



# **2020-21 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)  
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## Acknowledgements

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Gov. Kim Reynolds

Lt. Gov. Adam Gregg

IDPH Interim Director Kelly Garcia

Report Contact Information:

Bethany Kintigh, Immunization Program Manager

Don Callaghan, Bureau Chief

1-800-831-6293

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## 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 12<sup>th</sup> 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 2020-21 school year:

### Valid Immunization Certificates

- 96.7% of children attending licensed child care centers had valid immunization certificates, indicating 77,786 children had IDPH Certificates of Immunization, Certificates of Immunization Exemption, or Provisional Certificates of Immunization in compliance with Iowa law.
  - The percent of children in child care with valid immunization certificates remained constant from the previous assessment year.

### Certificates of Immunization

- 94.1% of children attending licensed child care centers had valid Certificates of Immunization, indicating 75,699 children met age-appropriate immunization requirements.
  - The percent of children in child care with a valid immunization certificates increased 0.3% from the previous assessment year.

### Provisional Certificates of Immunization

- 1.1% of children attending licensed child care centers had Provisional Certificates of Immunization, indicating 905 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 21.3% 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 57 children.
  - The number of children in child care with valid medical Certificates of Immunization Exemption decreased 45.2% from the previous assessment year, with a downward trend since the 2011-12 assessment year.

### Certificates of Immunization Exemption - Religious

- 1.4% of children attending licensed child care centers had a religious Certificates of Immunization Exemption, representing 1,125 children.
  - The number of children in child care with valid religious Certificates of Immunization Exemption decreased 24.3% from the previous assessment year.

### **Invalid or No Immunization Certificates**

- 3.3% of children attending licensed child care centers had invalid or no immunization certificates, representing 2,628 children.
  - The number of children in child care with invalid or no immunization certificates decreased 19.5% from the previous assessment year.

### **Under or Un-immunized**

- 5.9% of children attending licensed child care centers were under or un-immunized, representing 4,715 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 decreased 21.5% from previous assessment year.

## **School Audit Highlights**

During the 2020-21 school year:

### **Valid Immunization Certificates**

- 99.1% of students attending Iowa schools had valid immunization certificates, indicating 514,546 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 decreased 1.2% from the previous assessment year.

### **Certificates of Immunization**

- 95.6% of students attending Iowa schools had valid Certificates of Immunization, indicating 496,246 records met age-appropriate immunization requirements.
  - The percent of students in Iowa schools with a valid immunization certificates increased 0.2% from the previous assessment year.

### **Provisional Certificates of Immunization**

- 1.2% of students attending Iowa schools had Provisional Certificates of Immunization, indicating 6,137 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 decreased 10.3% from the previous assessment year.

### **Certificates of Immunization Exemption - Medical**

- 0.3% of students attending Iowa schools had medical Certificates of Immunization Exemption, representing 1,570 students.
  - The number of students in Iowa schools with valid medical Certificates of Immunization Exemption decreased 5.5% 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 10,593 students.
  - The number of students in Iowa schools with valid religious Certificates of Immunization Exemption decreased 1.1% from the previous school year.

**Invalid or No immunization Certificates**

- 0.9% of students attending Iowa schools had invalid or no immunization certificates, representing 4,613 students.
  - The number of students in Iowa schools with invalid or no immunization certificates decreased 9.2% from the previous assessment year.

**Under or Un-immunized**

- 4.4% of students attending Iowa schools were under or un-immunized, representing 22,913 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 decreased 5.7% from previous assessment year.

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

- Highest number of valid certificates: 8<sup>th</sup> grade
- Highest percentage of valid certificates: 2<sup>nd</sup> grade
- Highest number of Certificates of Immunization: 9<sup>th</sup> grade
- Highest percentage of Certificates of Immunization: 6<sup>th</sup> grade
- Highest number and percentage of Provisional Certificate of Immunization: 12<sup>th</sup> grade
- Highest number and percentage of medical Certificates of Immunization Exemption: 11<sup>th</sup> grade
- Highest number and percentage of religious Certificates of Immunization Exemption: 7<sup>th</sup> grade
- Highest number and percentage of invalid or no certificates: 12<sup>th</sup> grade
- Highest number and percentage of under or un-immunized students: 12<sup>th</sup> 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 12<sup>th</sup> 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/immtb/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 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 2020-2021 school year. Records from 80,414 enrolled students were analyzed to calculate statewide vaccination coverage levels, which is a 17.6% decrease in audited records from the previous year.

- During the 2020-21 school year, 96.7% of children attending licensed child care centers had valid immunization certificates (77,786 records).
- The statewide coverage levels for all vaccinations required at child care entry was 94.1%, as indicated by valid Certificates of Immunizations (75,699 records).
- Invalid or no immunization certificates accounted for 3.3% (2,628 records) of children enrolled in child care (Figure 1 and Table 1).
- 5.9% of children enrolled in licensed child care were under or un-immunized (4,715 records).

Figure 1 Immunization Certificates by Type, Child Care, Iowa, 2011-12 to 2020-21

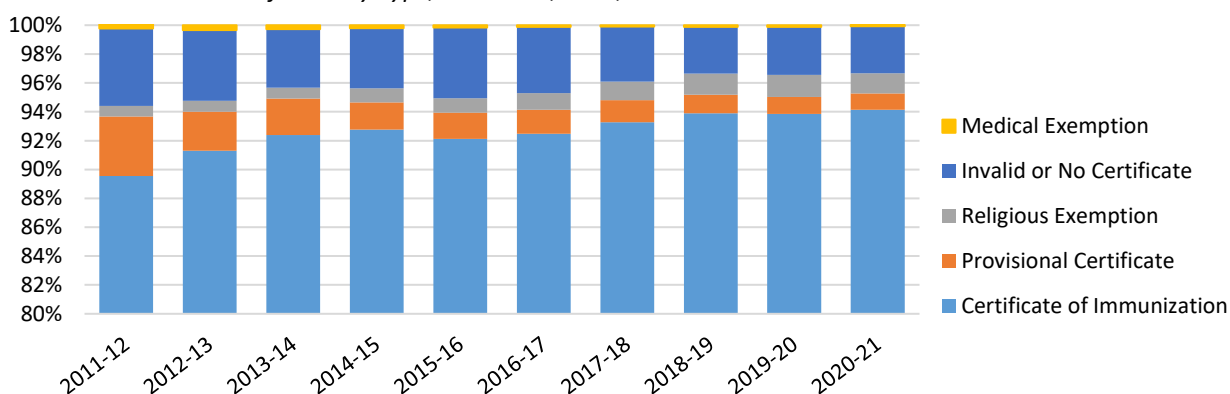


Figure Note: Vertical axis begins at 80%

Table 1 State Immunization Summary by Year, Child Care, Iowa, 2011-12 to 2020-21

Year	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates	
	Total	%	Total	%	Medical		Religious		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
2020-21	75,699	94.1	905	1.1	57	0.1	1,125	1.4	2,628	3.3	80,414	77,786	96.7

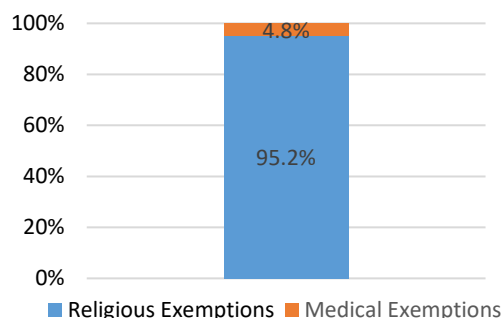
### Provisional Certificate of Immunization

- During the 2020-21 school year, 1.1% of children in child care had a Provisional Certificate of Immunization, representing 905 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 1.1% (905 children) during the 2020-21 school year (Table 2 and Figure 1).
- During the 2020-21 school year, the number of Provisional Certificates of Immunization decreased 42.0% since the 2016-17 school year and by 21.3% from the previous year.

### Certificates of Immunization Exemption

- During the 2020-21 school year, 1.5% of children in child care had a Certificate of Immunization Exemption (1,182 records).
- Of the 1,182 exemptions, 95.2% (1,125 records) were categorized as religious and 4.8% (57 records) were categorized as medical (Figure 2).

Figure 2 Percentage of Exemptions by Type, Child Care, Iowa, 2020-21



#### Medical Exemptions:

- During the 2020-21 school year, 0.1% of children enrolled in licensed child care had a medical Certificate of Immunization Exemption, representing 57 children.
- The number of medical Certificates of Immunization Exemption decreased 49.1% (55 records) since the 2016-17 school year and decreased 45.2% (47 records) from the previous year.

#### Religious Exemptions:

- During the 2020-21 school year, 1.4% of children enrolled in licensed child care had a religious Certificate of Immunization Exemption, representing 1,125 children.
- The number of religious Certificates of Immunization Exemptions increased 5.4% (58 records) since the 2016-17 school year and decreased 24.3% (361 records) from the previous year.
- The 2020-21 school year was the first decrease in the number of religious Certificate of Immunization Exemption since 2011-12 school year.

### Under and Un-Immunized

- During the 2020-21 school year, 5.9% of children enrolled in licensed child care were under immunized, representing 4,715 children.
- The number of under and un-immunized children decreased 21.5% from the previous school year (Table 2).

Table 2 Under-Immunized Children in Child Care, Iowa, 2016-17 to 2020-21

	2016-17	2017-18	2018-19	2019-20	2020-21
Certificate of Immunization Exemption-Medical	112	93	109	104	57
Percent change in number of Medical Exemptions from previous year	-20.0%	-17.0%	17.2%	-4.6%	-45.2%
Certificate of Immunization Exemption-Religious	1,067	1,231	1,415	1,486	1,125
Percent change in number of Religious Exemptions from previous year	26.3%	15.4%	14.9%	5.0%	-24.3%
Provisional Certificate	1,561	1,476	1,258	1,150	905
Percent change in number of Provisional Exemptions from previous year	0.6%	-5.4%	-14.8%	-8.6%	-21.3%
Invalid or No Certificate	4,266	3,662	3,156	3,265	2,628
Percent change in number of Invalid or No Certificate from previous year	2.5%	-14.2%	-13.8%	3.5%	-19.5%
Total Under/Un-immunized	7,006	6,462	5,938	6,005	4,715
Percent of Under/Un-immunized Students	7.5%	6.7%	6.1%	6.2%	5.9%
Percent change in number of Under/ Un-immunized from previous year	4.6%	-7.8%	-8.1%	1.1%	-21.5%

## 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 2020-2021 school year. Records from 519,159 enrolled students kindergarten - 12<sup>th</sup> grade in 1,541 Iowa schools were analyzed to calculate statewide vaccination coverage levels.

