



## Acknowledgements

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## EXECUTIVE SUMMARY

Each year, the Immunization Program releases school and child care immunization audit reports. Local Public Health Agencies (LPHAs) 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 Certificate of Immunization, Certificate of Immunization Exemption, or Provisional Certificate of Immunization.

### School Immunization Audit Highlights - 2022-23 School Year

- **Total Enrollment:** Records from 523,155 students attending Iowa schools were analyzed to calculate statewide vaccination coverage levels.
- **Valid Immunization Certificates:** 98.9% of students attending Iowa schools had valid immunization certificates, indicating 517,478 records of Certificates of Immunization, Certificates of Immunization Exemption, or Provisional Certificates of Immunization complied with Iowa law.
  - By grade, the percent of students with valid immunization certificates ranged from 97.6% to 99.5%.
  - The percent of students with valid immunization certificates increased from 98.8% in the 2020-21 school year to 98.9% in the 2022-23 school year.
- **Certificates of Immunization:** 94.2% of students attending Iowa schools had valid Certificates of Immunization, indicating 492,977 records met age-appropriate immunization requirements.
  - By grade, the percent of students with Certificates of Immunization ranged from 87.1% to 96.5%.
  - The percent of students with Certificates of Immunization decreased from 94.3% in the 2021-22 school year to 94.2% in the 2022-23 school year.
- **Provisional Certificates of Immunization:** 1.8% of students attending Iowa schools had Provisional Certificates of Immunization, indicating 9,459 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.
  - By grade, the percent of students with Provisional Certificates ranged from 0.6% to 7.5%.
  - The percent of students with Provisional Certificate decreased from 1.9% in the 2021-22 school year to 1.8% in the 2022-23 school year, which is a decrease of 619 records.
- **Certificates of Immunization Exemption – Medical:** 0.2% of students attending Iowa schools had medical Certificates of Immunization Exemption, representing 1,281 students.
  - By grade, the percent of students with medical Certificates of Immunization Exemption ranged from 0.1% to 0.5%.
  - The percent of students with medical Certificates of Immunization Exemption decreased from 0.3% in the 2021-22 school year to 0.2% in the 2022-23 school year, which is a decrease of 144 records.
- **Certificates of Immunization Exemption – Religious:** 2.6% of students attending Iowa schools had religious Certificates of Immunization Exemption, representing 13,761 students.
  - By grade, the percent of students with religious Certificates of Immunization Exemption ranged from 2.0% to 3.2%.
  - The percent of students with religious Certificates of Immunization increased from 2.3% in the 2021-22 school year to 2.6% in the 2022-23 school year, which is an increase of 1,779 records.
- **Invalid or No immunization Certificates:** 1.1% of students attending Iowa schools had invalid or no immunization certificates, representing 5,677 students.
  - By grade, the percent of students with invalid or no certificates ranged from 0.5% to 2.4%.

- The percent of students with invalid or no certificate decreased from 1.2% in the 2021-22 school year to 1.1% in the 2022-23 school year, which is a decrease of 488 records.
- **Under or Un-immunized:** 5.8% of students attending Iowa schools were under or un-immunized, representing 30,178 students with a Provisional Certificate of Immunization, Certificate of Immunization Exemption, or an invalid or no certificate.
  - By grade, the percent of under or un-immunized students ranged from 3.5% to 12.9%.  
The percent of students with invalid or no certificate increased from 5.7% in the 2021-22 school year to 5.8% in the 2022-23 school year, which is an increase of 528 records.

## BACKGROUND

Annually, the Immunization Program releases school and child care audit reports. 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 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 the 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 the 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 the 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://hhs.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 Iowa Public Health Tracking Portal. These data are available at <https://tracking.idph.iowa.gov/Health/Immunization>.

## SCHOOL IMMUNIZATION AUDIT DATA - KINDERGARTEN THROUGH 12<sup>TH</sup> GRADE

Local Public Health Agencies conducted audits of immunization records for 523,155 students enrolled in 1,562 of Iowa’s public, private and parochial schools during the 2022-23 school year. The audit data were analyzed to calculate statewide vaccination coverage levels.

For students in kindergarten through 12<sup>th</sup> grade during the 2022-23 school year:

- 98.9% of students had valid Certificates of Immunization, Certificates of Immunization Exemption, or Provisional Certificates of Immunization and were compliant with Iowa law (517,478 records).
- 94.2% of students had valid Certificates of Immunization and received all required vaccines (492,977 records).
- 5.8% of students were under or un-immunized (30,178 records).
- 1.8% of students had Provisional Certificates of Immunization (9,459 records).
- 1.1% of students had invalid or no certificates (5,677 records) (Table 1 and Figure 1).

