12th Grade, Iowa, 2015-2016 to 2019-20	15
Table 12 Under-Immunized Students, 12th Grade, Iowa, 2015-16 to 2019-20	16
Table 13 Vaccine Coverage and Exemptions in Iowa and United States, 2017-18 and 2019-20	17

List of Figures

Figure 1 Immunization Certificates by Type, Child Care, Iowa, 2011-12 to 2019-20	5
Figure 2 Percentage of Exemptions by Type, Child Care, Iowa, 2019-20	6
Figure 3 Immunization Certificates by Type, Kindergarten - 12th Grade, Iowa, 2006-07 to 2019-20	7
Figure 4 Number and Percentage of Exemptions, Kindergarten - 12th Grade, Iowa, 2014-15 to 2019-20	8
Figure 5 Percentage of Exemptions by Type, Kindergarten - 12th Grade, Iowa, 2019-20	8
Figure 6 Immunization Certificates by Type, Kindergarten, Iowa, 2011-12 to 2019-20	10
Figure 7 Percentage of Exemptions by Type, Kindergarten, Iowa, 2019-20	11
Figure 8 Immunization Certificates by Type 7th Grade, Iowa, 2015-16 to 2019-20	13
Figure 9 Percentage of Exemptions by Type, 7th Grade, Iowa, 2019-20	14
Figure 10 Immunization Certificates by Type, 12th Grade, Iowa, 2015-16 to 2019-20	15
Figure 11 Percentage of Exemptions by Type, 12th Grade, Iowa, 2019-20	16

Executive Summary

Each year, the Iowa Department of Public Health Immunization Program releases school and child care immunization audit reports. Local Public Health Agencies conduct audits of immunization records for students enrolled in licensed child care centers and public, private and parochial students in kindergarten through 12th grade each year. Assessments are conducted to ensure attendees receive required immunizations and have a valid Iowa Department of Public Health Certificate of Immunization, Certificate of Immunization Exemption, or Provisional Certificate of Immunization.

Child Care Audit Highlights

During the 2019-20 school year:

Valid Immunization Certificates

- 96.7% of children attending licensed child care centers had valid immunization certificates, indicating 94,309 children had IDPH Certificates of Immunization, Certificates of Immunization Exemption, or Provisional Certificates of Immunization in compliance with Iowa law.
 - The number of children in child care with valid immunization certificates increased 0.2% from the previous assessment year.

Certificates of Immunization

- 93.8% of children attending licensed child care centers had valid Certificates of Immunization, indicating 91,569 children met age-appropriate immunization requirements.
 - The number of children in child care with valid Certificates of Immunization increased 0.2% from the previous assessment year.

Provisional Certificates of Immunization

- 1.2% of children attending licensed child care centers had Provisional Certificates of Immunization, indicating 1,150 children received at least one dose of each of the required vaccines but did not complete all required immunizations.
 - The number of children in child care with Provisional Certificates of Immunization decreased 8.6% from the previous assessment year, and has decreased since the 2011-12 assessment year.

Certificates of Immunization Exemption - Medical

- 0.1% of children attending licensed child care centers had a medical Certificates of Immunization Exemption, representing 104 children.
 - The number of children in child care with valid medical Certificates of Immunization Exemption decreased 4.6% from the previous assessment year, with a downward trend since the 2011-12 assessment year.

Certificates of Immunization Exemption - Religious

- 1.5% of children attending licensed child care centers had a religious Certificates of Immunization Exemption, representing 1,486 children.
 - The number of children in child care with valid religious Certificates of Immunization Exemption increased 5.0% from the previous assessment year and has continued to increase since the 2011-12 assessment.

Invalid or No Immunization Certificates

- 3.3% of children attending licensed child care centers had invalid or no immunization certificates, representing 3,265 children.
 - The number of children in child care with invalid or no immunization certificates increased 3.5% from the previous assessment year.

Under or Un-immunized

- 6.2% of children attending licensed child care centers were under or un-immunized, representing 6,005 children with a Provisional Certificate of Immunization, Certificate of Immunization Exemption, or an invalid or no certificate.
 - The number of children in child care under and un-immunized increased 1.1% from previous assessment year.

School Audit Highlights

During the 2019-20 school year:

Valid Immunization Certificates

- 99.0% of students attending Iowa schools had valid immunization certificates, indicating 521,046 records of IDPH Certificates of Immunization, Certificates of Immunization Exemption, or Provisional Certificates of Immunization complied with Iowa law.
 - The number of students in Iowa schools with valid immunization certificates increased 0.2% from the previous assessment year.

Certificates of Immunization

- 95.4% of students attending Iowa schools had valid Certificates of Immunization, indicating 501,828 records met age-appropriate immunization requirements.
 - The number of students in Iowa schools with valid Certificates of Immunization decreased 0.1% from the previous assessment year.

Provisional Certificates of Immunization

- 1.3% of students attending Iowa schools had Provisional Certificates of Immunization, indicating 6,843 students received at least one dose of each of the required vaccines but did not complete all required immunizations or have transferred from another U.S. school system.
 - The number of students in Iowa schools with Provisional Certificates of Immunization increased 11.5% from the previous assessment year.

Certificates of Immunization Exemption - Medical

- 0.3% of students attending Iowa schools had medical Certificates of Immunization Exemption, representing 1,662 students.
 - The number of students in Iowa schools with valid medical Certificates of Immunization Exemption decreased 3.5% from the previous school year, and has decreased since the 2012-13 assessment year.

Certificates of Immunization Exemption - Religious

- 2.0% of students attending Iowa schools had religious Certificates of Immunization Exemption, representing 10,713 students.
 - The number of students in Iowa schools with valid religious Certificates of Immunization Exemption increased 8.8% from the previous school year, and has increased since the 2006-07 assessment year.

Invalid or No immunization Certificates

- 1.0% of students attending Iowa schools had invalid or no immunization certificates, representing 5,083 students.
 - The number of students in Iowa schools with invalid or no immunization certificates decreased 7.9% from the previous assessment year.

Under or Un-immunized

- 4.6% of students attending Iowa schools were under or un-immunized, representing 24,301 students with a Provisional Certificate of Immunization, Certificate of Immunization Exemption, or an invalid or no certificate.
 - The number of under and un-immunized students in Iowa schools increased 4.6% from previous assessment year.

School audits by grade (Excluding homeschool students that may represent multiple grades):

- Highest number of valid certificates: 6th grade
- Highest percentage of valid certificates: 4th grade
- Highest number and percentage of Certificates of Immunization: 6th grade
- Highest number and percentage of Provisional Certificate of Immunization: 12th grade
- Highest number and percentage of medical Certificates of Immunization Exemption: 10th grade
- Highest number of religious Certificates of Immunization Exemption: Kindergarten
- Highest percentage of religious Certificates of Immunization Exemption: 1st grade
- Highest number and percentage of invalid or no certificates: 12th grade
- Highest number and percentage of under or un-immunized students: 12th grade

BACKGROUND

Annually, the Iowa Department of Public Health Immunization Program releases school and child care audit reports. Local Public Health Agencies (LPHAs) conduct audits of immunization records for children enrolled in licensed child care centers and public, private and parochial students in kindergarten through 12th grade each year. Assessments are conducted to ensure attendees receive the required immunizations and have a valid Iowa Department of Public Health Certificate of Immunization, Certificate of Immunization Exemption, or Provisional Certificate of Immunization. Iowa Code, Chapter 139a.8(6) and Iowa Administrative Code, 641-7.7(139) outline immunization requirements to attend licensed child care centers and elementary or secondary schools. To attend school or licensed child care, the child needs to present a valid Certificate of Immunization, Provisional Certificate of Immunization, or Certificate of Immunization Exemption (Medical or Religious) to the admitting official. A brief explanation of each certificate is included below.

- **Certificate of Immunization** - Issued when applicant has a record of age-appropriate immunizations that meet the requirement for licensed child care or school enrollment.
- **Provisional Certificate of Immunization** - Issued when the applicant has received at least one dose of each of the required vaccines but has not completed all required immunizations or is a transfer student from another U.S. school system.
- **Certificate of Immunization Exemption-Medical** - Iowa law allows for medical exemption to immunization when required immunizations would be injurious to the health and well-being of the applicant or any member of the applicant's family or household or required vaccine would violate minimum interval spacing.
- **Certificate of Immunization Exemption-Religious** - Iowa law allows for religious exemption to immunization when immunizations conflict with a genuine and sincere religious belief, and is not based merely on philosophical, scientific, moral, personal or medical opposition to immunizations.

Data files contained in this report are available on the Immunization Program webpage at <http://idph.iowa.gov/immtdb/immunization/audits>. In 2019, the Immunization Program began to collaborate with the Iowa Public Health Tracking Program to include immunization data for childhood, adolescent, human papillomavirus (HPV), influenza and school and child care audits on the IDPH Tracking Portal. These data are currently available at <https://tracking.idph.iowa.gov/Health/Immunization>.

VACCINATION COVERAGE FOR CHILD CARE

Local Public Health Agencies conducted audits of immunization records for children enrolled in Iowa’s licensed child care centers during the 2019-2020 school year. Records from 97,574 enrolled students were analyzed to calculate statewide vaccination coverage levels.

- During the 2019-20 school year, 96.7% of children attending licensed child care centers had valid immunization certificates (94,309 records).
- The statewide coverage levels for all vaccinations required at child care entry was 93.8%, as indicated by valid Certificates of Immunizations (91,569 records).
- Invalid or no immunization certificates accounted for 3.3% (3,265 records) of children enrolled in child care (Figure 1 and Table 1).
- 6.2% of children enrolled in licensed child care were under or un-immunized (6,005 records).

Figure 1 Immunization Certificates by Type, Child Care, Iowa, 2011-12 to 2019-20

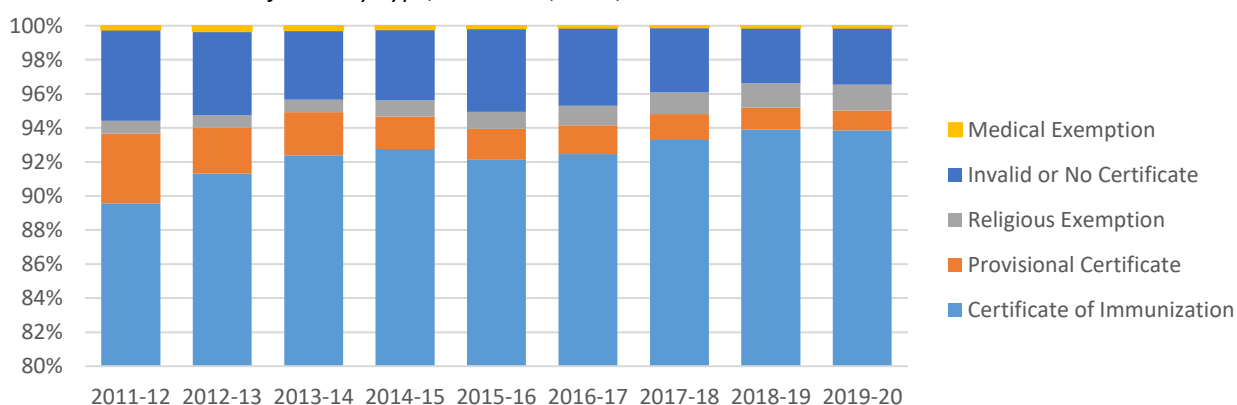


Figure Note: Vertical axis begins at 80%

Table 1 State Immunization Summary by Year, Child Care, Iowa, 2011-12 to 2019-20

Year	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates		
	Total	%	Total	%	Medical		Religious		Total	%		Total	Total	%
					Total	%	Total	%						
2011-12	68,830	89.6	3,158	4.1	285	0.4	571	0.7	4,118	5.4	76,854	72,844	94.8	
2012-13	75,983	91.3	2,235	2.7	269	0.3	636	0.8	4,089	4.9	83,212	79,123	95.1	
2013-14	74,659	92.4	2,048	2.5	219	0.3	599	0.7	3,286	4.1	80,811	77,525	95.9	
2014-15	79,415	92.8	1,631	1.9	169	0.2	826	1.0	3,576	4.2	85,617	82,041	95.8	
2015-16	78,272	92.1	1,551	1.8	140	0.2	845	1.0	4,163	4.9	84,971	80,808	95.1	
2016-17	86,048	92.5	1,561	1.7	112	0.1	1,067	1.2	4,266	4.6	93,054	88,788	95.4	
2017-18	89,720	93.3	1,476	1.5	93	0.1	1,231	1.3	3,662	3.8	96,182	92,520	96.2	
2018-19	91,354	93.9	1,258	1.3	109	0.1	1,415	1.5	3,156	3.2	97,292	94,136	96.8	
2019-20	91,569	93.8	1,150	1.2	104	0.1	1,486	1.5	3,265	3.3	97,574	94,309	96.7	

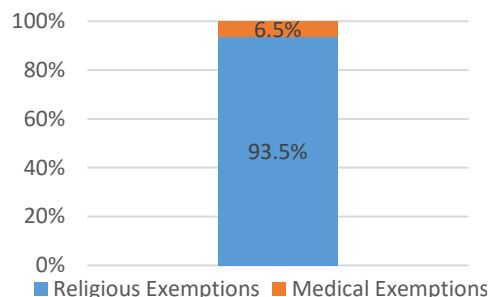
Provisional Certificate of Immunization

- During the 2019-2020 school year, 1.2% of children in child care had a Provisional Certificate of Immunization, representing 1,150 children.
- The percent of children in child care with a Provisional Certificate of Immunization has declined since the 2011-12 school year, decreasing from 4.1% (3,158 children) during the 2011-12 school year to 1.2% (1,150 children) during the 2019-20 school year (Table 2 and Figure 1).
- For the 2019-20 school year, the number of Provisional Certificates of Immunization decreased 29.5% since the 2014-15 school year and by 8.6% from the previous year.