### VACCINATION COVERAGE OF STUDENTS KINDERGARTEN THROUGH 12<sup>TH</sup> GRADE

- During the 2020-21 school year, 99.1% of students in kindergarten through 12<sup>th</sup> grade had valid Certificates of Immunization, Certificates of Immunization Exemption, or Provisional Certificates of Immunization and were compliant with Iowa law, representing 514,546 students.
- The statewide coverage level for all vaccinations required for school was 95.6%, as indicated by valid Certificates of Immunizations, representing 496,246 students.
- Invalid or no immunization certificates accounts for 0.9% of students enrolled in Kindergarten through 12<sup>th</sup> grade, representing 4,613 students (Figure 3 and Table 3).
- 4.4% of students in kindergarten through 12<sup>th</sup> grade were under or un-immunized.

Figure 3 Immunization Certificates by Type, Kindergarten - 12th Grade, Iowa, 2006-07 to 2020-21

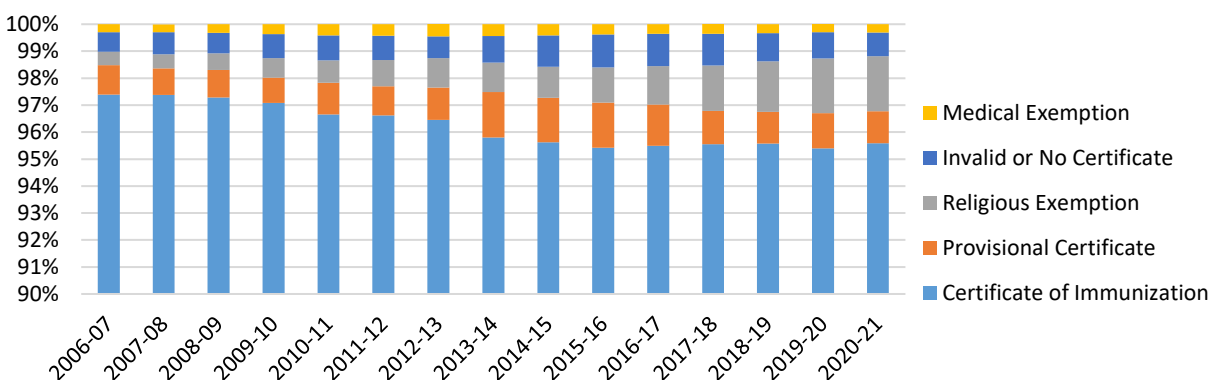


Figure Note: Vertical axis begins at 90%

Table 3 State Immunization Summary by Year, Kindergarten - 12th Grade, Iowa, 2006-07 to 2020-21

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
2020-21	496,246	95.6	6,137	1.2	1,570	0.3	10,593	2.0	4,613	0.9	519,159	514,546	99.1

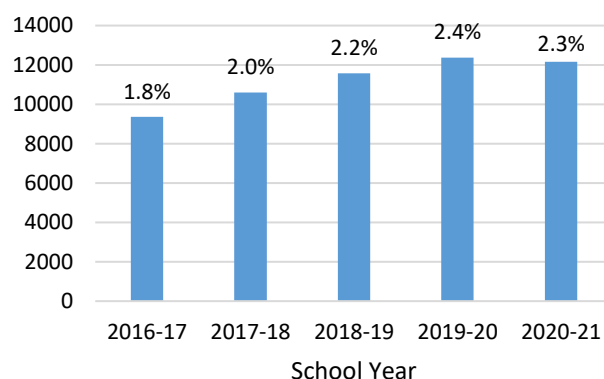
### Kindergarten - 12<sup>th</sup> Grade - Provisional Certificate of Immunization

- During the 2020-21 school year, 1.2% of students in kindergarten through 12<sup>th</sup> grade had a Provisional Certificate of Immunization, representing 6,137 students.
- Provisional Certificates of Immunization decreased from 1.3% (6,843 records) during the 2019-20 school year to 1.2% (6,137 records) during the 2020-21 school year (Table 3 and Figure 3).
- 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 in previous years.

### Certificate of Immunization Exemption

- During the 2020-21 school year, 2.3% of students in kindergarten through 12<sup>th</sup> grade were reported to have a Certificate of Immunization Exemption, representing 12,163 students (Table 3).
- The 2020-21 school year is the first decrease in exemption rates after previous year-over-year increases (Figure 4).
- Of the 12,163 exemptions, 87.1% (10,593 records) were categorized as religious and 12.9% (1,570 records) were categorized as medical (Figure 5).

Figure 4 Number and Percentage of Exemptions, Kindergarten - 12th Grade, Iowa, 2016-17 to 2020-21



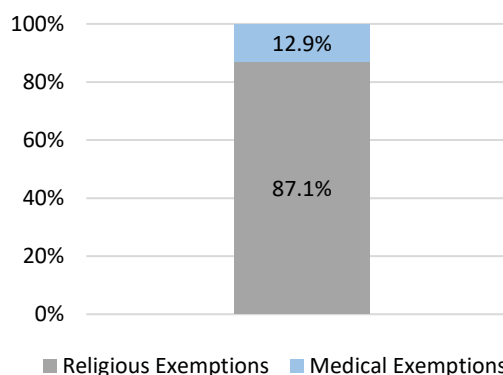
#### Medical Exemptions:

- During the 2020-21 school year, 0.3% of students in kindergarten through 12<sup>th</sup> grade had a medical Certificate of Immunization Exemption, representing 1,570 students and a slight decrease from the previous year.
- The percent of students in kindergarten through 12<sup>th</sup> 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 2020-21 school year, 2.0% of students in kindergarten through 12<sup>th</sup> grade had a religious Certificate of Immunization Exemption, representing 10,593 students.
- While the number of exemptions decreased from the previous school year, the percentage of students with exemptions remained constant from the previous year.

Figure 5 Percentage of Exemptions by Type, Kindergarten - 12th Grade, Iowa, 2020-21



### Kindergarten - 12th Grade - Under and Un-Immunized

- During the 2020-21 school year, 4.4% of students in kindergarten through 12<sup>th</sup> 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 22,913 records (Table 4).
- There was a 5.7% decrease in the number of under and un-immunized students in 2020-21 from the previous assessment year, which is a decrease in 1,388 records.
  - The number of religious Certificates of Immunization Exemption increased 41.9% (3,128 records) since 2016-17 school year, and decreased 1.1% (120 records) from the previous assessment year.
  - The number of medical Certificates of Immunization Exemption decreased 17.0% (321 records) since the 2016-17 school year and by 5.5% (92 records) from the previous assessment year.
  - The number of Provisional Certificates decreased 22.8% (1,814 records) since the 2016-17 school year and by 10.3% (706 records) from the previous assessment year.
  - The number of Invalid or No Certificate decreased 25.8% (1,605 records) since the 2016-17 school year and by 9.2% (470 records) from the previous assessment year.

Table 4 Under-Immunized Students, Kindergarten - 12th Grade, Iowa, 2016-17 to 2020-21

	2016-17	2017-18	2018-19	2019-20	2020-21
Certificate of Immunization Exemption-Medical	1,891	1,852	1,723	1,662	1,570
Percent change in number of Medical Exemptions from previous year	-5.3%	-2.1%	-7.0%	-3.5%	-5.5%
Certificate of Immunization Exemption-Religious	7,465	8,740	9,851	10,713	10,593
Percent change in number of Religious Exemptions from previous year	10.8%	17.1%	12.7%	8.8%	-1.1%
Provisional Certificate	7,951	6,439	6,163	6,843	6,137
Percent change in number of Provisional Exemptions from previous year	-9.1%	-19.0%	-4.7%	11.5%	-10.3%
Invalid or No Certificate	6,218	6,134	5,519	5,083	4,613
Percent change in number of Invalid or No Certificate from previous year	-1.7%	-1.4%	-10.0%	-7.9%	-9.2%
Total Under-Immunized	23,525	23,165	23,229	24,301	22,913
Percent of Under-Immunized Students	4.5%	4.4%	4.4%	4.6%	4.4%
Percent change in number of Under-immunized from previous year	-1.2%	-1.5%	0.3%	4.6%	-5.7%

### Kindergarten - 12th Grade - Individual Grades

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

- Highest number of valid certificates: 8<sup>th</sup> grade
- Highest percentage of valid certificates: 2<sup>nd</sup> grade
- Highest number of Certificates of Immunization: 9<sup>th</sup> grade
- Highest percentage of Certificates of Immunization: 6<sup>th</sup> grade
- Highest number and percentage of Provisional Certificate of Immunization: 12<sup>th</sup> grade
- Highest number and percentage of medical Certificates of Immunization Exemption: 11<sup>th</sup> grade
- Highest number and percentage of religious Certificates of Immunization Exemption: 7<sup>th</sup> grade
- Highest number and percentage of invalid or no certificates: 12<sup>th</sup> grade
- Highest number and percentage of under or un-immunized students: 12<sup>th</sup> grade

Table 5 State Immunization Summary by Grade, Kindergarten - 12th Grade, Iowa, 2020-21

Grade	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates	
	Total	%	Total	%	Medical		Religious		Total	%		Total	%
HS	2,519	72.8	180	5.2	26	0.8	558	16.1	179	5.2	3,462	3,283	94.8
K	36,555	93.4	1,221	3.1	64	0.2	803	2.1	498	1.3	39,141	38,643	98.7
1	37,129	96.1	346	0.9	66	0.2	881	2.3	213	0.6	38,635	38,422	99.5
2	37,317	96.8	174	0.5	63	0.2	811	2.1	176	0.5	38,541	38,365	99.5
3	37,054	96.9	154	0.4	85	0.2	736	1.9	207	0.5	38,236	38,029	99.5
4	37,001	97.0	173	0.5	77	0.2	726	1.9	179	0.5	38,156	37,977	99.5
5	38,118	96.9	163	0.4	112	0.3	721	1.8	229	0.6	39,343	39,114	99.4
6	39,109	97.1	159	0.4	121	0.3	697	1.7	191	0.5	40,277	40,086	99.5
7	38,997	93.5	825	2.0	150	0.4	957	2.3	789	1.9	41,718	40,929	98.1
8	40,011	96.1	270	0.7	157	0.4	869	2.1	310	0.7	41,617	41,307	99.3
9	40,148	96.8	222	0.5	150	0.4	736	1.8	236	0.6	41,492	41,256	99.4
10	39,206	96.6	243	0.6	165	0.4	761	1.9	200	0.5	40,575	40,375	99.5
11	37,667	96.4	336	0.9	169	0.4	654	1.7	258	0.7	39,084	38,826	99.3
12	35,415	91.1	1,671	4.3	165	0.4	683	1.8	948	2.4	38,882	37,934	97.6
State K-12	496,246	95.6	6,137	1.2	1,570	0.3	10,593	2.0	4,613	0.9	519,159	514,546	99.1

Table Note: HS indicates Home School and K indicates Kindergarten

### VACCINATION COVERAGE FOR KINDERGARTEN STUDENTS

- During the 2020-21 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 (38,643 records).
- The statewide coverage level for all vaccinations required at school entry was 93.4%, as indicated by valid Certificates of Immunizations (36,555 records).
- Invalid or no immunization certificates account for 1.3% of enrolled kindergarten students (498 records) (Figure 6 and Table 6).