Figure 1. Percent of Immunization Certificates by Type, Kindergarten - 12th Grade, Iowa, 2006-07 to 2022-23

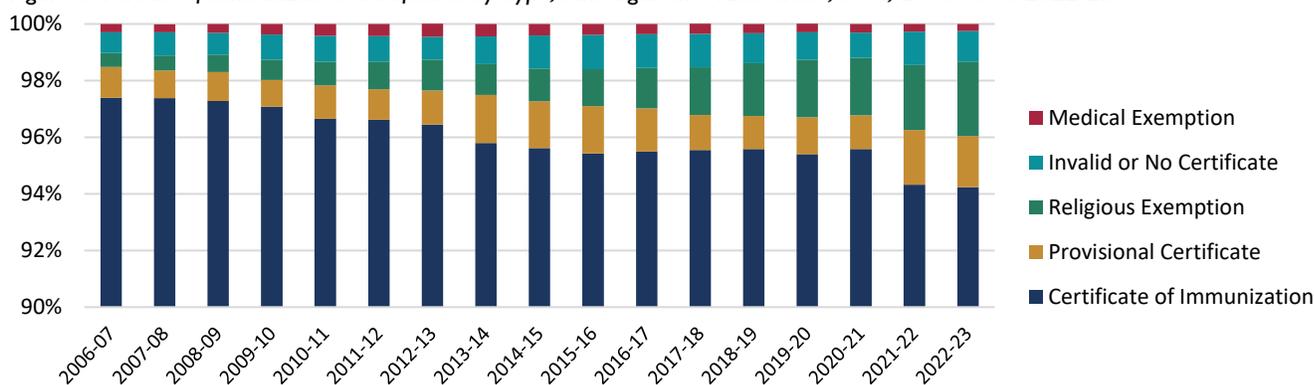


Figure Note: Vertical axis begins at 90%.

Table 1. State Immunization Summary by Year, Kindergarten - 12th Grade, Iowa, 2006-07 to 2022-23

Year	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates		Under and Un-Immunized	
	Total	%	Total	%	Total	%	Total	%	Total	%		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	13,309	2.6
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	13,420	2.6
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	13,663	2.7
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	14,753	2.9
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	16,933	3.3
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	17,234	3.4
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	18,286	3.6
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	21,651	4.2
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	22,557	4.4
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	23,804	4.6
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	23,525	4.5
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	23,165	4.4
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	23,229	4.4
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	24,301	4.6
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	22,913	4.4
2021-22	492,826	94.3	10,078	1.9	1,425	0.3	11,982	2.3	6,165	1.2	522,476	516,311	98.8	29,650	5.7
2022-23	492,977	94.2	9,459	1.8	1,281	0.2	13,761	2.6	5,677	1.1	523,155	517,478	98.9	30,178	5.8

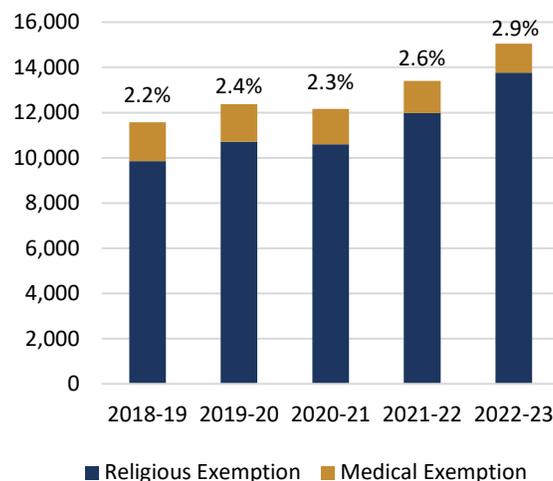
### Kindergarten - 12<sup>th</sup> Grade - Provisional Certificate of Immunization

- During the 2022-23 school year, 1.8% of students in kindergarten through 12<sup>th</sup> grade had a Provisional Certificate of Immunization, representing 9,459 students.
- Provisional Certificates of Immunization decreased from 1.9% (10,078 records) during the 2021-22 school year to 1.8% (9,459 records) during the 2022-23 school year (Table I and Figure I).