Certificates of Immunization Exemption

- During the 2019-2020 school year, 1.6% of children in child care had a Certificate of Immunization Exemption (1,590 records).
- Of the 1,590 exemptions, 93.5% (1,486 records) were categorized as religious and 6.5% (104 records) were categorized as medical (Figure 2).

Figure 2 Percentage of Exemptions by Type, Child Care, Iowa, 2019-20



Medical Exemptions:

- During the 2019-2020 school year, 0.1% of children enrolled in licensed child care had a medical Certificate of Immunization Exemption, representing 104 children
- The number of medical Certificates of Immunization Exemption decreased by 38.5% (65 records) since the 2014-15 school year and decreased by 4.6% (5 records) from the previous year.

Religious Exemptions:

- During the 2019-20 school year, 1.5% of children enrolled in licensed child care had a religious Certificate of Immunization Exemption, representing 1,486 children.
- The number of religious Certificates of Immunization Exemption has increased during the past seven years.
- The number of religious Certificates of Immunization Exemptions increased by 79.9% (660 records) since 2014-15, and increased 5.0% (71 records) from the previous year.

Under and Un-Immunized

- During 2019-2020, 6.2% of children enrolled in licensed child care were under immunized, representing 6,005 children.
- The number of under and un-immunized children increased from the previous school year, and includes children who have an invalid or no certificate, Provisional Certificate of Immunization, or Certificate of Immunization Exemption (Table 2).

Table 2 Under-Immunized Children in Child Care, Iowa, 2014-15 to 2019-20

	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Certificate of Immunization Exemption-Medical	169	140	112	93	109	104
Percent change in number of Medical Exemptions from previous year	-22.8%	-17.2%	-20.0%	-17.0%	17.2%	-4.6%
Certificate of Immunization Exemption-Religious	826	845	1,067	1,231	1,415	1,486
Percent change in number of Religious Exemptions from previous year	37.9%	2.3%	26.3%	15.4%	14.9%	5.0%
Provisional Certificate	1,631	1,551	1,561	1,476	1,258	1,150
Percent change in number of Provisional Exemptions from previous year	-20.4%	-4.9%	0.6%	-5.4%	-14.8%	-8.6%
Invalid or No Certificate	3,576	4,163	4,266	3,662	3,156	3,265
Percent change in number of Invalid or No Certificate from previous year	8.8%	16.4%	2.5%	-14.2%	-13.8%	3.5%
Total Under/Un-immunized	6,202	6,699	7,006	6,462	5,938	6,005
Percent of Under/Un-immunized Students	7.2%	7.9%	7.5%	6.7%	6.1%	6.2%
Percent change in number of Under/ Un-immunized from previous year	0.8%	8.0%	4.6%	-7.8%	-8.1%	1.1%

VACCINATION COVERAGE FOR PUBLIC, PRIVATE AND PAROCHIAL SCHOOLS

Local Public Health Agencies conducted audits of immunization records for children enrolled in Iowa public, private and parochial schools during the 2019-2020 school year. Records from 526,129 enrolled students kindergarten - 12th grade in 1,578 Iowa schools were analyzed to calculate statewide vaccination coverage levels.

VACCINATION COVERAGE OF STUDENTS KINDERGARTEN THROUGH 12TH GRADE

- During the 2019-20 school year, 99.0% of students in kindergarten through 12th grade had valid Certificates of Immunization, Certificates of Immunization Exemption, or Provisional Certificates of Immunization and were compliant with Iowa law, representing 521,046 students.
- The statewide coverage level for all vaccinations required for school was 95.4%, as indicated by valid Certificates of Immunizations, representing 501,828 students.
- Invalid or no immunization certificates accounts for 1.0% of students enrolled in Kindergarten through 12th grade, representing 5,083 students (Figure 3 and Table 3).
- 4.6% of students in kindergarten through 12th grade were under or un-immunized.

Figure 3 Immunization Certificates by Type, Kindergarten - 12th Grade, Iowa, 2006-07 to 2019-20

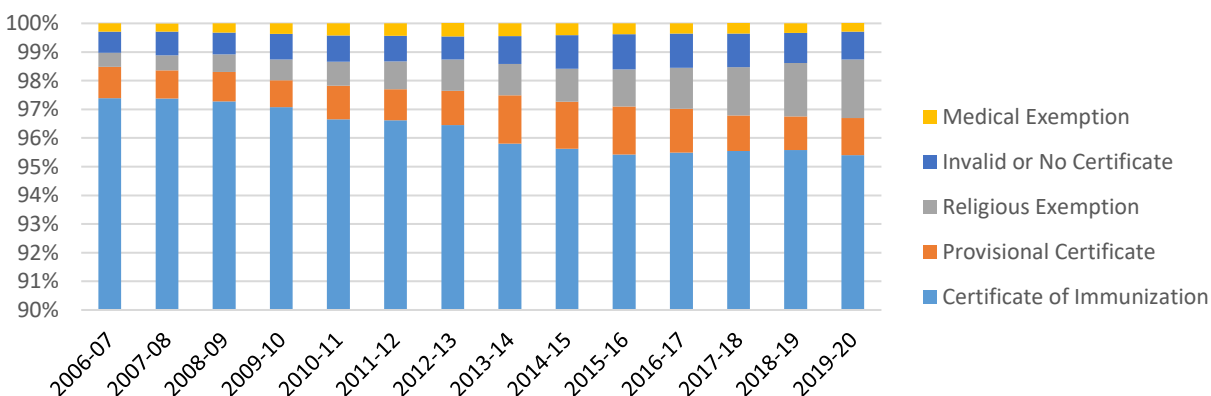


Figure Note: Vertical axis begins at 90%

Table 3 State Immunization Summary by Year, Kindergarten - 12th Grade, Iowa, 2006-07 to 2019-20

Year	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates	
	Total	%	Total	%	Medical		Religious		Total	%		Total	%
2006-07	496,646	97.4	5,543	1.1	1,461	0.3	2,572	0.5	3,733	0.7	509,955	506,222	99.3
2007-08	498,918	97.4	5,045	1.0	1,443	0.3	2,706	0.5	4,226	0.8	512,338	508,112	99.2
2008-09	489,493	97.3	5,109	1.0	1,604	0.3	3,133	0.6	3,817	0.8	503,156	499,339	99.2
2009-10	490,783	97.1	4,740	0.9	1,852	0.4	3,662	0.7	4,499	0.9	505,536	501,037	99.1
2010-11	489,069	96.7	5,959	1.2	2,113	0.4	4,206	0.8	4,655	0.9	506,002	501,347	99.1
2011-12	492,952	96.6	5,512	1.1	2,184	0.4	4,958	1.0	4,580	0.9	510,186	505,606	99.1
2012-13	496,460	96.5	6,168	1.2	2,355	0.5	5,612	1.1	4,151	0.8	514,746	510,595	99.2
2013-14	493,432	95.8	8,700	1.7	2,251	0.4	5,628	1.1	5,072	1.0	515,083	510,011	99.0
2014-15	492,611	95.6	8,501	1.7	2,096	0.4	5,941	1.2	6,019	1.2	515,168	509,149	98.8
2015-16	495,792	95.4	8,746	1.7	1,996	0.4	6,737	1.3	6,325	1.2	519,596	513,172	98.8
2016-17	497,812	95.5	7,951	1.5	1,891	0.4	7,465	1.4	6,218	1.2	521,337	515,119	98.8
2017-18	497,864	95.6	6,439	1.2	1,852	0.4	8,740	1.7	6,134	1.2	521,029	514,895	98.8
2018-19	502,286	95.6	6,136	1.2	1,723	0.3	9,851	1.9	5,519	1.1	525,515	519,996	98.9
2019-20	501,828	95.4	6,843	1.3	1,662	0.3	10,713	2.0	5,083	1.0	526,129	521,046	99.0

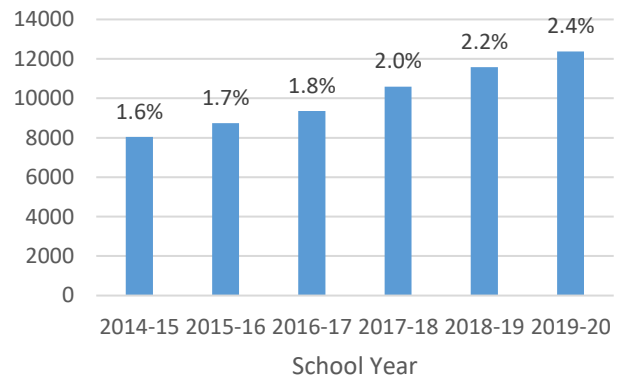
Provisional Certificate of Immunization

- During the 2019-2020 school year, 1.3% of students in kindergarten through 12th grade had a Provisional Certificate of Immunization, representing 6,843 students.
- Provisional Certificates of Immunization increased from 1.2% (6,136 records) during the 2018-19 school year to 1.3% (6,843 records) during the 2019-20 school year (Table 3 and Figure 3). This increase is the first increase since the 2015-16 school year.
- A Tdap secondary school vaccine requirement went into effect during the 2013-14 school year, which resulted in an increase in the number of Provisional Certificates.

Certificate of Immunization Exemption

- During the 2019-2020 school year, 2.4% of students in kindergarten through 12th grade were reported to have a Certificate of Immunization Exemption, representing 12,375 students (Table 3).
- This percentage of exemptions is part of a five-year trend of year-over-year increase in exemption rates (Figure 4).
- Of the 12,375 exemptions, 86.6% (10,713 records) were categorized as religious and 13.4% (1,662 records) were categorized as medical (Figure 5).

Figure 4 Number and Percentage of Exemptions, Kindergarten - 12th Grade, Iowa, 2014-15 to 2019-20



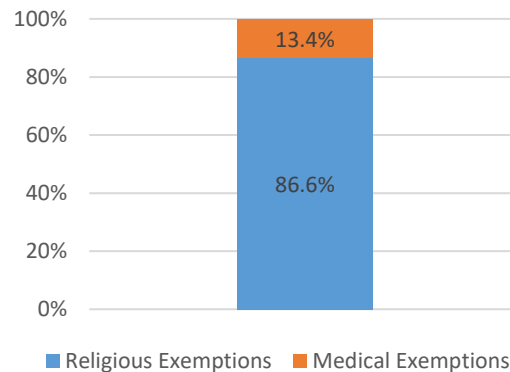
Medical Exemptions:

- During the 2019-2020 school year, 0.3% of students in kindergarten through 12th grade had a medical Certificate of Immunization Exemption, representing 1,662 students and a slight decrease from the previous year.
- The percent of students in kindergarten through 12th grade with medical Certificates of Immunization Exemption increased from 2000-01 to 2012-13, but has since been on the decline.

Religious Exemptions:

- During the 2019-2020 school year, 2.0% of students in kindergarten through 12th grade had a religious Certificate of Immunization Exemption, representing 10,713 students and an 8.8% increase from the previous school year.
- The percent of students in kindergarten through 12th grade with religious Certificates of Immunization Exemption has steadily increased each year.

Figure 5 Percentage of Exemptions by Type, Kindergarten - 12th Grade, Iowa, 2019-20



Under and Un-Immunized

- During the 2019-2020 school year, 4.6% of students in kindergarten through 12th grade were under or un-immunized and includes children who have an invalid or no certificate, Provisional Certificate of Immunization, Certificate of Immunization Exemption, representing 24,301 records (Table 4).
- There was a 4.6% increase in the number of under and un-immunized students in 2019-2020 from the previous assessment year, which is an increase in 1,072 records.
 - The number of religious Certificates of Immunization Exemption increased 80.3% (4,772 records) since 2014-15 school year, and increased 8.8% (862 records) from the previous assessment year.
 - The number of medical Certificates of Immunization Exemption decreased by 20.7% (434 records) since the 2014-15 school year, and by 3.5% (61 records) from the previous assessment year.
 - The number of Provisional Certificates decreased 19.5% (1,658 records) since the 2014-15 school year, and increased by 11.5% (707 records) from the previous assessment year.
 - The number of Invalid or No Certificate decreased 15.6% (936 records) since the 2014-15 school year, and by 7.9% (436 records) from the previous assessment year.