Figure 6 Immunization Certificates by Type, Kindergarten, Iowa, 2011-12 to 2020-21

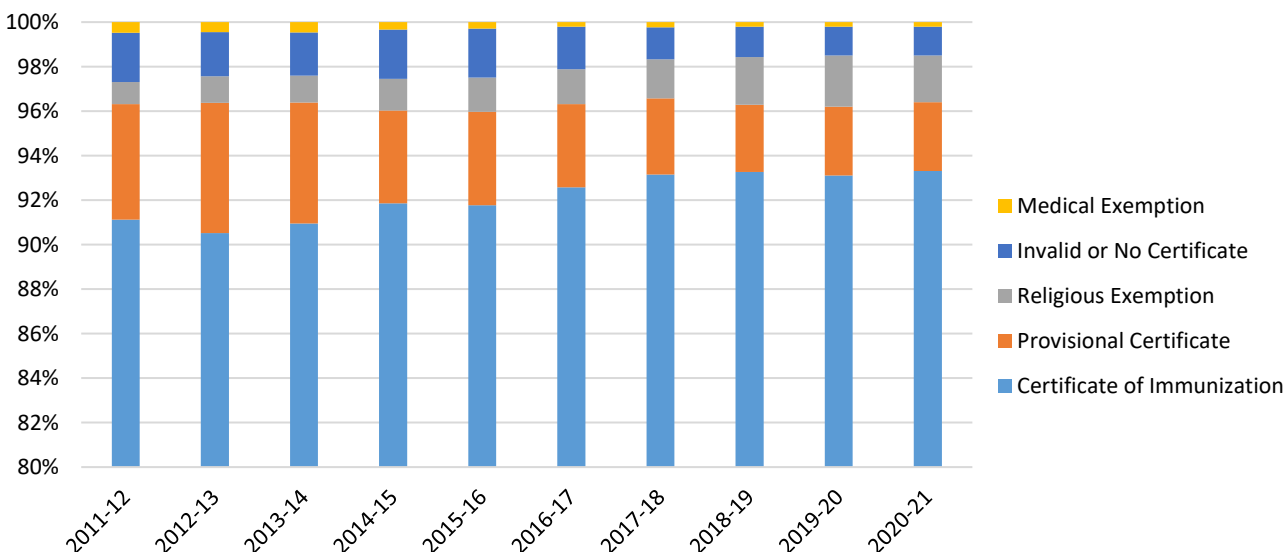


Figure Note: Vertical axis begins at 80%

Table 6 State Immunization Summary by Year, Kindergarten, Iowa, 2011-12 to 2020-21

Year	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates	
	Total	%	Total	%	Medical		Religious		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
2020-21	36,555	93.4	1,221	3.1	64	0.2	803	2.1	498	1.3	39,141	38,643	98.7

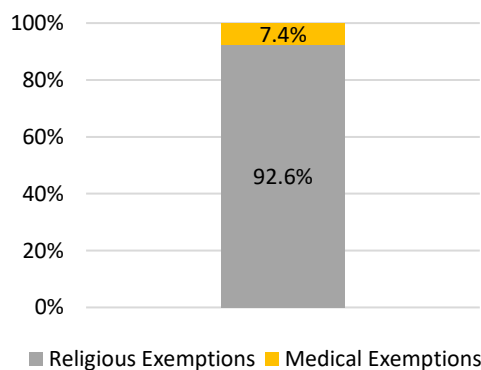
### Kindergarten Students - Provisional Certificate of Immunization

- During the 2020-21 school year, 3.1% of kindergarten students had a Provisional Certificate of Immunization, representing 1,221 students.
- Provisional certificates have decreased 29.4% (509 records) since 2015-16.

### Kindergarten Students - Certificate of Immunization Exemption

- During the 2020-21 school year, 2.2% of kindergartners were reported to have an exemption, representing 867 students.
- Of the 867 exemptions, 803 (92.6%) were categorized as religious and 64 (7.4%) as medical (Figure 7).

Figure 7 Percentage of Exemptions by Type, Kindergarten, Iowa, 2020-21



#### Medical Exemptions:

- During the 2020-21 school year, 0.2% of kindergarten students were reported to have a medical Certificate of Immunization Exemption, representing 64 students. (Table 6).

#### Religious Exemptions:

- During the 2020-21 school year, 2.1% of kindergarten students were reported to have a religious Certificate of Immunization Exemption, representing 803 students.

### Kindergarten Student - Vaccination Coverage by School Type

- During the 2020-21 school year, kindergartners enrolled in public schools had a higher percentage of immunization certificates and provisional certificates, and lower percentage of invalid/no 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 90.3% and 93.7%, respectively, as represented by valid Certificates of Immunization.
- During the 2020-21 school year, 4.2% of kindergarten students enrolled in private schools reported an exemption, compared to 2.0% enrolled in public schools (Table 7).
- During the 2020-21 school year, 9.7% of kindergarten students enrolled in private schools were under or un-immunized, compared to 6.3% enrolled in public schools.

Table 7 Kindergarten Vaccine Coverage and Exemptions by School Type, Iowa, 2020-21

Year	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates	
	Total	%	Total	%	Medical		Religious		Total	%	Total	Total	%
Private	2,863	90.3	69	2.2	6	0.2	126	4.0	106	3.3	3,170	3,064	96.7
Public	33,692	93.7	1,152	3.2	58	0.2	677	1.9	392	1.1	35,971	35,579	98.9
Total	36,555	93.4	1,221	3.1	64	0.2	803	2.1	498	1.3	39,141	38,643	98.7

### Kindergarten Students Under and Un-Immunized

- During the 2020-21 school year, 6.6% 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 2,586 students (Table 8).
- The number of under/un-immunized students has decreased 12.0% (352 records) since the 2016-17 school year and by 7.3% from the previous year.
  - The number of religious Certificates of Immunization Exemption increased 29.1% (181 records) since the 2016-17 school year and decreased 14.2% (133 records) from the previous year.
  - The number of Provisional Certificates decreased 17.4% (257 records) since the 2016-17 school year and by 2.7% (34 records) from the previous year.
  - The number of medical Certificates of Immunization Exemption decreased 19.0% (15 records) since the 2016-17 school year and by 5.9% (4 records) from the previous year.
  - The number of Invalid or No Certificates decreased 34.4% (261 records) since the 2016-17 school year and by 6.2% (33 records) from the previous year.

Table 8 Under-Immunized Students, Kindergarten, Iowa, 2016-17 to 2020-21

	2016-17	2017-18	2018-19	2019-20	2020-21
Certificate of Immunization Exemption-Medical	79	93	87	68	64
Percent change in number of Medical Exemptions from previous year	-33.6%	17.7%	-6.5%	-21.8%	-5.9%
Certificate of Immunization Exemption-Religious	622	694	873	936	803
Percent change in number of Religious Exemptions from previous year	-2.0%	11.6%	25.8%	7.2%	-14.2%
Provisional Certificate	1,478	1,356	1,228	1,255	1,221
Percent change in number of Provisional Certificate from previous year	-14.6%	-8.3%	-9.4%	2.2%	-2.7%
Invalid or No Certificate	759	572	552	531	498
Percent change in number of Invalid or No Certificate from previous year	-16.3%	-24.6%	-3.5%	-3.8%	-6.2%
Total Under-Immunized	2,938	2,715	2,740	2,790	2,586
Percent of Under-Immunized Students	7.4%	6.9%	6.7%	6.8%	6.6%
Percent change in number of Under-Immunized from previous year	-13.4%	-7.6%	0.9%	1.8%	-7.3%



## Vaccination Coverage for 7<sup>th</sup> Grade Students

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

- Beginning with the 2013-2014 school year, all students entering, advancing or transferring into 7<sup>th</sup> 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 7<sup>th</sup> grade and born after September 15, 2004, require proof of one dose of meningococcal conjugate vaccine (MenACWY).

During the 2020-21 school year:

- 98.1% of 7<sup>th</sup> grade students had valid Certificates of Immunization, Certificates of Immunization Exemption, or Provisional Certificates of Immunization and were compliant with Iowa law.
- 93.5% of 7<sup>th</sup> grade students had Certificates of Immunization.
- 1.9% of 7<sup>th</sup> grade students had invalid or no immunization certificates (Figure 8 and Table 9).

Figure 8 Immunization Certificates by Type 7th Grade, Iowa, 2016-17 to 2020-21

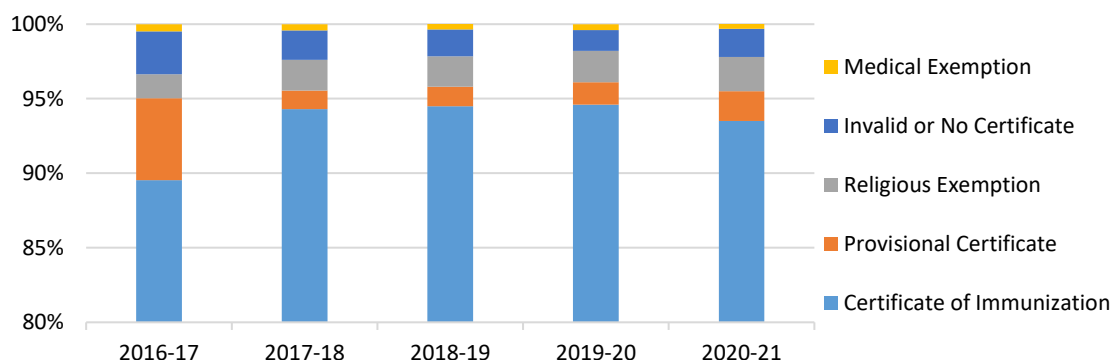


Figure Note: Vertical axis begins at 80%

Table 9 Immunization Certificates by Type 7th Grade, Iowa, 2016-17 to 2020-21

Grade	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates	
	Total	%	Total	%	Medical		Religious		Total	%		Total	%
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
2020-21	38,997	93.5	825	2.0	150	0.4	957	2.3	789	1.9	41,718	40,929	98.1

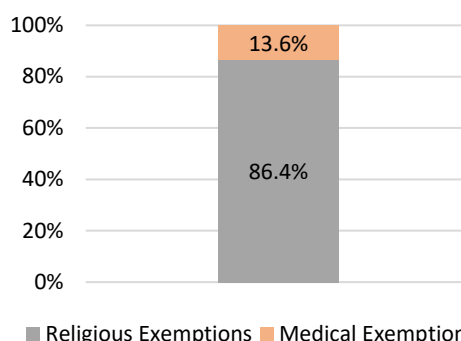
### 7th Grade Students - Provisional Certificate of Immunization

- During the 2020-21 school year, 2.0% of 7<sup>th</sup> grade students had a Provisional Certificate of Immunization, representing 825 students.
- The number of Provisional Certificates increased from 1.5% (621 records) during the 2019-20 school year to 2.0% (825 records) during the 2020-21 school year.
- During the 2020-21 school year, the number of Provisional Certificates decreased 61.9% since the 2016-17 school year, but increased 32.9% from the previous year (Figure 8 and Table 9).