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

- During the 2022-23 school year, 2.9% of students in kindergarten through 12<sup>th</sup> grade were reported to have a Certificate of Immunization Exemption, representing 15,042 students (Figure 2).
- Of the 15,042 exemptions, 91.5% (13,761 records) were categorized as religious and 8.5% (1,281 records) were categorized as medical.
- The number of Certificates of Immunization Exemptions increased 12.2% (1,635 records) from the previous year and 30.0% (3,568 records) since the 2018-19 school year.

Figure 2. Number and Percent of Exemptions by Type, Kindergarten - 12th Grade, Iowa, 2017-18 to 2022-23



#### Medical Exemptions:

- During the 2022-23 school year, 0.2% of students in kindergarten through 12<sup>th</sup> grade had a medical Certificate of Immunization Exemption, representing 1,281 students and a slight decrease from the previous year.
- Both the number of medical exemptions and the percent of students with this exemption slightly decreased from the previous school year.
- The number of medical Certificates of Immunization Exemptions decreased 25.7% (442 records) since the 2018-19 school year.

#### Religious Exemptions:

- During the 2022-23 school year, 2.6% of students in kindergarten through 12<sup>th</sup> grade had a religious Certificate of Immunization Exemption, representing 13,761 students and an increase from the previous year.
- The number of religious Certificates of Immunization Exemptions increased 14.8% (1,779 records) from the previous year and 39.7% (3,910 records) since the 2018-19 school year.

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

- During the 2022-23 school year, 5.8% of students in kindergarten through 12<sup>th</sup> grade were under immunized and includes children who have an invalid or no certificate, Provisional Certificate of Immunization, Certificate of Immunization Exemption (30,178 records) (Table 2).
- The number of under and un-immunized students increased 1.8% from the previous assessment year, which is an increase of 528 records.
- A percent increase in under immunized students was observed in the number of religious Certificates of Immunization Exemption (14.8%). Percent decreases in under immunized student were observed for medical Certificates of Immunization Exemption (-10.1%), invalid or no certificates (-7.9%) and Provisional Certificates (-6.1%).

Table 2. Under-Immunized Students, Kindergarten - 12th Grade, Iowa, 2018-19 to 2022-23

Kindergarten-12 <sup>th</sup> Grade	2018-19	2019-20	2020-21	2021-22	2022-23
Total Enrollment	525,515	526,129	519,159	522,476	523,155
Percent change in total enrollment	0.9%	0.1%	-1.3%	0.6%	0.1%
Certificate of Immunization Exemption-Medical	1,723	1,662	1,570	1,425	1,281
Percent change in number of Medical Exemptions from previous year	-7.0%	-3.5%	-5.5%	-9.2%	-10.1%
Certificate of Immunization Exemption-Religious	9,851	10,713	10,593	11,982	13,761
Percent change in number of Religious Exemptions from previous year	12.7%	8.8%	-1.1%	13.1%	14.8%
Provisional Certificate	6,136	6,843	6,137	10,078	9,459
Percent change in number of Provisional Exemptions from previous year	-4.7%	11.5%	-10.3%	64.2%	-6.1%
Invalid or No Certificate	5,519	5,083	4,613	6,165	5,677
Percent change in number of Invalid or No Certificate from previous year	-10.0%	-7.9%	-9.2%	33.6%	-7.9%
Total Under and Un-immunized	23,229	24,301	22,913	29,650	30,178
Percent of Under and Un-immunized Students	4.4%	4.6%	4.4%	5.7%	5.8%
Percent change in number of Under and Un-immunized from previous year	0.3%	4.6%	-5.7%	29.4%	1.8%

### Kindergarten - 12th Grade - Individual Grades

The percent of each certificate type varied by grade level and home school classification during the 2022-23 school year (Tables 3 and 4).