Table 4 Under-Immunized Students, Kindergarten - 12th Grade, Iowa, 2014-15 to 2019-20

	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Certificate of Immunization Exemption-Medical	2,096	1,996	1,891	1,852	1,723	1,662
Percent change in number of Medical Exemptions from previous year	-6.9%	-4.8%	-5.3%	-2.1%	-7.0%	-3.5%
Certificate of Immunization Exemption-Religious	5,941	6,737	7,465	8,740	9,851	10,713
Percent change in number of Religious Exemptions from previous year	5.6%	13.4%	10.8%	17.1%	12.7%	8.8%
Provisional Certificate	8,501	8,746	7,951	6,439	6,163	6,843
Percent change in number of Provisional Exemptions from previous year	-2.3%	2.9%	-9.1%	-19.0%	-4.7%	11.5%
Invalid or No Certificate	6,019	6,325	6,218	6,134	5,519	5,083
Percent change in number of Invalid or No Certificate from previous year	18.7%	5.1%	-1.7%	-1.4%	-10.0%	-7.9%
Total Under-Immunized	22,557	23,804	23,525	23,165	23,229	24,301
Percent of Under-Immunized Students	4.4%	4.6%	4.5%	4.4%	4.4%	4.6%
Percent change in number of Under-immunized from previous year	4.2%	5.5%	-1.2%	-1.5%	0.3%	4.6%

Individual Grades

Excluding homeschool students (which represent multiple grades), by grade (Table 5):

- Highest number of valid certificates: 6th grade
- Highest percentage of valid certificates: 4th grade
- Highest number and percentage of Certificates of Immunization: 6th grade
- Highest number and percentage of Provisional Certificate of Immunization: 12th grade
- Highest number and percentage of medical Certificates of Immunization Exemption: 10th grade
- Highest number of religious Certificates of Immunization Exemption: Kindergarten
- Highest percentage of religious Certificates of Immunization Exemption: 1st grade
- Highest number and percentage of invalid or no certificates: 12th grade
- Highest number and percentage of under or un-immunized students: 12th grade

Table 5 State Immunization Summary by Grade, Kindergarten - 12th Grade, Iowa, 2019-20

Grade	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates	
					Medical		Religious						
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	Total	%
HS	1,845	70.2	129	4.9	36	1.4	517	19.7	102	3.9	2,629	2,527	96.1
K	38,022	93.2	1,255	3.1	68	0.2	936	2.3	531	1.3	40,812	40,281	98.7
1	37,626	95.7	404	1.0	69	0.2	929	2.4	294	0.7	39,322	39,028	99.3
2	37,404	96.1	268	0.7	88	0.2	821	2.1	350	0.9	38,931	38,581	99.1
3	37,290	96.6	272	0.7	81	0.2	789	2.0	188	0.5	38,620	38,432	99.5
4	38,522	96.6	248	0.6	102	0.3	797	2.0	193	0.5	39,862	39,669	99.5
5	39,189	96.6	254	0.6	114	0.3	779	1.9	214	0.5	40,550	40,336	99.5
6	40,409	96.8	232	0.6	159	0.4	708	1.7	244	0.6	41,752	41,508	99.4
7	39,782	94.6	621	1.5	151	0.4	896	2.1	607	1.4	42,057	41,450	98.6
8	39,606	95.9	312	0.8	167	0.4	852	2.1	359	0.9	41,296	40,937	99.1
9	39,697	95.8	456	1.1	171	0.4	801	1.9	321	0.8	41,446	41,125	99.2
10	38,658	96.1	408	1.0	176	0.4	688	1.7	290	0.7	40,220	39,930	99.3
11	38,343	96.7	357	0.9	124	0.3	545	1.4	279	0.7	39,648	39,369	99.3
12	35,435	90.9	1,627	4.2	156	0.4	655	1.7	1,111	2.8	38,984	37,873	97.2
State K-12	501,828	95.4	6,843	1.3	1,662	0.3	10,713	2.0	5,083	1.0	526,129	521,046	99.0

Table Note: HS indicates Home School and K indicates Kindergarten

VACCINATION COVERAGE FOR KINDERGARTEN STUDENTS

- During the 2019-20 school year, 98.7% of Iowa kindergarten students had valid Certificates of Immunization, Certificates of Immunization Exemption, or Provisional Certificates of Immunization and were compliant with Iowa law, representing (40,281 records).
- The statewide coverage level for all vaccinations required at school entry was 93.2%, as indicated by valid Certificates of Immunizations (38,022 records).
- Invalid or no immunization certificates account for 1.3% of enrolled kindergarten students (531 records) (Figure 6 and Table 6).

Figure 6 Immunization Certificates by Type, Kindergarten, Iowa, 2011-12 to 2019-20

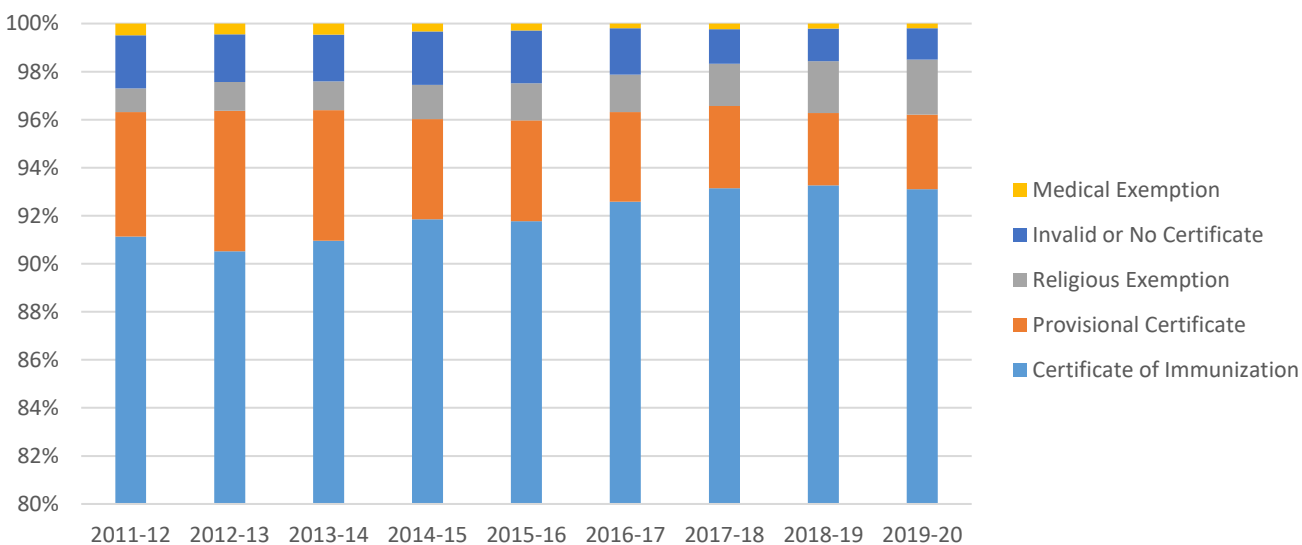


Figure Note: Vertical axis begins at 80%

Table 6 State Immunization Summary by Year, Kindergarten, Iowa, 2011-12 to 2019-20

Year	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates	
					Medical		Religious						
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	Total	%
2011-12	36,500	91.1	2,076	5.2	193	0.5	398	1.0	886	2.2	40,053	39,167	97.8
2012-13	37,713	90.5	2,438	5.9	188	0.5	499	1.2	825	2.0	41,663	40,838	98.0
2013-14	37,587	91.0	2,246	5.4	193	0.5	498	1.2	801	1.9	41,325	40,524	98.1
2014-15	38,261	91.9	1,737	4.2	138	0.3	597	1.4	923	2.2	41,656	40,733	97.8
2015-16	37,824	91.8	1,730	4.2	119	0.3	635	1.5	907	2.2	41,215	40,308	97.8
2016-17	36,649	92.6	1,478	3.7	79	0.2	622	1.6	759	1.9	39,587	38,828	98.1
2017-18	36,917	93.2	1,356	3.4	93	0.2	694	1.8	572	1.4	39,632	39,060	98.6
2018-19	37,884	93.3	1,228	3.0	87	0.2	873	2.2	552	1.4	40,624	40,072	98.6
2019-20	38,022	93.2	1,255	3.1	68	0.2	936	2.3	531	1.3	40,812	40,281	98.7

Provisional Certificate of Immunization

- During the 2019-2020 school year, 3.1% of kindergarten students had a Provisional Certificate of Immunization, representing 1,255 students.
- Provisional certificates have decreased by 27.7% (482 records) since 2014-15.

Certificate of Immunization Exemption

- During the 2019-2020 school year, 2.5% of kindergartners were reported to have an exemption, representing 1,004 students.
- Of the 1,004 exemptions, 936 (93.2%) were categorized as religious and 68 (6.8%) as medical (Figure 7).

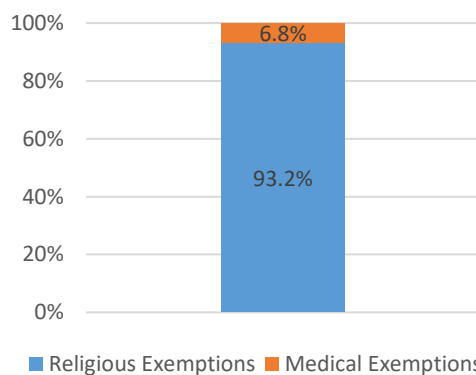
Medical Exemptions:

- During the 2019-2020 school year, 0.2% of kindergarten students were reported to have a medical Certificate of Immunization Exemption, representing 68 students. (Table 6).

Religious Exemptions:

- During the 2019-2020 school year, 2.3% of kindergarten students were reported to have a religious Certificate of Immunization Exemption, representing 936 students.

Figure 7 Percentage of Exemptions by Type, Kindergarten, Iowa, 2019-20



Kindergarten Vaccination Coverage by School Type

- During the 2019-20 school year, kindergartners enrolled in public schools had a higher percentage of immunization certificates and lower percentage of invalid/no certificates, provisional certificates, and exemptions compared to their peers enrolled in private schools.
- The statewide coverage levels for all vaccinations required at school entry in private and public schools was 87.7% and 93.6%, respectively, as indicated by valid Certificates of Immunization.
- During the 2019-20 school year, 4.9% of kindergarten students enrolled in private schools reported an exemption, compared to 2.3% enrolled in public schools (Table 7).
- During the 2019-20 school year, 12.3% of kindergarten students enrolled in private schools were under or un-immunized, compared to 6.4% enrolled in public schools

Table 7 Kindergarten Vaccine Coverage and Exemptions by School Type, Iowa, 2019-20

Year	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates	
					Medical		Religious						
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	Total	%
Private	2,867	87.7	93	2.9	8	0.2	151	4.6	151	4.6	3,270	3,119	95.4
Public	35,155	93.6	1,162	3.1	60	0.2	785	2.1	380	1.0	37,542	37,162	99.0
Total	38,022	93.2	1,255	3.1	68	0.2	936	2.3	531	1.3	40,812	40,281	98.7

Under and Un-Immunized

- During the 2019-20 school year, 6.8% of kindergarten students were under or un-immunized and includes students with a Provisional Certificate of Immunization, Certificate of Immunization Exemption, or an invalid or no certificate, representing 2,790 students (Table 8).
- The number of under/un-immunized students has decreased 17.8% since the 2014-15 school year and increased 1.8% from the previous year.
 - The number of religious Certificates of Immunization Exemption has increased 56.8% (339 records) since the 2014-15 school year and 7.2% (63 records) from the previous year.
 - The number of Provisional Certificates decreased 27.7% (482 records) since the 2014-15 school year and increased by 2.2% (27 records) from the previous year.
 - The number of medical Certificates of Immunization Exemption decreased by 50.7% (70 records) since the 2014-15 school year and by 21.8% (19 records) from the previous year.
 - The number of Invalid or No Certificates decreased 42.5% (392 records) since the 2014-15 school year and by 3.8% (21 records) from the previous year.

Table 8 Under-Immunized Students, Kindergarten, Iowa, 2014-15 to 2019-20

	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Certificate of Immunization Exemption-Medical	138	119	79	93	87	68
Percent change in number of Medical Exemptions from previous year	-28.5%	-13.8%	-33.6%	17.7%	-6.5%	-21.8%
Certificate of Immunization Exemption-Religious	597	635	622	694	873	936
Percent change in number of Religious Exemptions from previous year	19.9%	6.4%	-2.0%	11.6%	25.8%	7.2%
Provisional Certificate	1,737	1,730	1,478	1,356	1,228	1,255
Percent change in number of Provisional Certificate from previous year	-22.7%	-0.4%	-14.6%	-8.3%	-9.4%	2.2%
Invalid or No Certificate	923	907	759	572	552	531
Percent change in number of Invalid or No Certificate from previous year	15.2%	-1.7%	-16.3%	-24.6%	-3.5%	-3.8%
Total Under-Immunized	3,395	3,391	2,938	2,715	2,740	2,790
Percent of Under-Immunized Students	8.2%	8.2%	7.4%	6.9%	6.7%	6.8%
Percent change in number of Under-Immunized from previous year	-9.2%	-0.1%	-13.4%	-7.6%	0.9%	1.8%

Vaccination Coverage for 7th Grade Students

Iowa currently has two additional immunization requirements for all students entering, advancing or transferring into 7th grade, which may affect vaccination coverage:

- Beginning with the 2013-2014 school year, all students entering, advancing or transferring into 7th grade require proof of an adolescent tetanus, diphtheria and pertussis (whooping cough) booster immunization (Tdap) for school enrollment. This dose must contain the pertussis component to be compliant with school entry requirements.
- Beginning with the 2017-2018 school year, all students entering, advancing or transferring into 7th grade and born after September 15, 2004, require proof of one dose of meningococcal conjugate vaccine (MenACWY).