### 7th Grade Students - Certificate of Immunization Exemption

- During the 2020-21 school year, 2.7% of 7<sup>th</sup> grade students were reported to have an exemption, representing 1,107 students.
- Of the 1,107 exemptions, 957 (85.6%) were categorized as religious and 150 (13.6%) as medical (Table 9 and Figure 9).

Figure 9 Percentage of Exemptions by Type, 7th Grade, Iowa, 2020-21



#### Medical Exemptions:

- During the 2020-21 school year, 0.4% of 7<sup>th</sup> grade students were reported to have a medical Certificate of Immunization Exemption, representing 150 students.

#### Religious Exemptions:

- During the 2020-21 school year, 2.3% of 7<sup>th</sup> grade students were reported to have a religious Certificate of Immunization Exemption, representing 957 students.

### 7th Grade Students - Under and Un-Immunized

- During the 2020-21 school year, 6.5% of 7<sup>th</sup> grade students were under or un-immunized (2,721 records) including students with a Provisional Certificate of Immunization, Certificate of Immunization Exemption, or an invalid or no certificate.
- The number of under or un-immunized students has decreased 34.1% since the 2016-17 school year, but has increased 19.6% from the previous school year (Table 10).
  - The number of religious Certificates of Immunization Exemption increased 50.0% (319 records) since 2016-17 and by 6.8% (61 records) from the previous year.
  - The number of Provisional Certificates decreased 61.9% (1,343 records) since the 2016-17 school year and increased 32.9% (204 records) from the previous year.
  - The number of Invalid or No Certificates decreased 30.4% (344 records) since the 2016-17 school year and increased 30.0% (182 records) from the previous year.

Table 10 Under-Immunized Students, 7th Grade, Iowa, 2016-17 to 2020-21

	2016-17	2017-18	2018-19	2019-20	2020-21
Certificate of Immunization Exemption-Medical	192	166	152	151	150
Percent Change in Number of Medical Exemptions from previous year	32.4%	-13.5%	-8.4%	-0.7%	-0.7%
Certificate of Immunization Exemption-Religious	638	820	850	896	957
Percent Change in Number of Religious Exemptions from previous year	24.9%	28.5%	3.7%	5.4%	6.8%
Provisional Certificate	2,168	502	537	621	825
Percent Change in Number of Provisional Certificates from previous year	-24.1%	-76.8%	7.0%	15.6%	32.9%
Invalid or No Certificate	1,133	796	749	607	789
Percent Change in Number of Invalid or No Certificates from previous year	5.0%	-29.7%	-5.9%	-19.0%	30.0%
Total Under-Immunized	4,131	2,284	2,288	2,275	2,721
Percent of Under-Immunized Students	10.5%	5.7%	5.5%	5.4%	6.5%
Percent Change in Number of Under-Immunized from previous year	-10.0%	-44.7%	2.0%	-0.6%	19.6%

## VACCINATION COVERAGE FOR 12<sup>TH</sup> GRADE STUDENTS

Iowa has an additional vaccine requirement for students enrolling in 12<sup>th</sup> grade. Beginning with the 2017-2018 school year, all students entering, advancing or transferring into 12<sup>th</sup> 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 12<sup>th</sup> grade students.

- During the 2020-21 school year, 97.6% of Iowa 12<sup>th</sup> 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 12<sup>th</sup> grade was 91.1%, as indicated by valid Certificates of Immunizations. This coverage level is the lowest of all grades.
- Invalid or no immunization certificates accounted for 2.4% of enrolled 12<sup>th</sup> grade students, which is the highest percentage of all school grades (Figure 10, and Tables 5 and 11).

Figure 10 Immunization Certificates by Type, 12th Grade, Iowa, 2016-17 to 2020-21

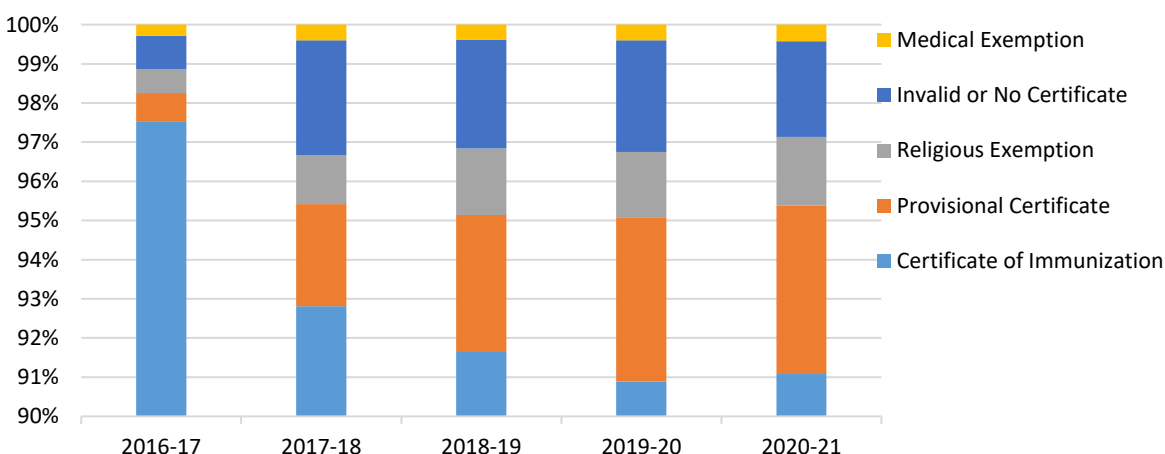


Figure Note: Vertical axis begins at 90%

Table 11 State Immunization Summary, 12th Grade, Iowa, 2016-2017 to 2020-21

Year	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates	
	Total	%	Total	%	Medical		Religious		Total	%		Total	%
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
2020-21	35,415	91.1	1,671	4.3	165	0.4	683	1.8	948	2.4	38,882	37,934	97.6

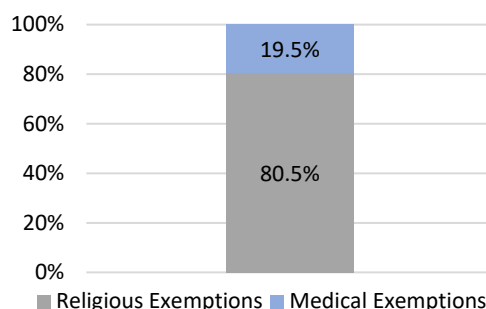
### 12<sup>th</sup> Grade Students - Provisional Certificate of Immunization

- During the 2020-21 school year, 4.3% of 12<sup>th</sup> grade students had a Provisional Certificate of Immunization (1,671 records).
- Twelfth grade had the highest rate of provisional exemptions of all grades, and accounted for 28.1% of all Provisional Certificates issued in kindergarten through 12<sup>th</sup> grade.
- The number of Provisional Certificates increased from 0.7% (282 records) during the 2016-17 school year to 4.3% (1,671 records) during the 2020-21 school year (Figure 10 and Table 11).

### 12th Grade Students - Certificate of Immunization Exemption

- During the 2020-21 school year, 848 (2.2%) of 12<sup>th</sup> graders were reported to have an exemption.
- Of the 848 exemptions, 683 (80.5%) were categorized as religious and 165 (19.5%) as medical (Table 11 and Figure 11).

Figure 11 Percentage of Exemptions by Type, 12th Grade, Iowa, 2020-21



#### Medical Exemptions:

- During the 2020-21 school year, 0.4% of 12<sup>th</sup> grade students were reported to have a medical Certificate of Immunization Exemption, representing 165 students.

#### Religious Exemptions:

- During the 2020-21 school year, 1.8% of 12<sup>th</sup> grade students were reported to have a religious Certificate of Immunization Exemption, representing 683 students.

### 12th Grade Students - Under and Un-Immunized

- During the 2020-21 school year, 8.9% of 12<sup>th</sup> grade students were under or un-immunized (3,467 records). This includes students with a Provisional Certificate of Immunization, Certificate of Immunization Exemption, or an invalid or no certificate (Table 12).
- The number of under or un-immunized students has increased 260.8% since 2016-17.
- There was a 2.3% decrease in under and un-immunized students from the previous year.
  - There was a 5.8% increase in the number of medical Certificates of Immunization Exemption from the previous year, which was an increase of nine records.
  - There was a 4.3% increase in the number of religious Certificates of Immunization Exemption from the previous year, which was an increase of 28 records.
  - There was a 2.7% increase in the number of Provisional Certificates from the previous year, which was an increase of 44 records.

Table 12 Under-Immunized Students, 12th Grade, Iowa, 2016-17 to 2020-21

	2016-17	2017-18	2018-19	2019-20	2020-21
Certificate of Immunization Exemption-Medical	110	156	148	156	165
Percent change in number of Medical Exemptions from previous year	-19.1%	41.8%	-5.1%	5.4%	5.8%
Certificate of Immunization Exemption-Religious	239	485	660	655	683
Percent change in number of Religious Exemptions from previous year	3.5%	102.9%	36.1%	-0.8%	4.3%
Provisional Certificate	282	1,013	1,355	1,627	1,671
Percent change in number of Provisional Certificates from previous year	12.8%	259.2%	33.8%	20.1%	2.7%
Invalid or No Certificate	330	1,140	1,076	1,111	948
Percent change in number of Invalid or No Certificates from previous year	-14.7%	245.5%	-5.6%	3.3%	-14.7%
Total Under-Immunized	961	2,794	3,239	3,549	3,467
Percent of Under-Immunized Students	2.5%	7.2%	8.4%	9.1%	8.9%
Percent change in number of Under-Immunized from previous year	-4.3%	190.7%	15.9%	9.6%	-2.3%

## 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 four states do not allow exemptions for religious or philosophic reasons (California, Mississippi, New York, and West Virginia). Iowa law allows for medical and religious exemptions. Iowa exemption rates are comparable to available national data, 2019-20 (Table 13).