Table 3. High and Low Percent of Certificate Type by Grade, Kindergarten - 12th Grade, Iowa, 2022-23

Certificate type	Lowest Percent		Highest Percent	
	Grade	Percent	Grade	Percent
Valid Immunization Certificates	7 <sup>th</sup> grade	97.6%	4 <sup>th</sup> grade	99.5%
Certificates of Immunization	12 <sup>th</sup> grade	87.1%	5 <sup>th</sup> grade	96.5%
Provisional Certificate of Immunization	5 <sup>th</sup> grade	0.6%	12 <sup>th</sup> grade	7.5%
Medical Certificates of Immunization Exemption	2 <sup>nd</sup> grade	0.1%	12 <sup>th</sup> grade	0.5%
Religious Certificates of Immunization Exemption	11 <sup>th</sup> grade	2.0%	7 <sup>th</sup> grade	3.2%
Invalid or no Certificate	4 <sup>th</sup> grade	0.5%	7 <sup>th</sup> grade	2.4%
Under or un-immunized students	5 <sup>th</sup> grade	3.5%	12 <sup>th</sup> grade	12.9%

Table Note: Aggregated Home School student records excluded from table due to representing multiple grades.

Table 4. State Immunization Summary by Grade, Kindergarten - 12th Grade, Iowa, 2022-23

Grade	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates		Under and Un-Immunized	
	Total	%	Total	%	Total	%	Total	%	Total	%		Total	%	Total	%
HS	1,651	64.3	157	6.1	20	0.8	582	22.7	158	6.2	2,568	2,410	93.85	917	35.7
K	35,239	90.0	2,070	5.3	68	0.2	1,105	2.8	696	1.8	39,178	38,482	98.22	3,939	10.1
1	37,249	94.7	577	1.5	53	0.1	1,084	2.8	363	0.9	39,326	38,963	99.08	2,077	5.3
2	37,418	95.6	328	0.8	50	0.1	1,094	2.8	248	0.6	39,138	38,890	99.37	1,720	4.4
3	37,820	96.0	260	0.7	59	0.2	1,002	2.5	259	0.7	39,400	39,141	99.34	1,580	4.0
4	37,688	96.2	232	0.6	61	0.2	991	2.5	196	0.5	39,168	38,972	99.5	1,480	3.8
5	37,589	96.5	229	0.6	77	0.2	843	2.2	204	0.5	38,942	38,738	99.48	1,353	3.5
6	37,402	96.3	245	0.6	78	0.2	856	2.2	264	0.7	38,845	38,581	99.32	1,443	3.7
7	36,800	92.1	836	2.1	104	0.3	1,266	3.2	956	2.4	39,962	39,006	97.61	3,162	7.9
8	38,635	94.8	360	0.9	123	0.3	1,180	2.9	453	1.1	40,751	40,298	98.89	2,116	5.2
9	40,841	95.4	453	1.1	129	0.3	1,036	2.4	348	0.8	42,807	42,459	99.19	1,966	4.6
10	40,735	95.9	414	1.0	145	0.3	891	2.1	311	0.7	42,496	42,185	99.27	1,761	4.1
11	39,157	96.2	303	0.7	132	0.3	827	2.0	275	0.7	40,694	40,419	99.32	1,537	3.8
12	34,753	87.1	2,995	7.5	182	0.5	1,004	2.5	946	2.4	39,880	38,934	97.63	5,127	12.9
K-12	492,977	94.2	9,459	1.8	1,281	0.2	13,761	2.6	5,677	1.1	523,155	517,478	98.9	30,178	5.8

Table Note: HS indicates aggregated Home School student records representing multiple grades and K indicates Kindergarten.

## SCHOOL IMMUNIZATION AUDIT DATA - KINDERGARTEN STUDENTS

During the 2022-23 school year:

- 98.2% of Iowa kindergarten students had valid Certificates of Immunization, Certificates of Immunization Exemption, or Provisional Certificates of Immunization and were compliant with Iowa law (38,482 records).
- 89.9% of Iowa kindergarten students had valid Certificates of Immunization and received all required vaccines (35,239 records).
- 10.1% of kindergarten students were under or un-immunized (3,939 records).
- 1.8% of enrolled kindergarten students had invalid or no certificates (696 records) (Figure 3 and Table 5).

Figure 3. Percent of Immunization Certificates by Type, Kindergarten, Iowa, 2012-23 to 2022-23