During the 2019-20 school year:

- 98.6% of 7th grade students had valid Certificates of Immunization, Certificates of Immunization Exemption, or Provisional Certificates of Immunization and were compliant with Iowa law.
- 94.6% of 7th grade students had Certificates of Immunization
- 1.4% of 7th grade students had invalid or no immunization certificates (Figure 8 and Table 9).

Figure 8 Immunization Certificates by Type 7th Grade, Iowa, 2015-16 to 2019-20

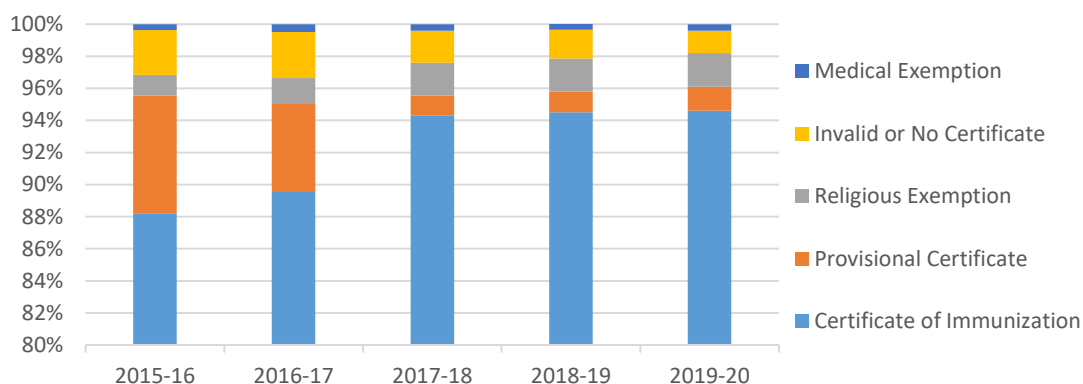


Figure Note: Vertical axis begins at 80%

Table 9 Immunization Certificates by Type 7th Grade, Iowa, 2015-16 to 2019-20

Grade	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates	
	Total	%	Total	%	Medical		Religious		Total	%		Total	%
2015-16	34,251	88.2	2,857	7.4	145	0.4	511	1.3	1,079	2.8	38,843	37,764	97.2
2016-17	35,320	89.5	2,168	5.5	192	0.5	638	1.6	1,133	2.9	39,451	38,318	97.1
2017-18	37,760	94.3	502	1.3	166	0.4	820	2.1	796	2.0	40,044	39,248	98.0
2018-19	39,262	94.5	537	1.3	152	0.4	850	2.1	749	1.8	41,550	40,801	98.2
2019-20	39,782	94.6	621	1.5	151	0.4	896	2.1	607	1.4	42,057	41,450	98.6

Provisional Certificate of Immunization

- During the 2019-2020 school year, 1.5% of 7th grade students had a Provisional Certificate of Immunization, representing 621 students.
- The number of Provisional Certificates increased from 1.3% (537 records) during the 2018-19 school year to 1.5% (621 records) during the 2019-20 school year.
- For the 2019-20 school year, the number of Provisional Certificates decreased by 78.3% since the 2015-16 school year, but increased by 15.6% from the previous year (Figure 8 and Table 9).

Certificate of Immunization Exemption

- During the 2019-2020 school year, 2.5% of 7th grade students were reported to have an exemption, representing 1,047 students.
- Of the 1,047 exemptions, 896 (85.6%) were categorized as religious and 151 (14.4%) as medical (Table 9 and Figure 9).

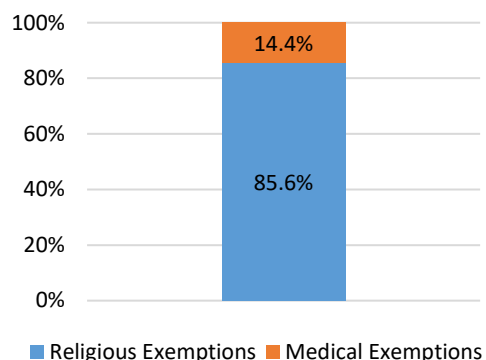
Medical Exemptions:

- During the 2019-2020 school year, 0.4% of 7th grade students were reported to have a medical Certificate of Immunization Exemption, representing 151 students.

Religious Exemptions:

- During the 2019-2020 school year, 2.1% of 7th grade students were reported to have a religious Certificate of Immunization Exemption, representing 896 students.

Figure 9 Percentage of Exemptions by Type, 7th Grade, Iowa, 2019-20



Under and Un-Immunized

- During the 2019-20 school year, 5.4% of 7th grade students were under or un-immunized (2,275 records) including students with a Provisional Certificate of Immunization, Certificate of Immunization Exemption, or an invalid or no certificate, which is a 1.2% increase from the previous school year (Table 10).
- The number of under or un-immunized students has decreased 50.5% since 2015-16, due to reductions in provisional certificates and invalid or no certificates.
 - The number of medical Certificates of Immunization Exemption increased by 4.1% (6 records) since the 2015-16 school year, and decreased 0.7% (1 record) from the previous year.
 - The number of religious Certificates of Immunization Exemption increased 75.3% (385 records) since 2015-16 and increased 5.4% (46 records) from the previous year.

Table 10 Under-Immunized Students, 7th Grade, Iowa, 2015-16 to 2019-20

	2015-16	2016-17	2017-18	2018-19	2019-20
Certificate of Immunization Exemption-Medical	145	192	166	152	151
Percent Change in Number of Medical Exemptions from previous year		32.4%	-13.5%	-8.4%	-0.7%
Certificate of Immunization Exemption-Religious	511	638	820	850	896
Percent Change in Number of Religious Exemptions from previous year		24.9%	28.5%	3.7%	5.4%
Provisional Certificate	2,857	2,168	502	537	621
Percent Change in Number of Provisional Certificates from previous year		-24.1%	-76.8%	7.0%	15.6%
Invalid or No Certificate	1,079	1,133	796	749	607
Percent Change in Number of Invalid or No Certificates from previous year		5.0%	-29.7%	-5.9%	-19.0%
Total Under-Immunized	4,592	4,131	2,284	2,288	2,275
Percent of Under-Immunized Students	11.8%	10.5%	5.7%	5.5%	5.4%
Percent Change in Number of Under-Immunized from previous year		-10.0%	-44.7%	3.8%	1.2%

VACCINATION COVERAGE FOR 12TH GRADE STUDENTS

Iowa has an additional vaccine requirement for students enrolling in 12th grade. Beginning with the 2017-2018 school year, all students entering, advancing or transferring into 12th grade and born after September 15, 1999 need proof of two doses of meningococcal (A, C W, Y) vaccine (one dose received on or after 16 years of age); or one dose if received when the student was 16 years of age or older. This vaccine requirement has directly affected the immunization audits for 12th grade students.

- During the 2019-20 school year, 97.2% of Iowa 12th grade students had a Certificates of Immunization, Certificates of Immunization Exemption, or Provisional Certificates of Immunization and were compliant with Iowa law. This percentage is the lowest of all grades.
- The statewide coverage levels for all vaccinations required at 12th grade was 90.9%, as indicated by valid Certificates of Immunizations. This coverage level is the lowest of all grades (Figure 10 and Table 11).
- Invalid or no immunization certificates accounted for 2.8% of enrolled 12th grade students, which is the highest percentage of all school grades (Table 5).

Figure 10 Immunization Certificates by Type, 12th Grade, Iowa, 2015-16 to 2019-20

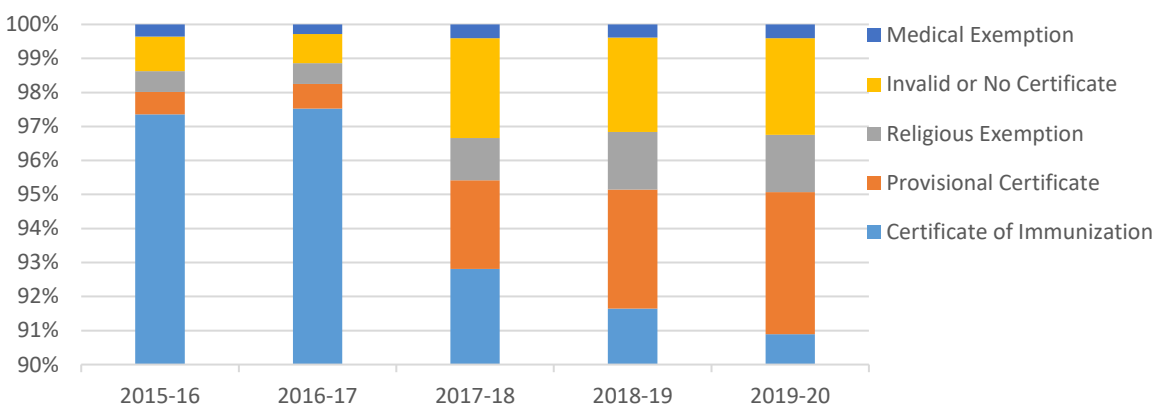


Figure Note: Vertical axis begins at 90%

Table 11 State Immunization Summary, 12th Grade, Iowa, 2015-2016 to 2019-20

Year	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates	
	Total	%	Total	%	Medical		Religious		Total	%		Total	%
2015-16	37,037	97.4	250	0.7	136	0.4	231	0.6	387	1.0	38,041	37,654	99.0
2016-17	37,814	97.5	282	0.7	110	0.3	239	0.6	330	0.9	38,775	38,445	99.2
2017-18	36,066	92.8	1,013	2.6	156	0.4	485	1.3	1,140	2.9	38,860	37,720	97.1
2018-19	35,540	91.7	1,355	3.5	148	0.4	660	1.7	1,076	2.8	38,779	37,703	97.2
2019-20	35,435	90.9	1,627	4.2	156	0.4	655	1.7	1,111	2.8	38,984	37,873	97.2

Provisional Certificate of Immunization

- During the 2019-2020 school year, 4.2% of 12th grade students had a Provisional Certificate of Immunization (1,627 records).
- Twelfth grade had the highest rate of provisional exemptions of all grades, and accounted for 23.8% of all Provisional Certificates issued in kindergarten through 12th grade.
- The number of Provisional Certificates increased from 0.7% (250 records) during the 2015-16 school year to 4.2% (1,627 records) during the 2019-20 school year (Figure 10 and Table 11).

Certificate of Immunization Exemption

- During the 2019-2020 school year, 811 (2.1%) of 12th graders were reported to have an exemption.
- Of the 811 exemptions, 655 (80.8%) were categorized as religious and 156 (19.2%) as medical (Table 11 and Figure 11).

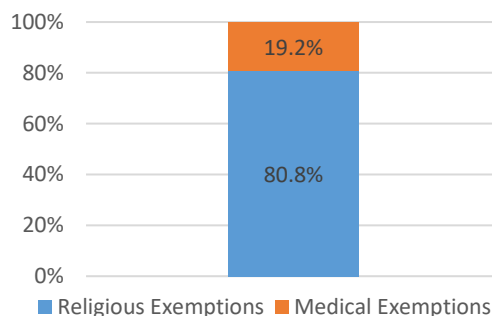
Medical Exemptions:

- During the 2019-2020 school year, 0.4% of 12th grade students were reported to have a medical Certificate of Immunization Exemption, representing 156 students.

Religious Exemptions:

- During the 2019-2020 school year, 1.7% of 12th grade students were reported to have a religious Certificate of Immunization Exemption, representing 655 students.

Figure 11 Percentage of Exemptions by Type, 12th Grade, Iowa, 2019-20



Under and Un-Immunized

- During the 2019-20 school year, 9.2% of 12th grade students were under or un-immunized (3,549 records). This includes students with a Provisional Certificate of Immunization, Certificate of Immunization Exemption, or an invalid or no certificate (Table 12).
- There was a 9.6% increase in under and un-immunized students from the previous year.
 - There was a 20.1% increase in the number of Provisional Certificates from the previous year, which was an increase of 272 records.
 - There was a 5.4% increase in the number of medical Certificates of Immunization Exemption from the previous year, which was an increase of eight records.
 - There was a 3.3% increase in the number of Invalid or No Certificates from the previous year, which was an increase of 35 records.
- The number of under or un-immunized students has increased 253.5% since 2015-16.