*Table 13 Vaccine Coverage and Exemptions in Iowa and United States, 2019-20 and 2020-21*

	Iowa Child Care	Iowa Kindergarten	Iowa Kindergarten - 12th grade	National 2019-2020 (Kindergarten only)
Percent Valid Certificates	96.7%	98.7%	99.1%	
Certificate of Immunization	94.1%	93.4%	95.6%	
Provisional Certificates	1.1%	3.1%	1.2%	1.6% (Range <0.1 – 6.1%)
Certificate of Immunization Exemption-Medical	0.1%	0.2%	0.3%	0.3% (Range <0.1 – 1.4%)
Certificate of Immunization Exemption-Religious	1.4%	2.1%	2.0%	2.2% (Non-medical Exemptions Range 0.9 – 7.2%)
Invalid or No Certificate	3.3%	1.3%	0.9%	

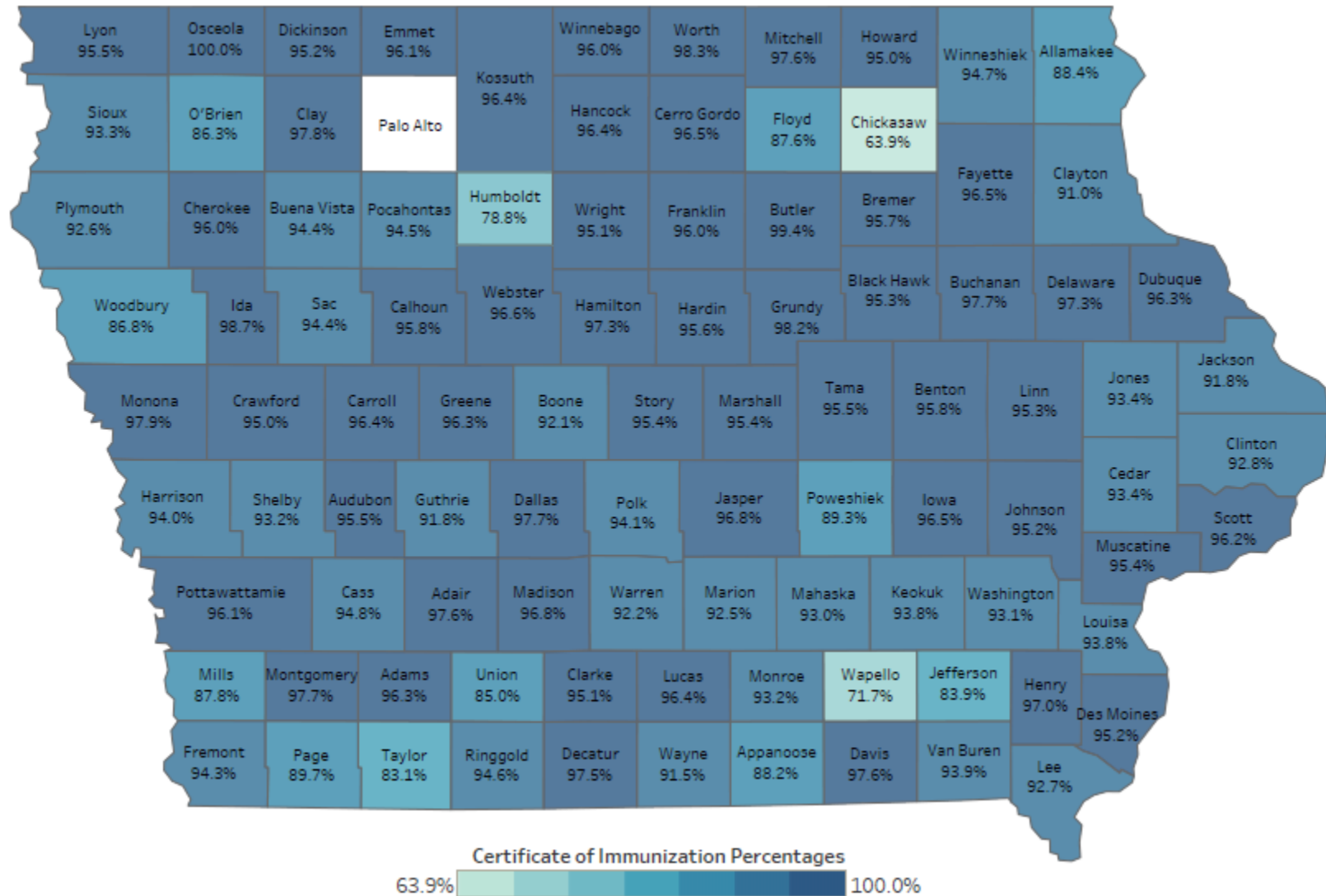
Data Note: Source of national kindergarten data available at <https://www.cdc.gov/vaccines/imz-managers/coverage/schoolvaxview/pubs-resources.html>.

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

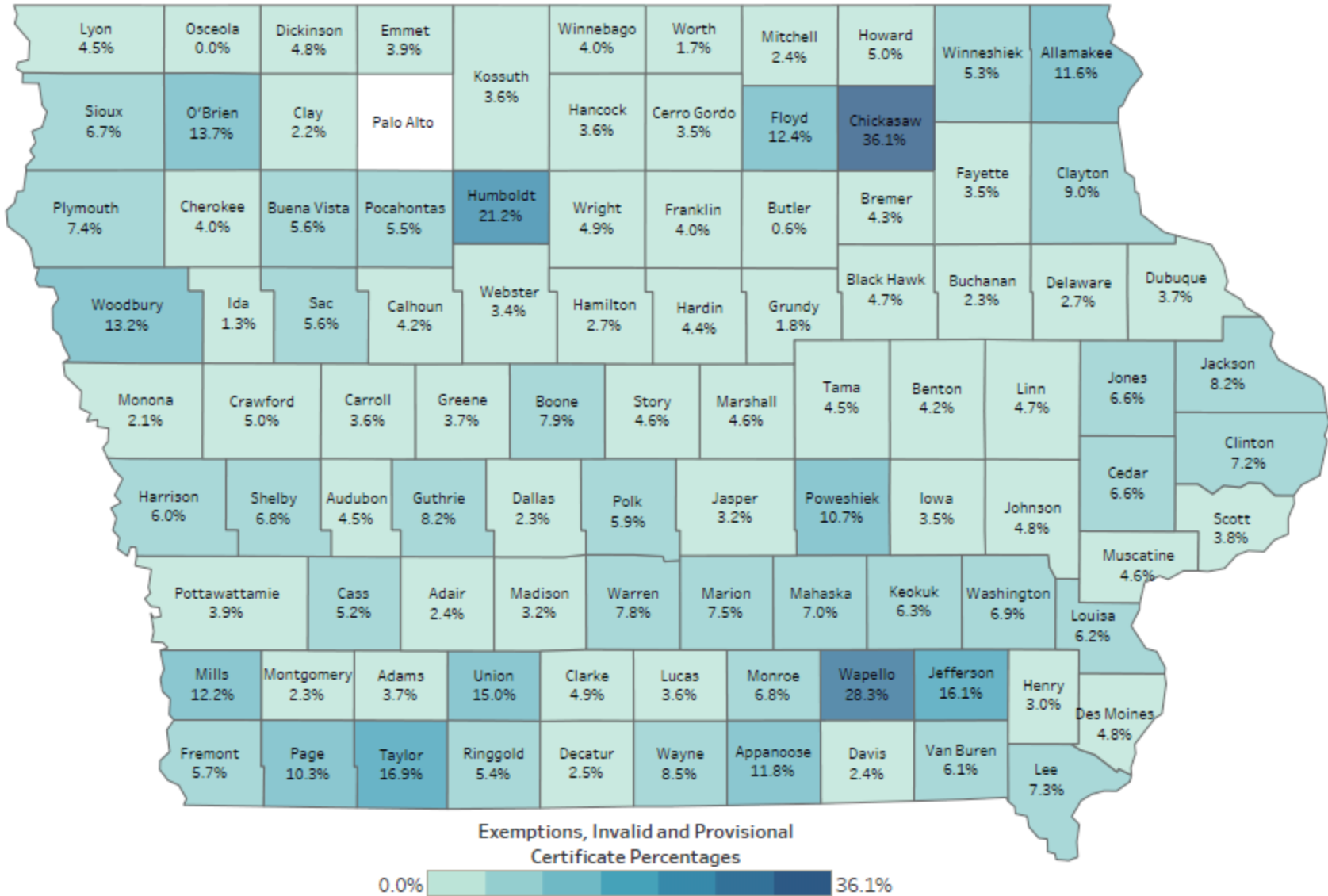
### Appendix 1. Percent of Child Care Attendees with a Certificate of Immunization by County, Iowa, 2020-2021 School Year

Map Note: Palo Alto did not submit child care audit data for the 2020-2021 school year.

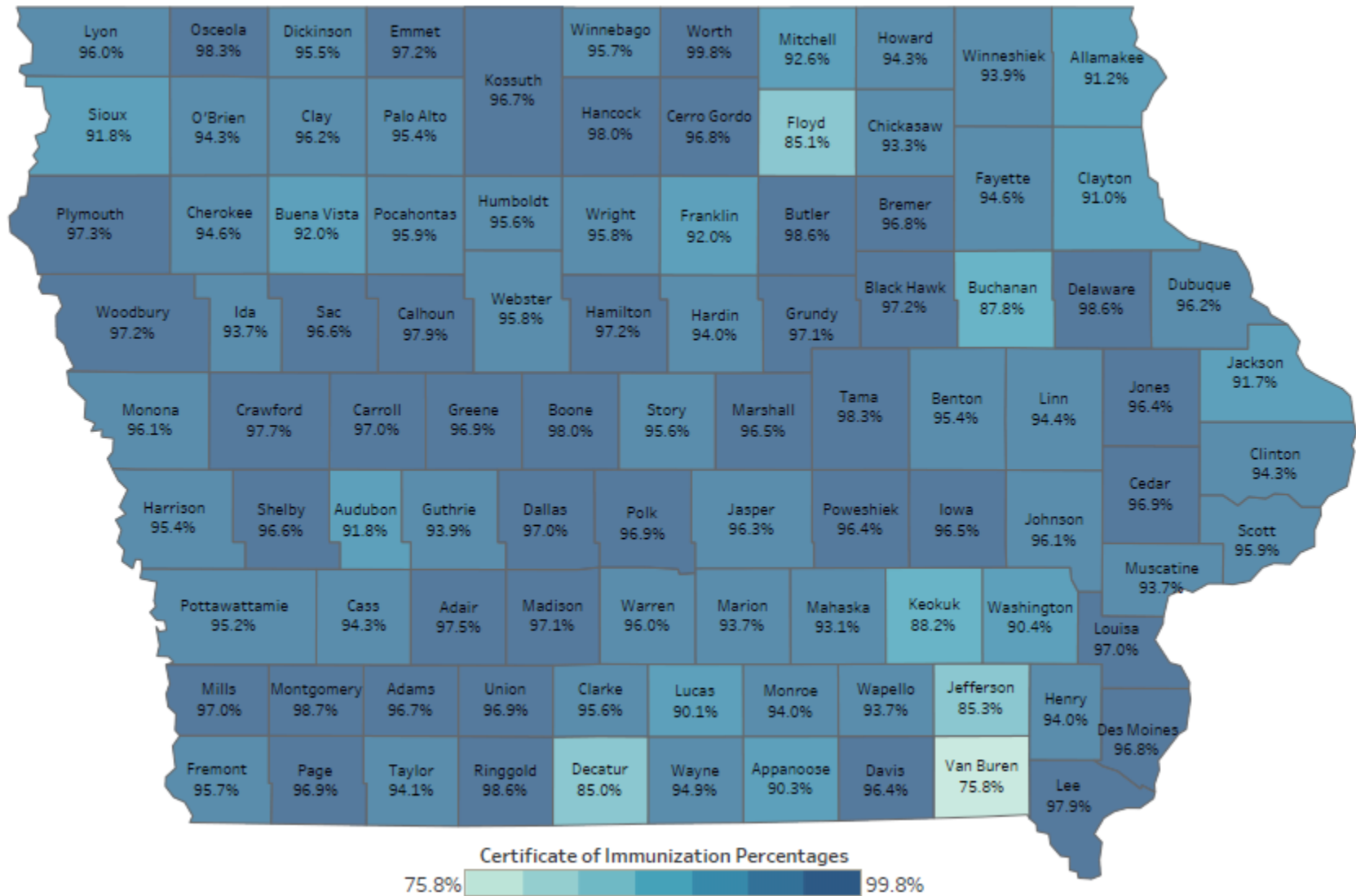


**Appendix 2. Percent of Child Care Attendees who are Under or Un-immunized by County, Iowa, 2020-2021 School Year**  
 Attendees with a Certificate of Religious or Medical Exemption, Provisional Certificate, or Invalid/No Certificate

Map Note: Palo Alto did not submit child care audit data for the 2020-2021 school year.