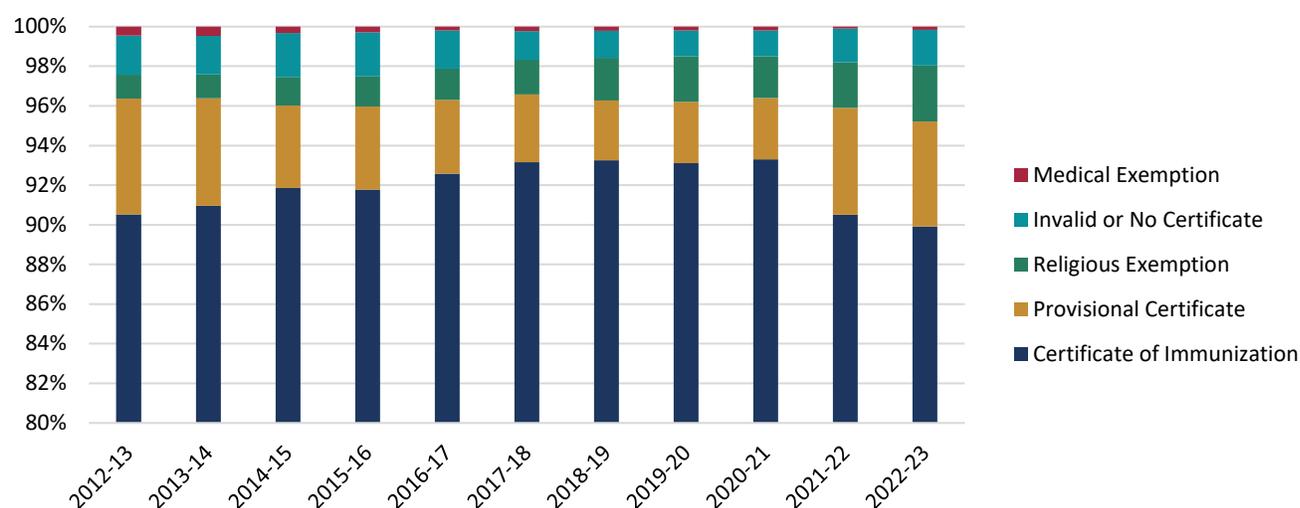


Figure Note: Vertical axis begins at 80%.

Table 5. State Immunization Summary by Year, Kindergarten, Iowa, 2012-13 to 2022-23

Year	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates		Under and Un-Immunized	
					Medical		Religious								
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	
2012-13	37,713	90.5	2,438	5.9	188	0.5	499	1.2	825	2	41,663	40,838	98	3,950	9.5
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	3,738	9.0
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	3,395	8.2
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	3,391	8.2
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	2,938	7.4
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	2,715	6.9
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	2,740	6.7
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	2,790	6.8
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	2,586	6.6
2021-22	36,337	90.6	2,146	5.4	49	0.1	913	2.3	666	1.7	40,111	39,445	98.3	3,774	9.4
2022-23	35,239	89.9	2,070	5.3	68	0.2	1,105	2.8	696	1.8	39,178	38,482	98.2	3,939	10.1

### Kindergarten Students - Provisional Certificate of Immunization

- During the 2022-23 school year, 5.3% of kindergarten students had a Provisional Certificate of Immunization, representing 2,070 students.
- The number of Provisional certificates decreased 3.5% (76 records) from the previous year but has increased 68.6% (842 records) since the 2018-2019 school year.

### Kindergarten Students - Certificate of Immunization Exemption

- During the 2022-23 school year, 3.0% of kindergartners were reported to have an exemption, representing 1,173 students (Figure 4).
- Of the 1,173 exemptions, 1,105 (94.2%) were categorized as religious and 68 (5.8%) as medical.
- The number of Certificates of Immunization Exemptions increased 21.9% (211 records) from the previous year and 22.2% (213 records) since the 2018-19 school year.

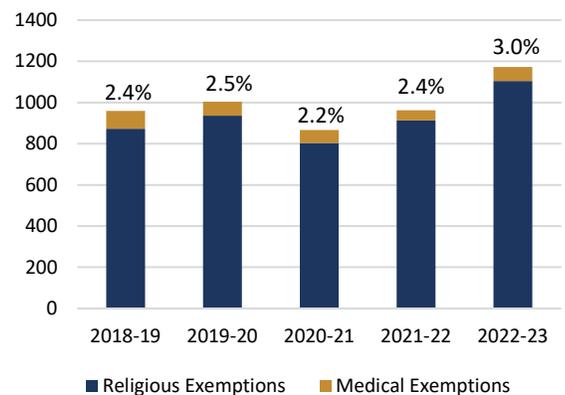
#### Medical Exemptions:

- During the 2022-23 school year, 0.2% of kindergarten students were reported to have a medical Certificate of Immunization Exemption, representing 68 students.
- The number of medical Certificates of Immunization Exemptions increased 38.8% (19 records) from the previous year but decreased 21.8% (19 records) since the 2018-19 school year.