Table 12 Under-Immunized Students, 12th Grade, Iowa, 2015-16 to 2019-20

	2015-16	2016-17	2017-18	2018-19	2019-20
Certificate of Immunization Exemption-Medical	136	110	156	148	156
Percent change in number of Medical Exemptions from previous year		-19.1%	41.8%	-5.1%	5.4%
Certificate of Immunization Exemption-Religious	231	239	485	660	655
Percent change in number of Religious Exemptions from previous year		3.5%	102.9%	36.1%	-0.8%
Provisional Certificate	250	282	1,013	1,355	1,627
Percent change in number of Provisional Certificates from previous year		12.8%	259.2%	33.8%	20.1%
Invalid or No Certificate	387	330	1,140	1,076	1,111
Percent change in number of Invalid or No Certificates from previous year		-14.7%	245.5%	-5.6%	3.3%
Total Under-Immunized	1,004	961	2,794	3,239	3,549
Percent of Under-Immunized Students	2.6%	2.5%	7.2%	8.4%	9.2%
Percent change in number of Under-Immunized from previous year		-4.3%	190.7%	15.9%	9.6%

SUMMARY

State vaccination requirements for child care and school entry are important tools for maintaining high vaccination coverage rates and in turn, lower rates of vaccine-preventable diseases. While immunization rates in Iowa are consistent with or exceed national averages, pockets of under and un-immunized children leave themselves and their communities vulnerable to vaccine-preventable diseases. While the data in this report demonstrate trends, school audit data do not provide a full picture of all children's immunization history. Vaccination and exemption status reflects the child's status at the time of the audit. Some children may be in the process of receiving required vaccines and final vaccination or exemption status may change after completion of the audit (Provisional Certificates, Medical Exemptions and invalid records). In addition, some students with Religious Exemptions may have received some of the required vaccines.

All states allow for medical exemptions, and five do not allow exemptions for religious or philosophic reasons (California, Maine, Mississippi, New York, and West Virginia). Iowa law allows for medical and religious exemptions. Iowa exemption rates are comparable to available national data, 2018-19 (Table 13).

Table 13 Vaccine Coverage and Exemptions in Iowa and United States, 2017-18 and 2019-20

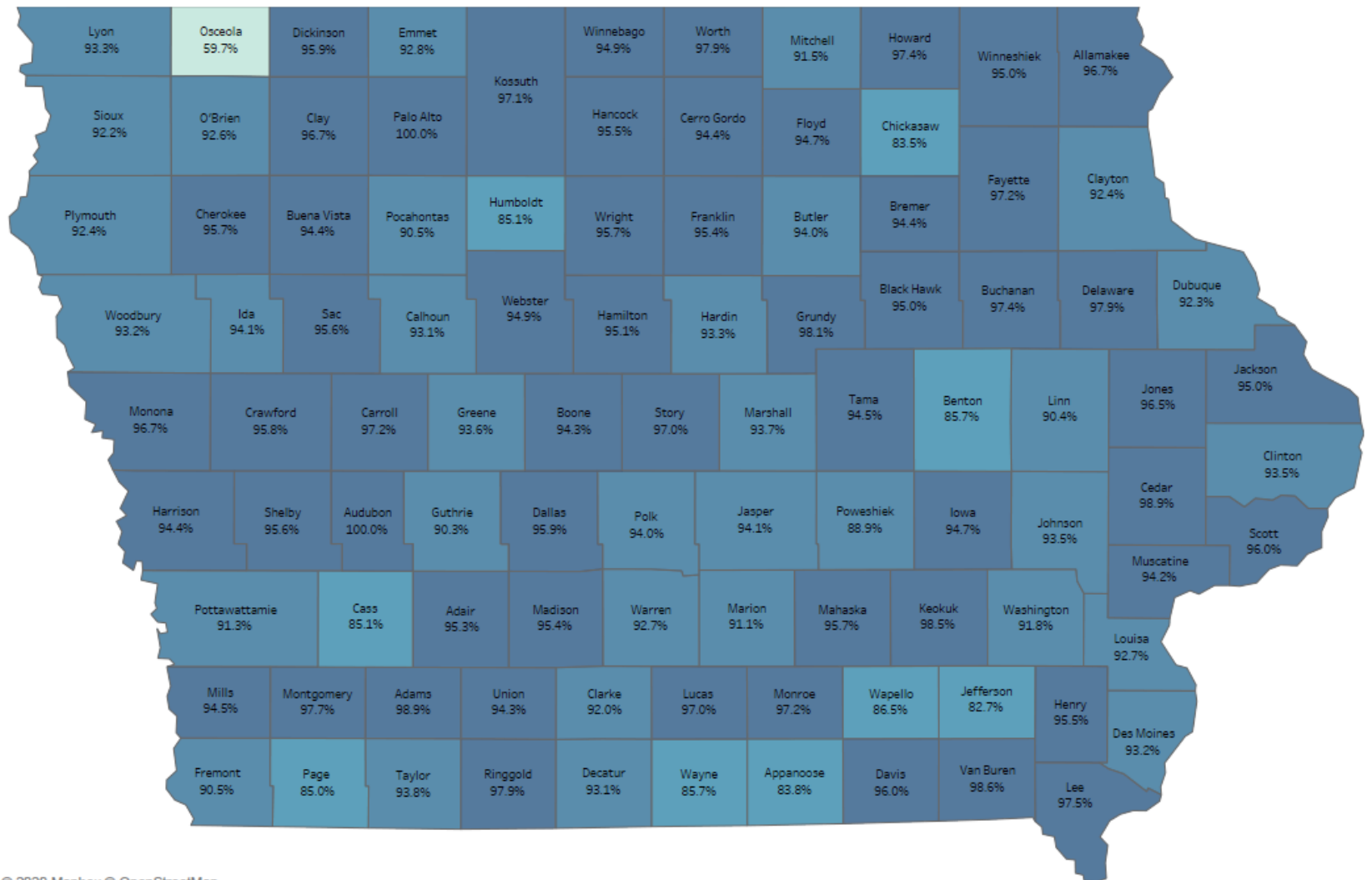
	Iowa Child Care	Iowa Kindergarten	Iowa Kindergarten - 12th grade	National 2018-2019 (Kindergarten only)
Percent Valid Certificates	96.7%	98.7%	99.0%	
Certificate of Immunization	93.8%	93.2%	95.4%	
Provisional Certificates	1.2%	3.1%	1.3%	
Certificate of Immunization Exemption-Medical	0.1%	0.2%	0.3%	0.3% (Range <0.1 – 0.8%)
Certificate of Immunization Exemption-Religious	1.5%	2.3%	2.0%	2.2% (Non-medical Exemptions Range 0.9 – 7.5%)
Invalid or No Certificate	3.3%	1.3%	1.0%	

Data Note: Source of national kindergarten data available at <https://www.cdc.gov/vaccines/imz-managers/coverage/schoolvaxview/pubs-resources.html>.

Studies have found individuals claiming exemptions from immunization are at a greater risk of contracting vaccine-preventable diseases. States with lower immunization rates have higher rates of vaccine-preventable diseases. The IDPH Immunization Program continues to monitor immunization exemption rates, identify clusters of un-immunized children and provide education and information to address vaccine safety concerns. Vaccines prevent diseases and save lives. Immunize for a better life.

Appendix A - Supplemental Maps

Appendix 1. Percent of Child Care Attendees with a Certificate of Immunization by County, Iowa, 2019-2020 School Year

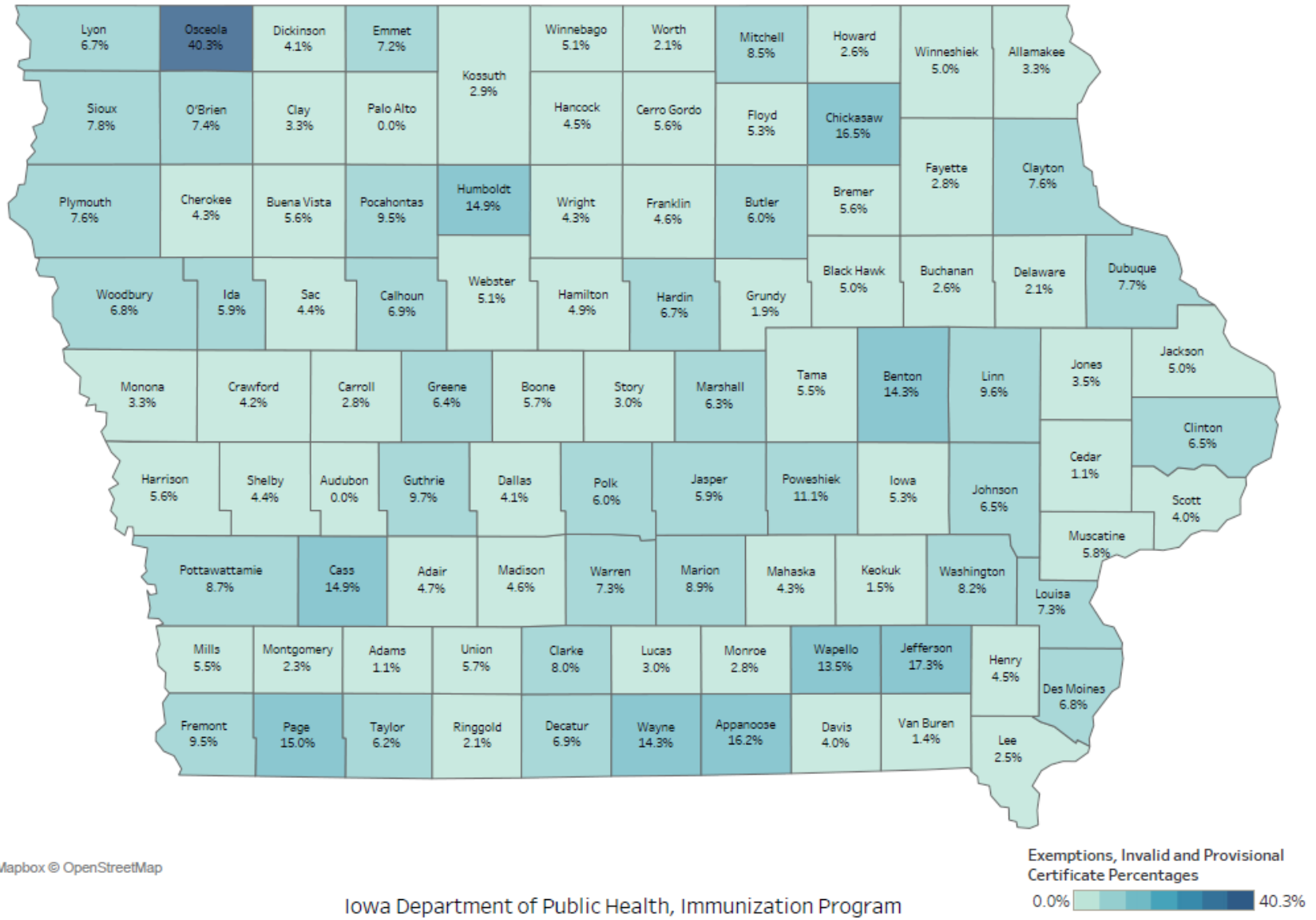


© 2020 Mapbox © OpenStreetMap

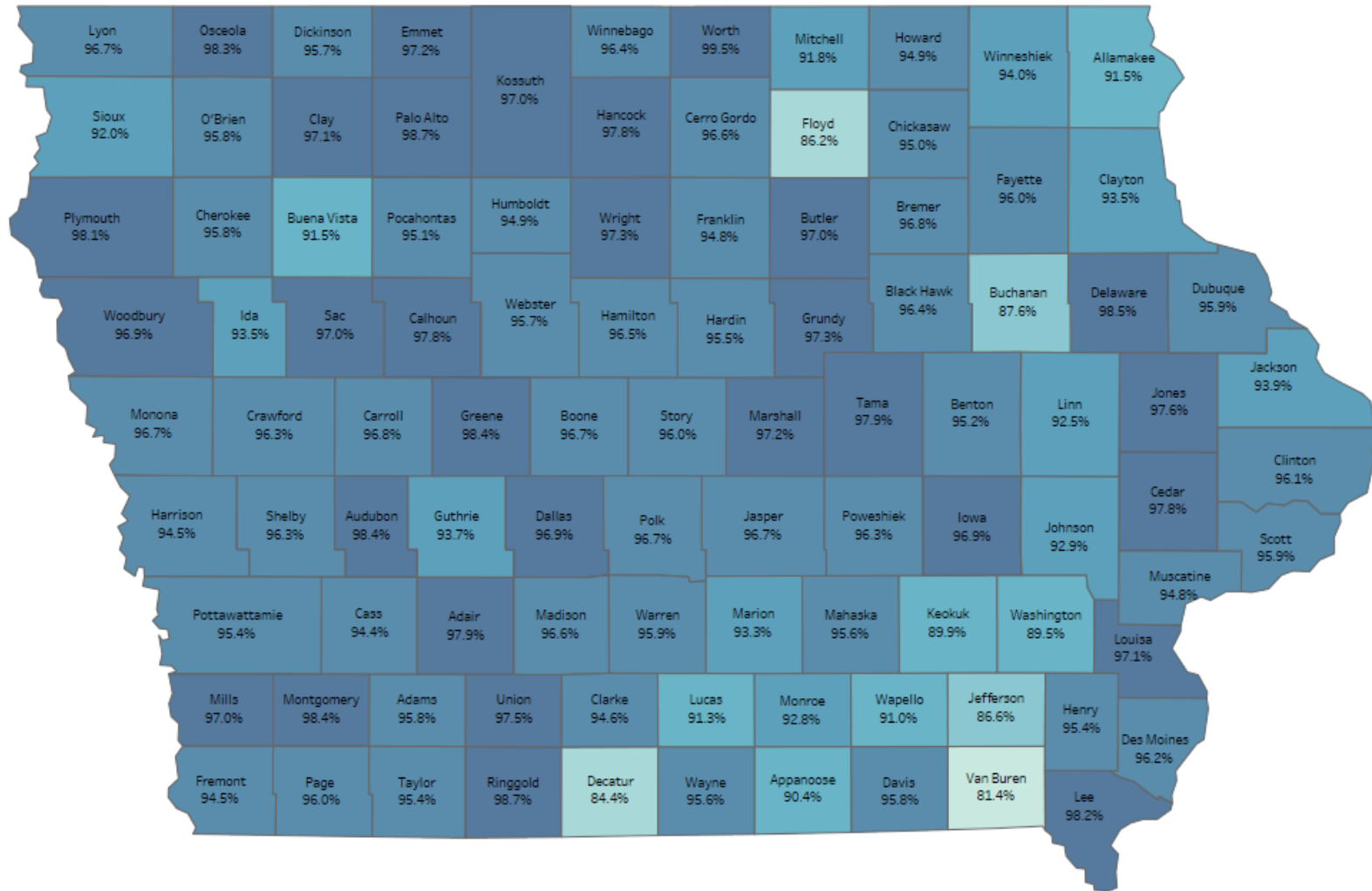
Iowa Department of Public Health, Immunization Program