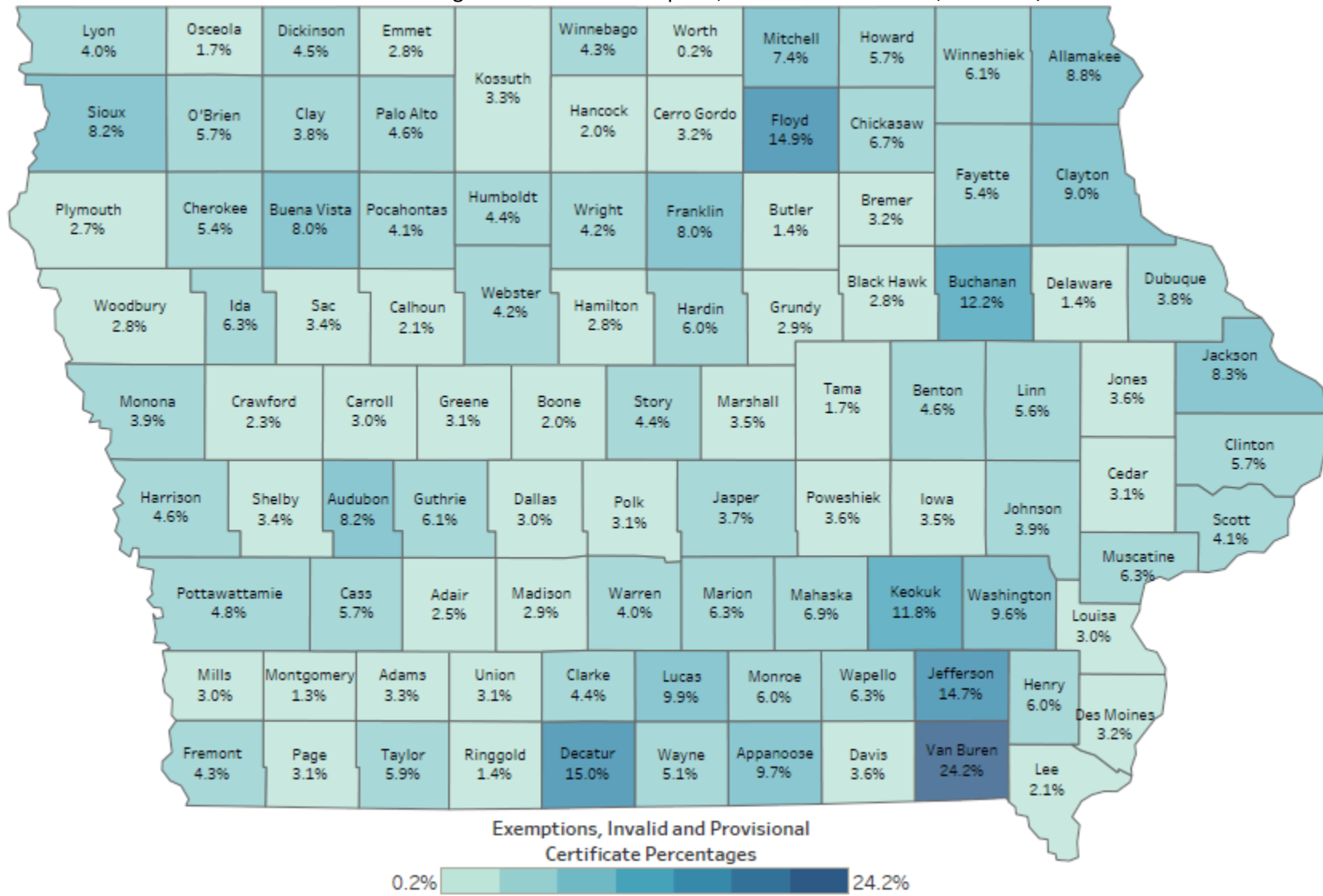
**Appendix 3. Percent of Students Kindergarten through 12th Grade with a Certificate of Immunization by County, Iowa, 2020-2021 School Year**



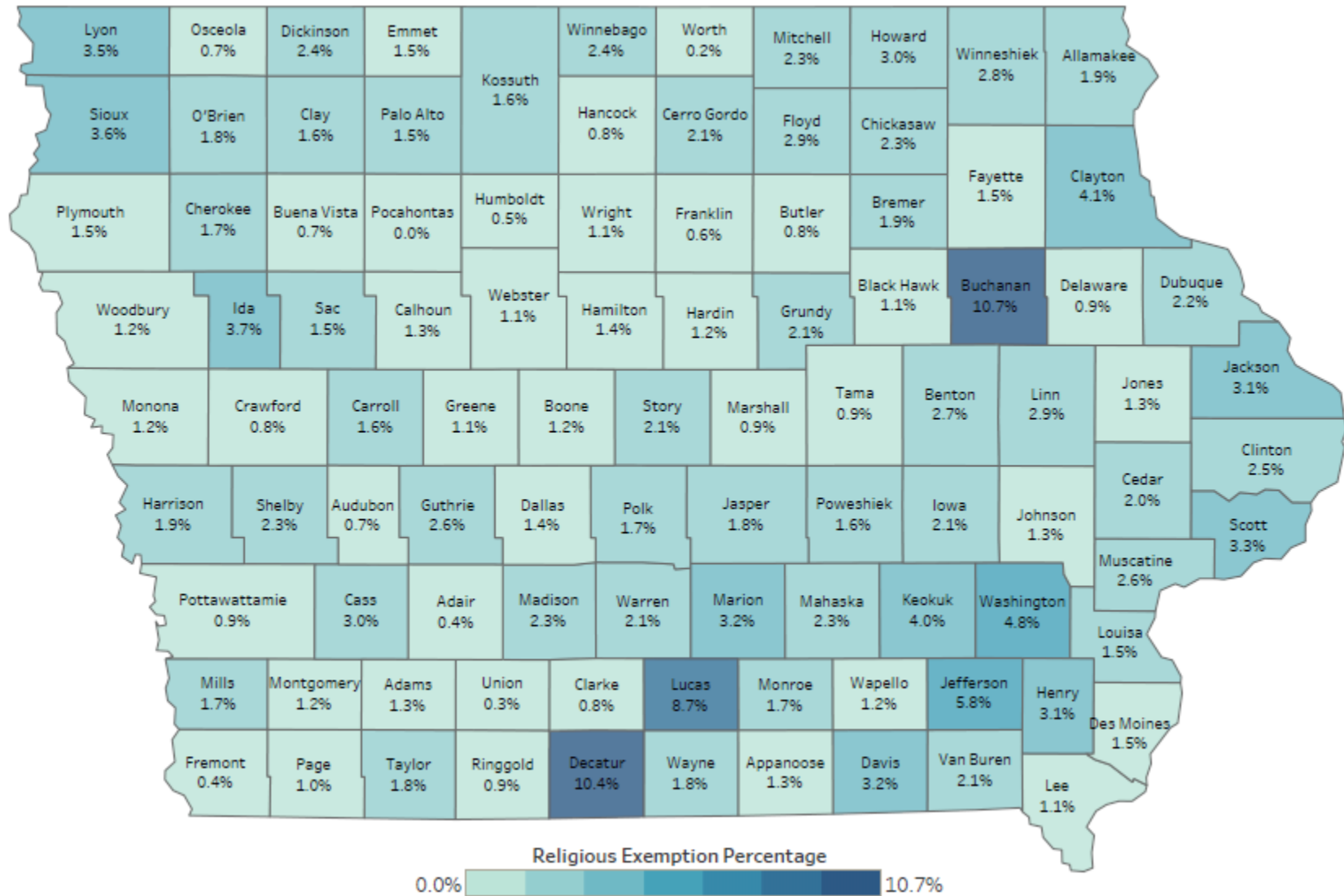


**Appendix 4. Percent of Students Kindergarten through 12th Grade who are Under or Un-immunized by County, Iowa, 2020-2021 School Year**

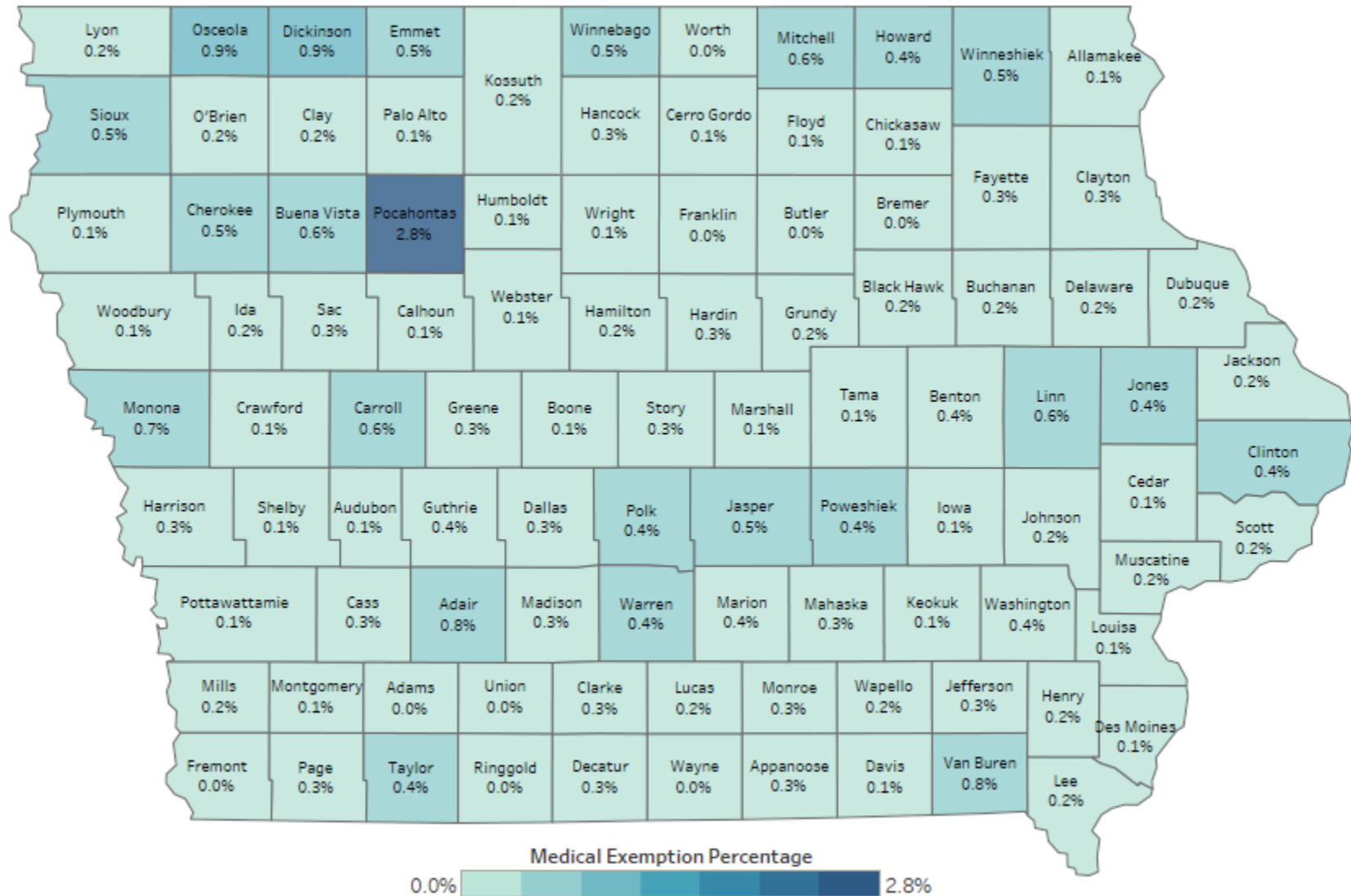
Students with a Certificate of Religious or Medical Exemption, Provisional Certificate, or Invalid/No Certificate