Certificate of Immunization Percentages
59.7% 100.0%

Appendix 2. Percent of Child Care Attendees who are Under or Un-immunized by County, Iowa, 2019-2020 School Year
Attendees with a Certificate of Religious or Medical Exemption, Provisional Certificate, or Invalid/No Certificate



Appendix 3. Percent of Students Kindergarten through 12th Grade with a Certificate of Immunization by County, Iowa, 2019-2020 School Year



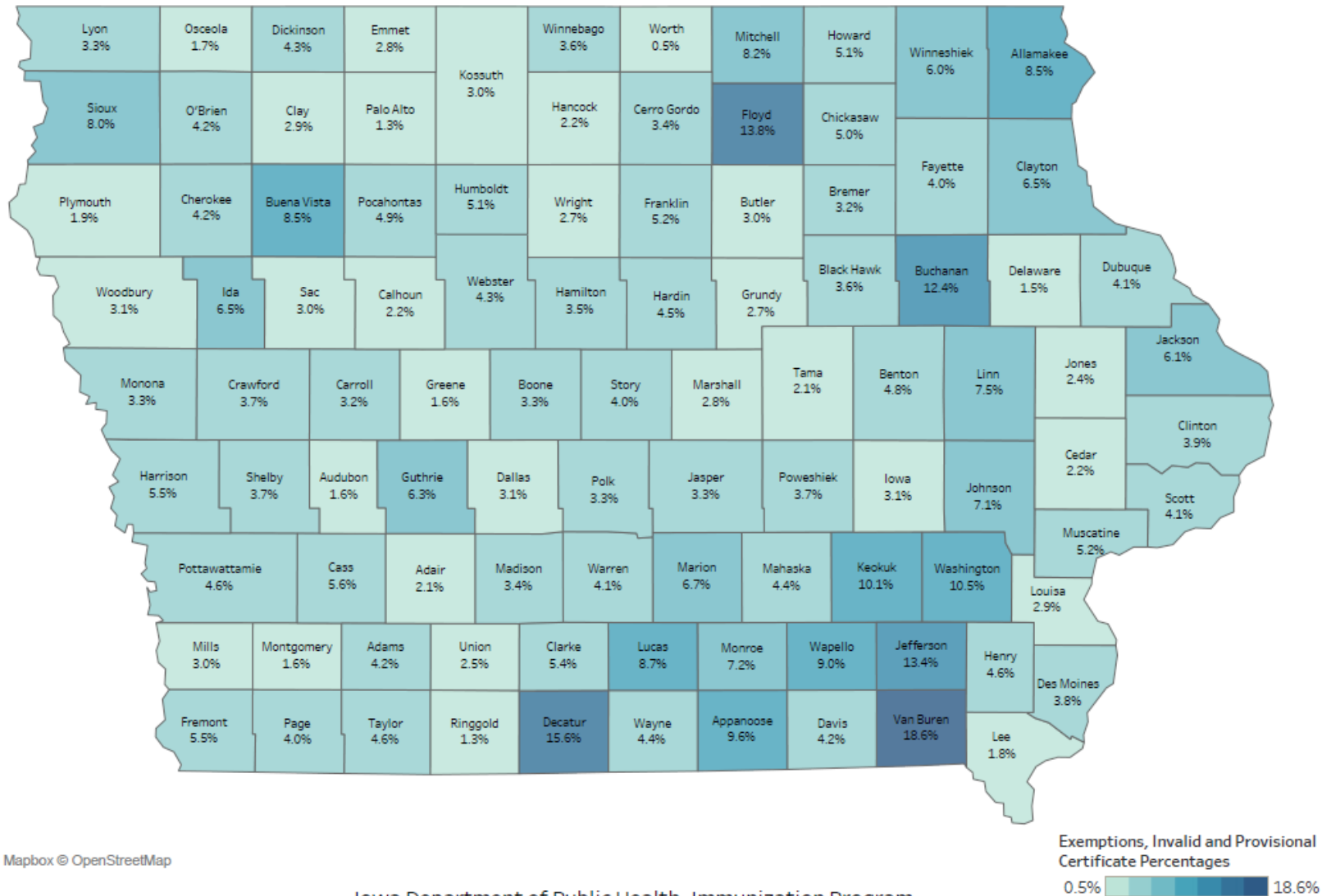
© 2020 Mapbox © OpenStreetMap

Iowa Department of Public Health, Immunization Program

Certificate of Immunization Percentages
81.4% 99.5%

Appendix 4. Percent of Students Kindergarten through 12th Grade who are Under or Un-immunized by County, Iowa, 2019-2020 School Year

Students with a Certificate of Religious or Medical Exemption, Provisional Certificate, or Invalid/No Certificate

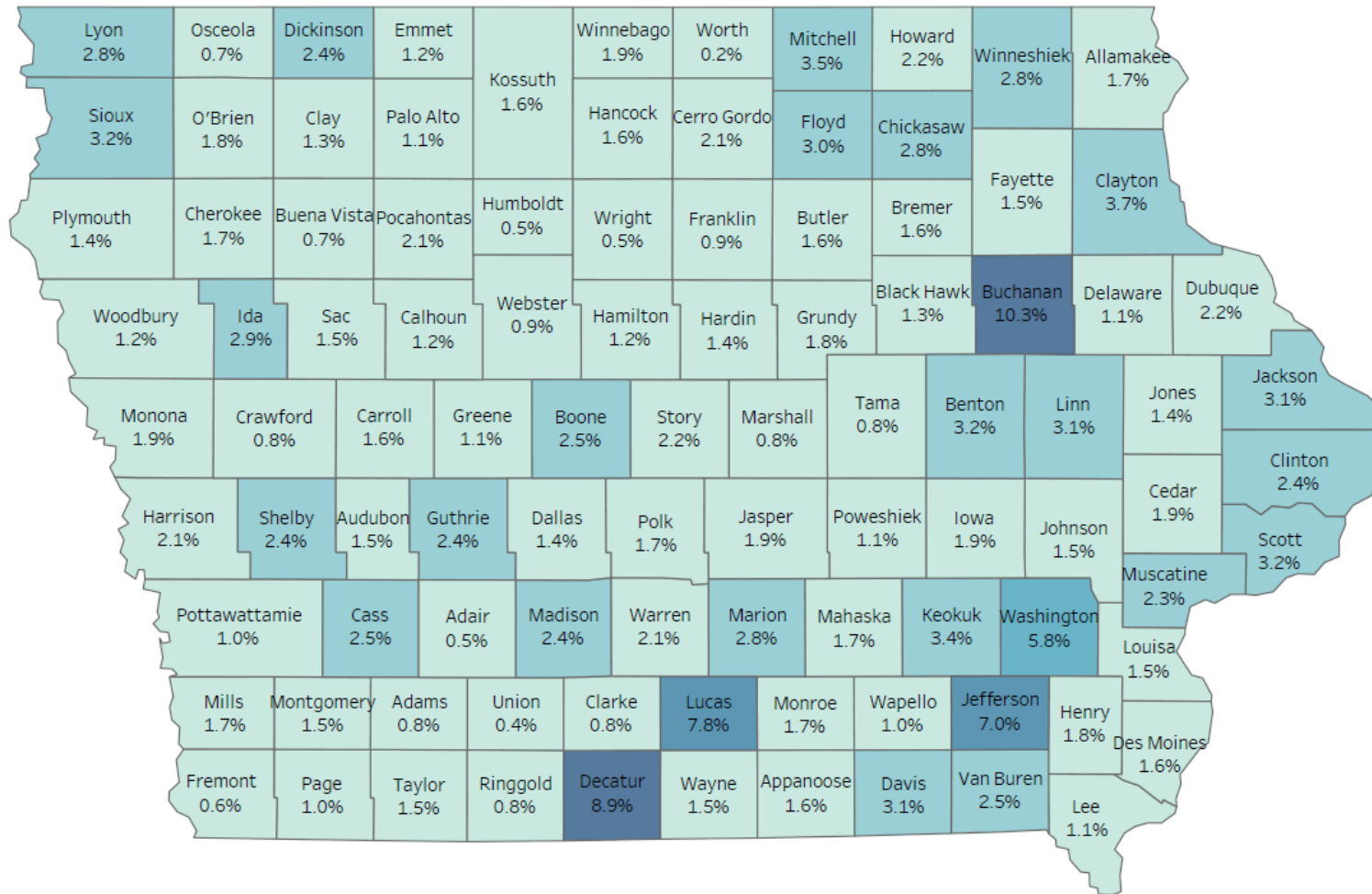


© 2020 Mapbox © OpenStreetMap

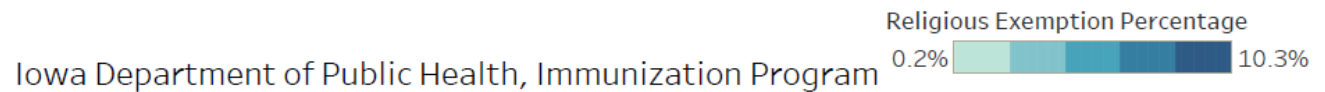
Iowa Department of Public Health, Immunization Program

Exemptions, Invalid and Provisional Certificate Percentages
0.5% 18.6%

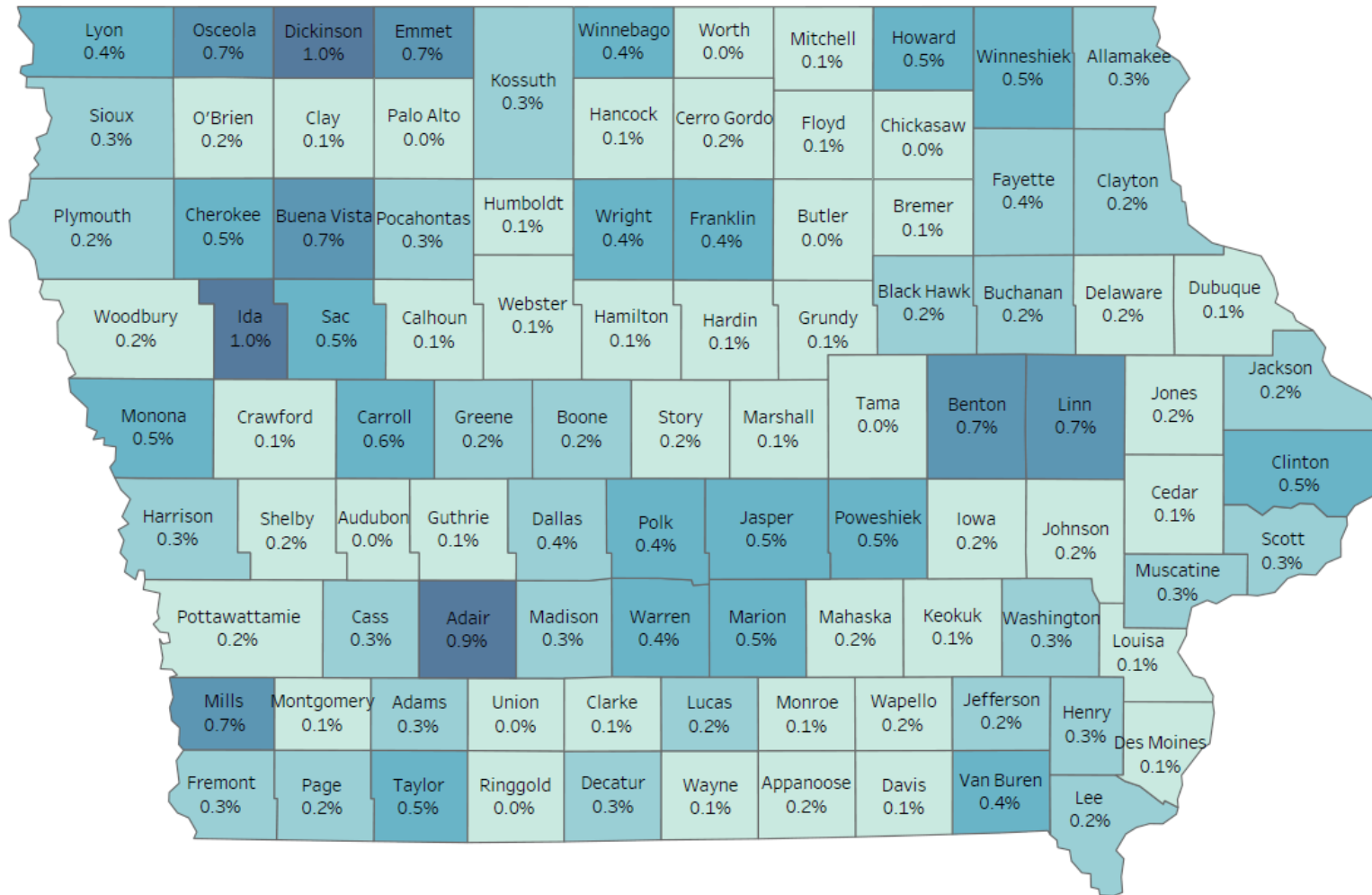
Appendix 5. Percent of Students Kindergarten through 12th Grade with a Certificate of Religious Exemption by County, Iowa, 2019-2020 School Year



© 2020 Mapbox © OpenStreetMap



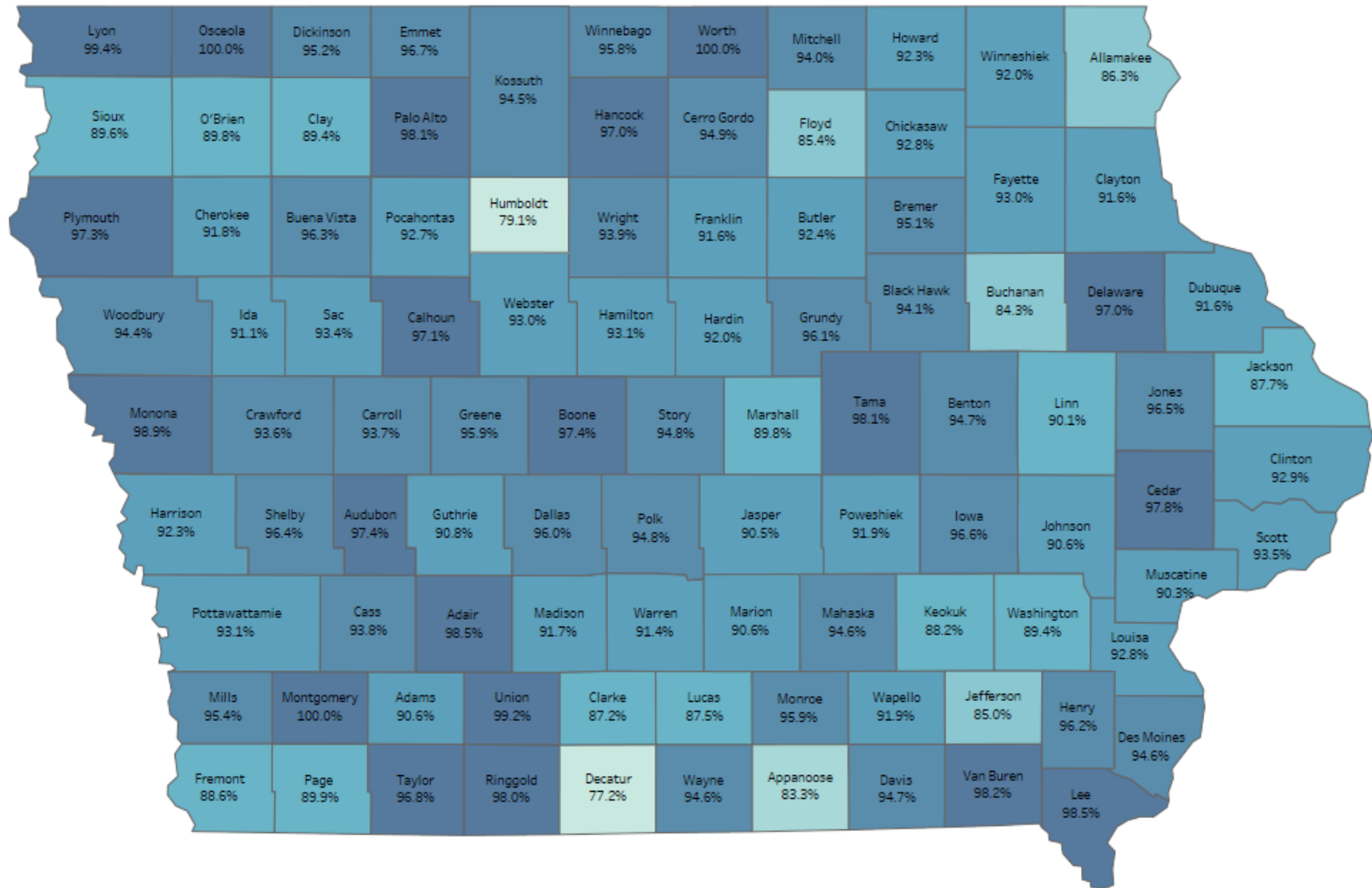
Appendix 6. Percent of Students Kindergarten through 12th Grade with a Certificate of Medical Exemption by County, Iowa, 2019-2020 School Year



© 2020 Mapbox © OpenStreetMap

Iowa Department of Public Health, Immunization Program Medical Exemption Percentage
 0.0% 1.0%

Appendix 7. Percent of Kindergarten Students with a Certificate of Immunization by County, Iowa, 2019-2020 School Year

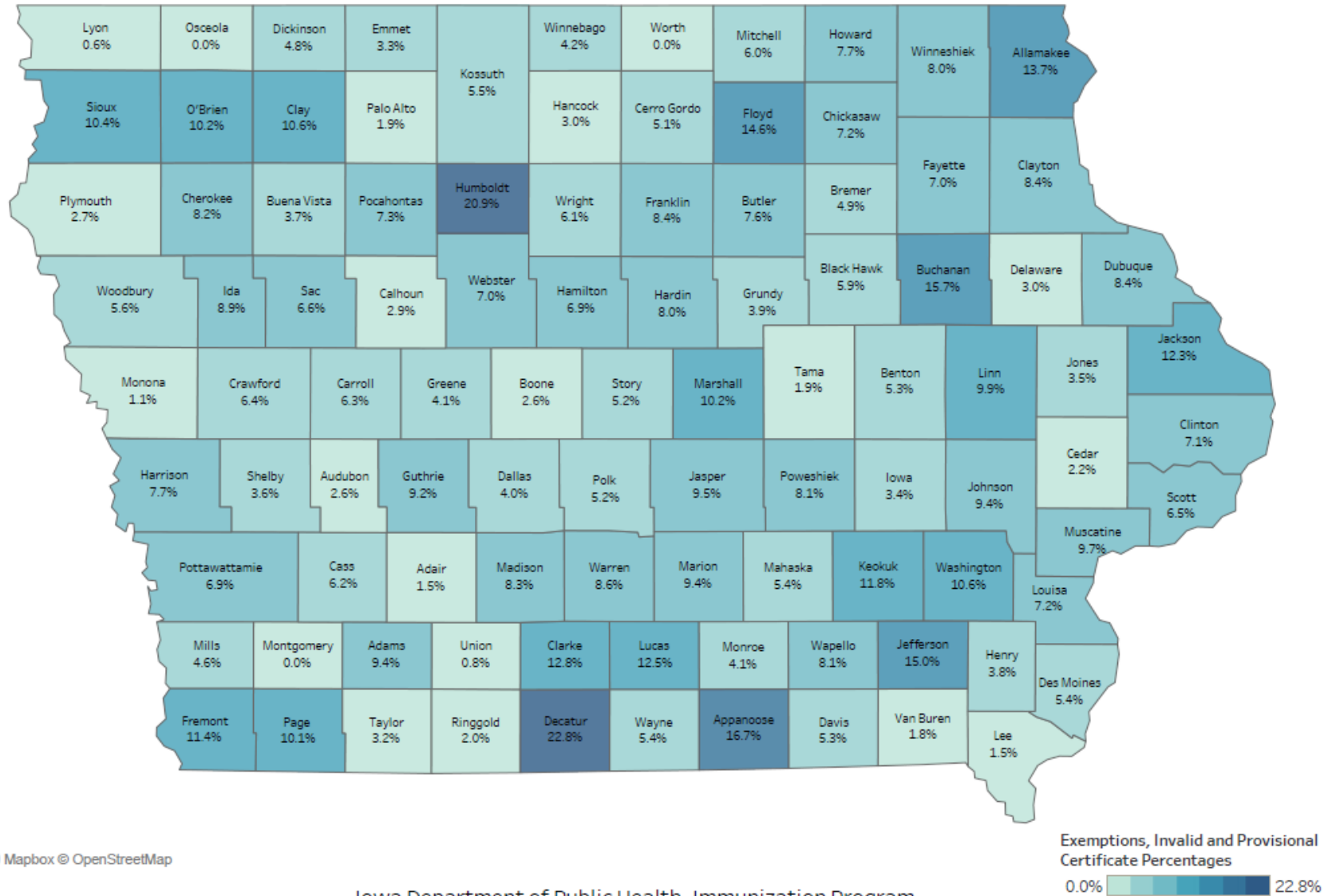


© 2020 Mapbox © OpenStreetMap

Iowa Department of Public Health, Immunization Program

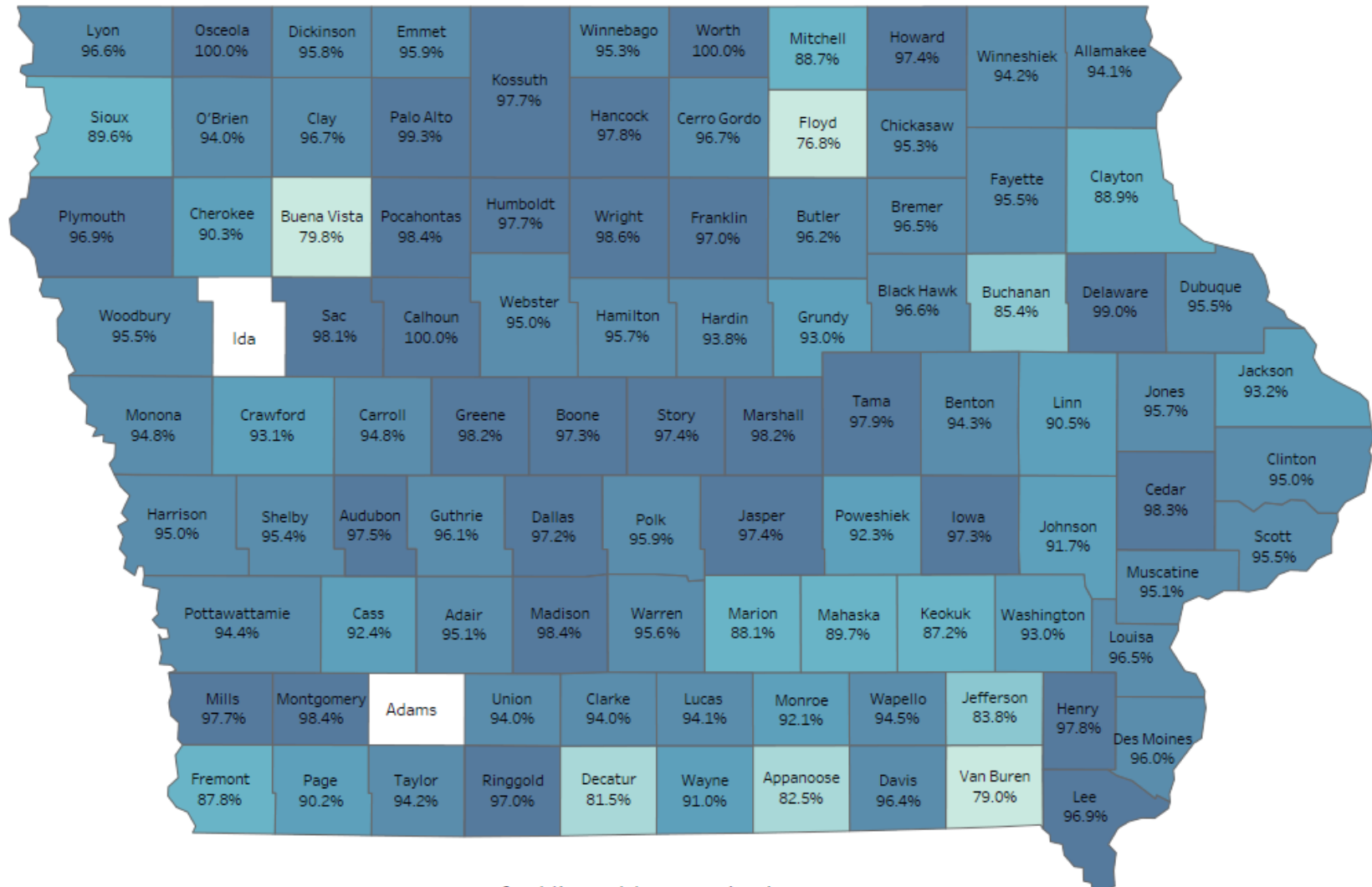
Certificate of Immunization Percentages
77.2% 100.0%

Appendix 8. Percent of Kindergarten Students who are Under or Un-immunized by County, Iowa, 2019-2020 School Year
Students with a Certificate of Religious or Medical Exemption, Provisional Certificate, or Invalid/No Certificate



Appendix 9. Percent of Seventh Grade Students with a Certificate of Immunization by County, Iowa, 2019-2020 School Year

Map Note: Data are collected by location of school, not county of resident of student. Ida and Adams counties do not include 7th grade students.