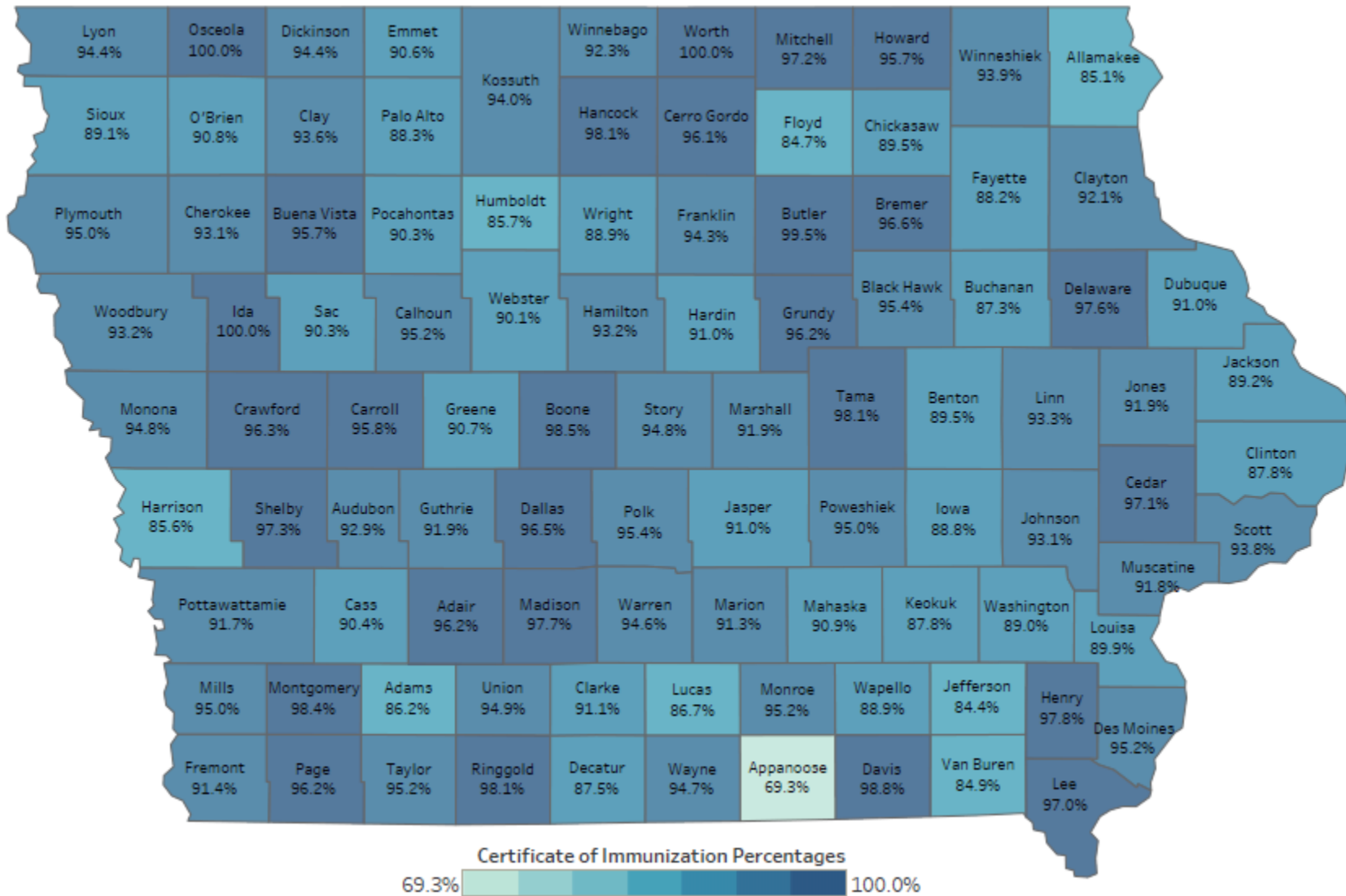
**Appendix 5. Percent of Students Kindergarten through 12th Grade with a Religious Certificate of Immunization Exemption by County, Iowa, 2020-2021 School Year**



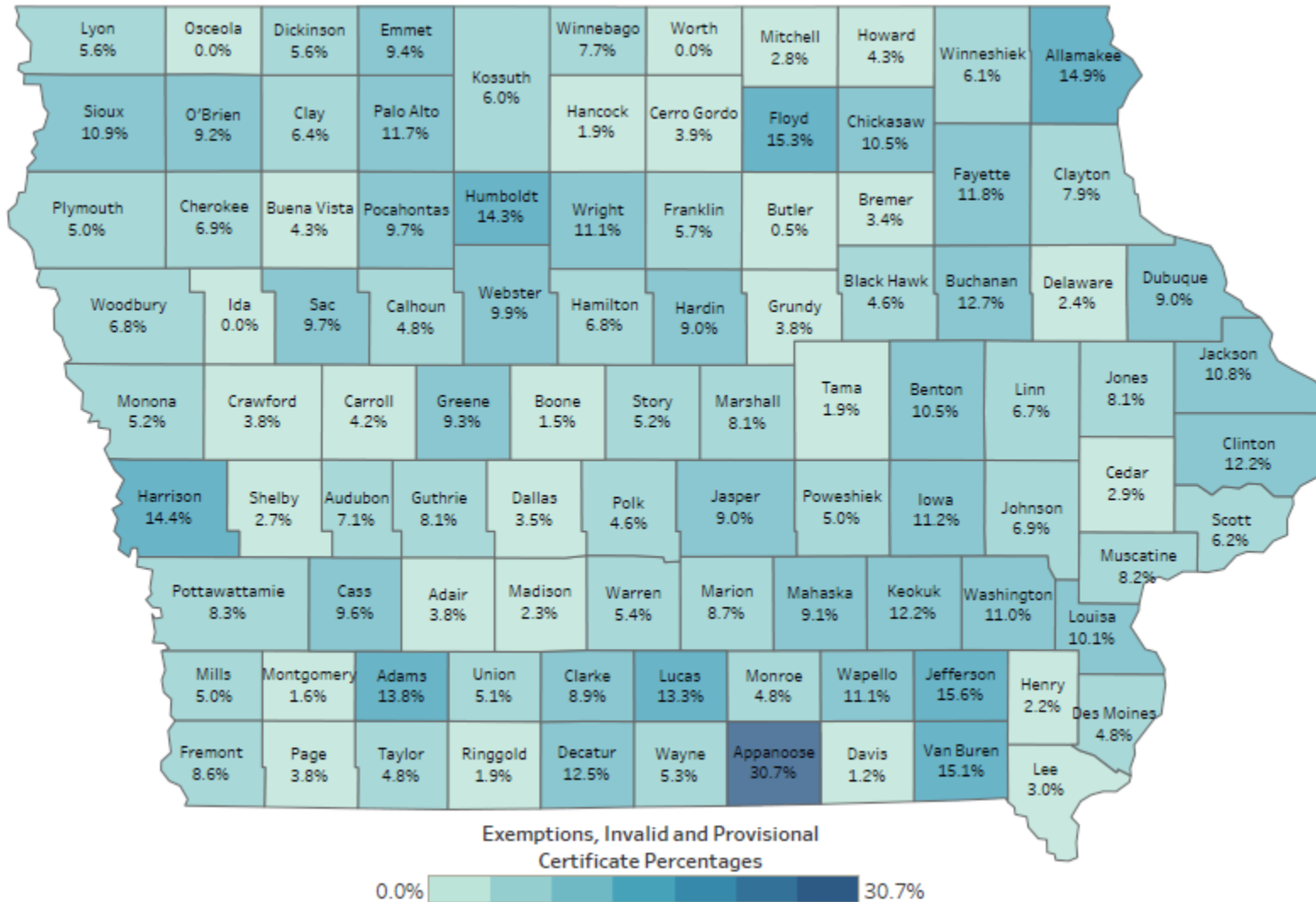
**Appendix 6. Percent of Students Kindergarten through 12th Grade with a Medical Certificate of Immunization Exemption by County, Iowa, 2020-2021 School Year**



**Appendix 7. Percent of Kindergarten Students with a Certificate of Immunization by County, Iowa, 2020-2021 School Year**

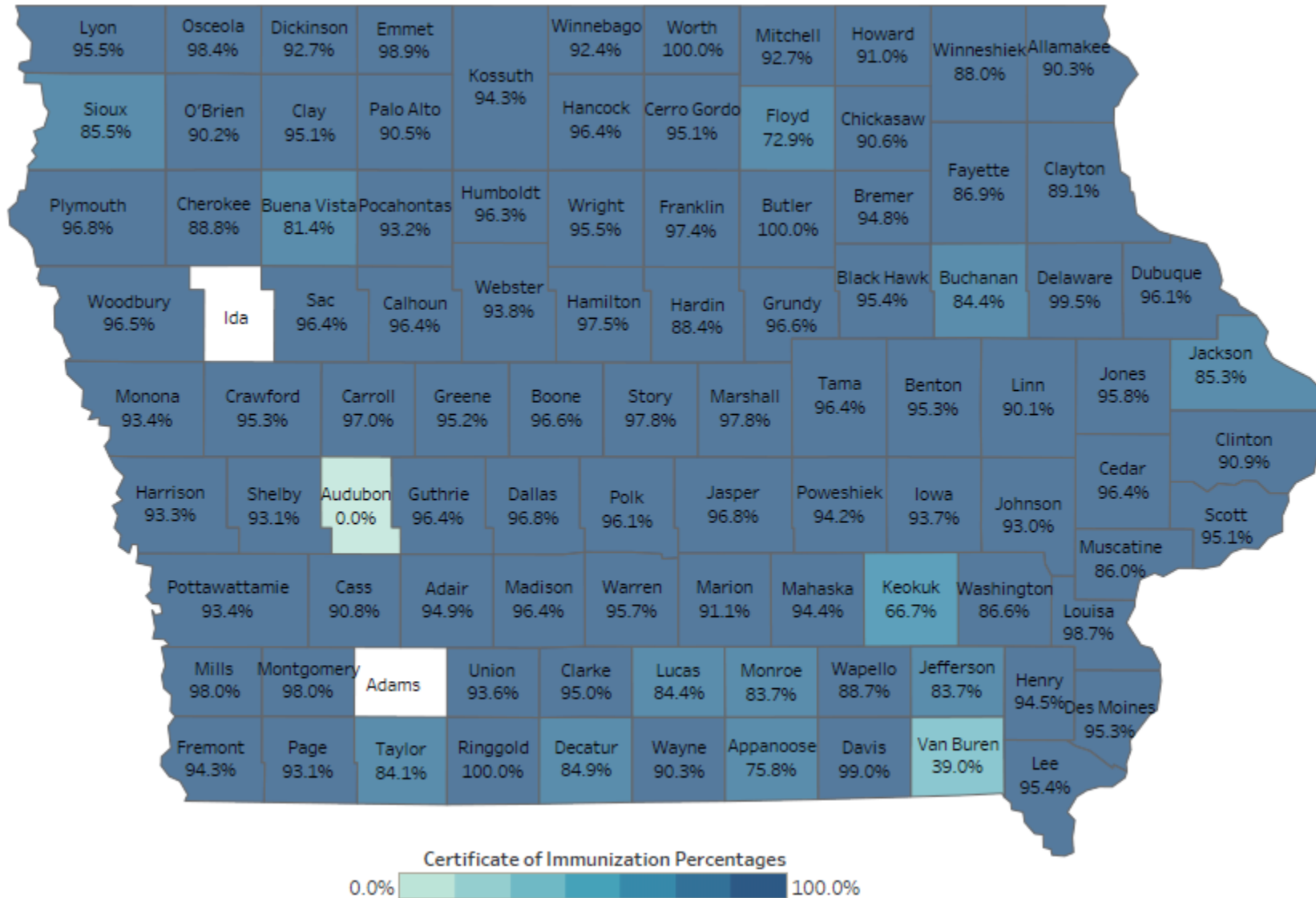


**Appendix 8. Percent of Kindergarten Students who are Under or Un-immunized by County, Iowa, 2020-2021 School Year**  
*Students with a Certificate of Religious or Medical Exemption, Provisional Certificate, or Invalid/No Certificate*



**Appendix 9. Percent of Seventh Grade Students with a Certificate of Immunization by County, Iowa, 2020-2021 School Year**

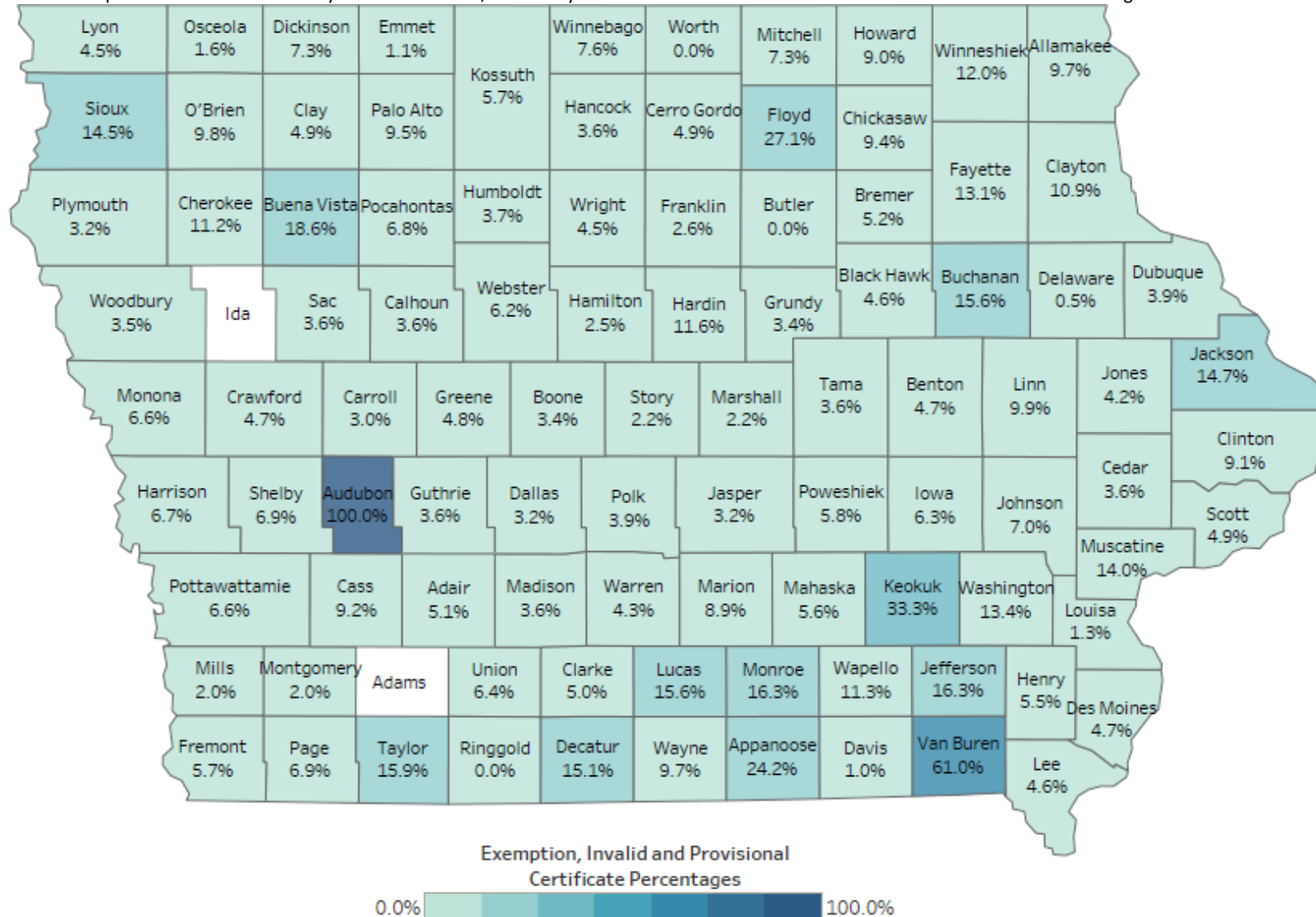
Map Note: Data are collected by location of school, not county of residence of students. Ida and Adams counties do not include 7th grade students.



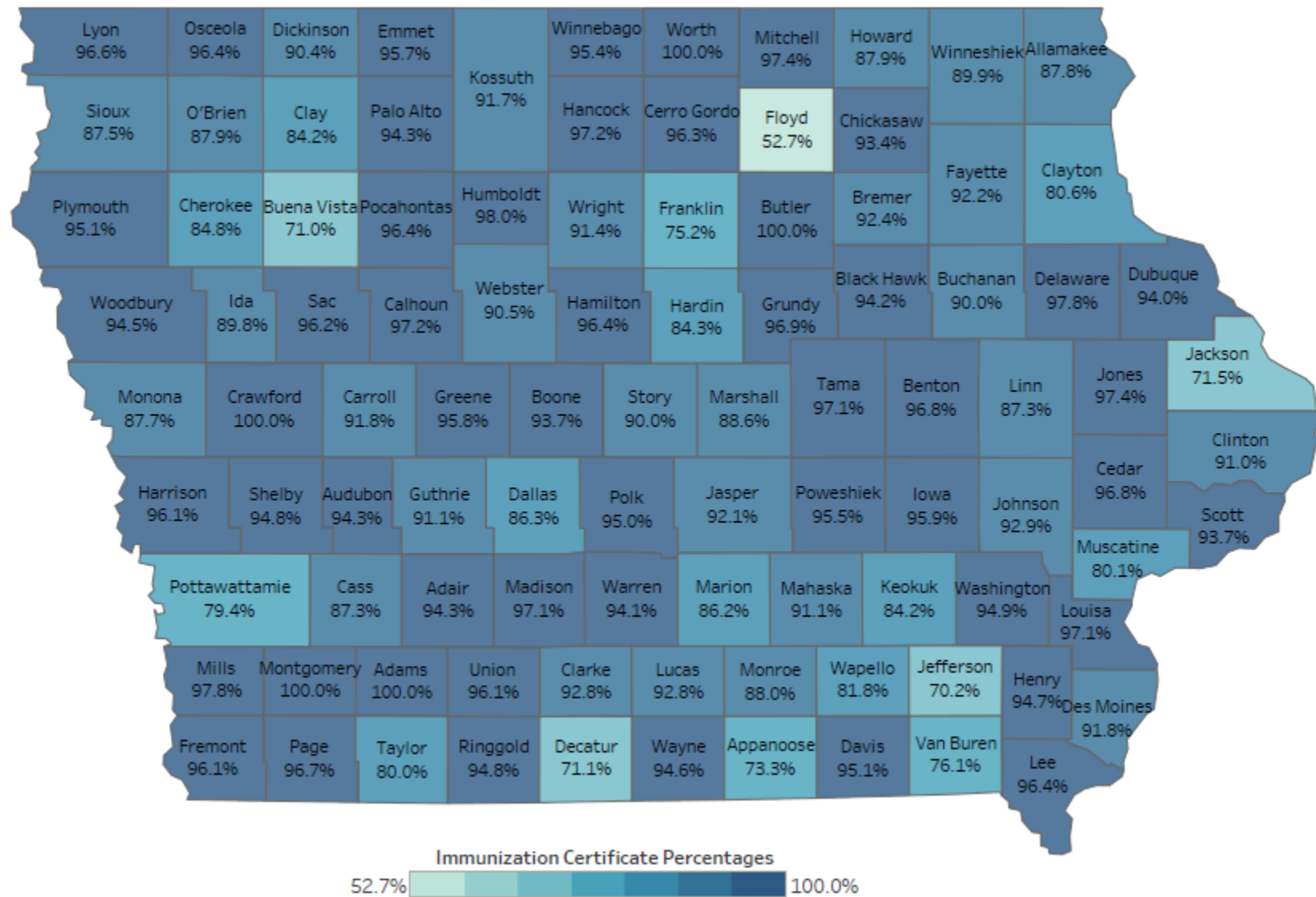
**Appendix 10. Percent of Seventh Grade Students who are Under or Un-immunized by County, Iowa, 2020-2021 School Year**

*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 residence of students. Ida and Adams counties do not include 7th grade students.



**Appendix 11. Percent of 12th Grade Students with a Certificate of Immunization by County, Iowa, 2020-2021 School Year**





**Appendix 12. Percent of 12th Grade Students who are Under or Un-immunized by County, Iowa, 2020-2021 School Year**  
*Students with a Certificate of Religious or Medical Exemption, Provisional Certificate, or Invalid/No Certificate*