Iowa Department of Public Health, Immunization Program

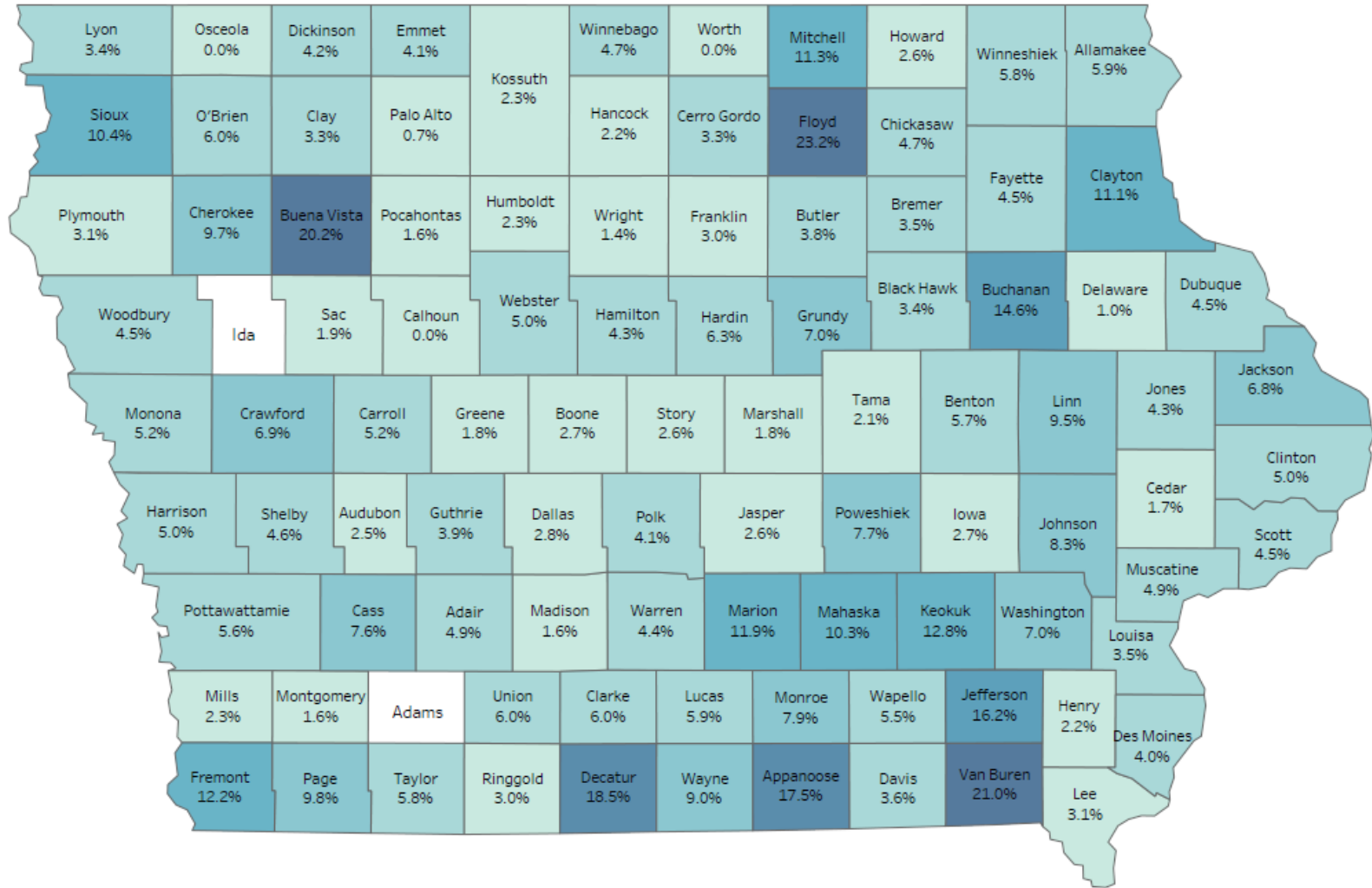
Certificate of Immunization Percentages
76.8% 100.0%

© 2020 Mapbox © OpenStreetMap

Appendix 10. Percent of Seventh Grade Students who are Under or Un-immunized by County, Iowa, 2019-2020 School Year

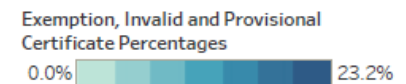
Students with a Certificate of Religious or Medical Exemption, Provisional Certificate, or Invalid/No Certificate

Map Note: Data are collected by location of school, not county of resident of student. Ida and Adams counties do not include 7th grade students.

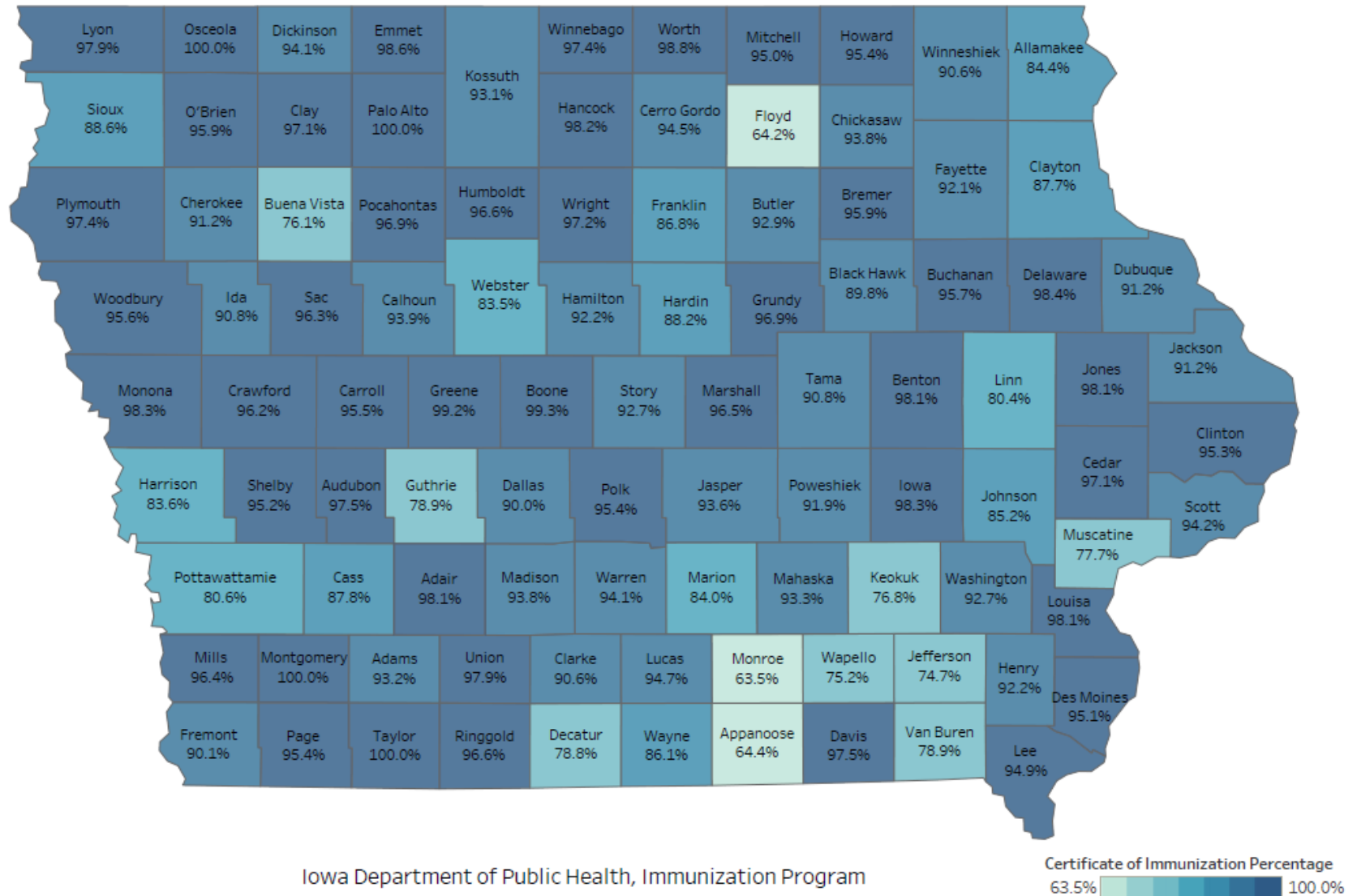


Iowa Department of Public Health, Immunization Program

© 2020 Mapbox © OpenStreetMap

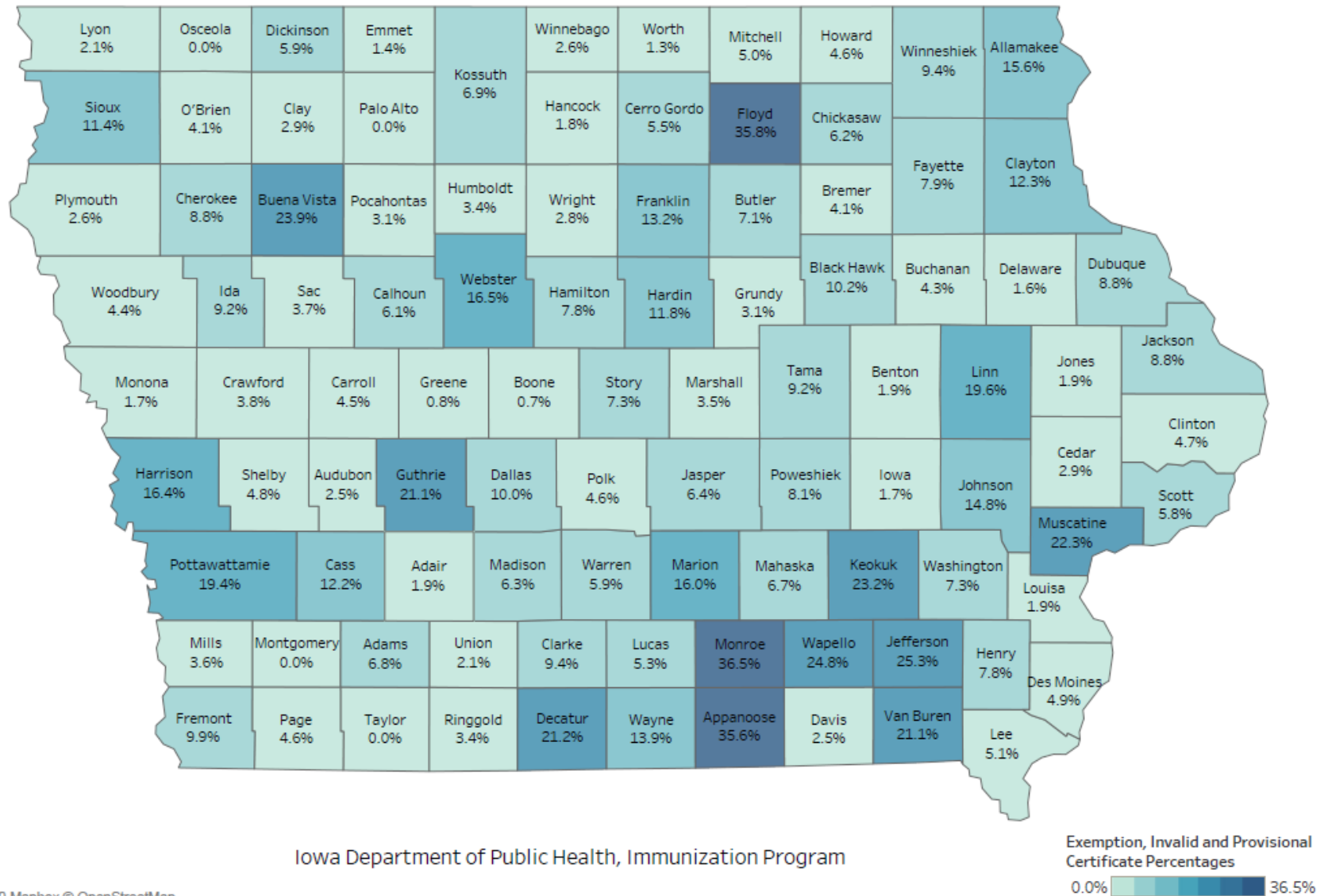


Appendix 11. Percent of 12th Grade Students with a Certificate of Immunization by County, Iowa, 2019-2020 School Year



© 2020 Mapbox © OpenStreetMap

Appendix 12. Percent of 12th Grade Students who are Under or Un-immunized by County, Iowa, 2019-2020 School Year
Students with a Certificate of Religious or Medical Exemption, Provisional Certificate, or Invalid/No Certificate



© 2020 Mapbox © OpenStreetMap