#### Religious Exemptions:

- During the 2022-23 school year, 2.8% of kindergarten students were reported to have a religious Certificate of Immunization Exemption, representing 1,105 students.
- The number of religious Certificates of Immunization Exemptions increased 21.0% (192 records) from the previous year and 26.6% (232 records) since the 2018-19 school year.

Figure 4. Number and Percent of Exemptions by Type, Kindergarten, Iowa, 2018-19 to 2022-23



### Kindergarten Student - Vaccination Coverage by School Type

- During the 2022-23 school year, kindergartners enrolled in public schools had a higher percentage of Certificates of Immunization and Provisional Certificates of Immunization, and lower percentage of invalid or no certificates and Certificates of Immunization Exemption 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 94.0% and 98.6%, respectively, as represented by valid Certificates of Immunization.
- During the 2022-23 school year, 6.7% of kindergarten students enrolled in private schools reported an exemption, compared to 2.7% enrolled in public schools.
- During the 2022-23 school year, 15.6% of kindergarten students enrolled in private schools were under or un-immunized, compared to 9.6% enrolled in public schools (Table 6).

Table 6. Kindergarten Immunization Summary by School Type, Iowa, 2022-23

Year	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates		Under and Un-Immunized	
	Total	%	Total	%	Medical		Religious		Total	%	Total	Total	%	Total	%
Private	27,17	84.4	97	3.0	5	0.2	210	6.5	192	6.0	3,221	3,029	94.0	504	15.6
Public	32,522	90.5	1,973	5.5	63	0.2	895	2.5	504	1.4	35,957	35,453	98.6	3,435	9.6
Total	35,239	89.9	2,070	5.3	68	0.2	1,105	2.8	696	1.8	39,178	38,482	98.2	3,939	10.1

### Kindergarten Students Under and Un-Immunized

- During the 2022-23 school year, 10.1% 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 3,939 students.
- The number of under and un-immunized students increased by 4.4% from the previous year (165 records) and 43.8% (1,199 records) since the 2018-19 school year.
- The largest percent increase in under and un-immunized students was observed in the number of medical Certificates of Exemption (38.8%), followed by religious Certificates of Immunization Exemption (21.0%) and invalid or no certificate (4.5%) (Table 7).

Table 7. Under-Immunized Students, Kindergarten, Iowa, 2018-19 to 2022-23

Kindergarten	2018-19	2019-20	2020-21	2021-22	2022-23
Total Enrollment	40,624	40,812	39,141	40,111	39,178
Percent change in total enrollment	2.5%	0.5%	-4.1%	2.5%	-2.3%
Certificate of Immunization Exemption-Medical	87	68	64	49	68
Percent change in number of Medical Exemptions from previous year	-6.5%	-21.8%	-5.9%	-23.4%	38.8%
Certificate of Immunization Exemption-Religious	873	936	803	913	1,105
Percent change in number of Religious Exemptions from previous year	25.8%	7.2%	-14.2%	13.7%	21.0%
Provisional Certificate	1,228	1,255	1,221	2,146	2,070
Percent change in number of Provisional Certificate from previous year	-9.4%	2.2%	-2.7%	75.8%	-3.5
Invalid or No Certificate	552	531	498	666	696
Percent change in number of Invalid or No Certificate from previous year	-3.5%	-3.8%	-6.2%	33.7%	4.5%
Total Under and Un-immunized	2,740	2,790	2,586	3,774	3,939
Percent of Under and Un-immunized Students	6.7%	6.8%	6.6%	9.4%	10.1%
Percent change in number of Under and Un-immunized from previous year	0.9%	1.8%	-7.3%	45.9%	4.4%

## SCHOOL IMMUNIZATION AUDIT DATA - 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.
- 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).

Compared to other grades in the 2022-23 school year, 7<sup>th</sup> grade students were reported to have:

- Lowest percent of valid Certificates of Immunization at 97.6% (39,006 records)
- Highest percent of Religious Certificates of Immunization Exemption at 3.2% (1,266 records)
- Highest percent of invalid or no certificates at 2.4%, (956 records)

During the 2022-23 school year:

- 97.6% 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 (39,006 records).
- 92.1% of 7<sup>th</sup> grade students had Certificates of Immunization, which is the statewide coverage level for all vaccinations required at school entry (36,800 records).
- 7.9% of children were under or un-immunized (3,162 records).
- 2.4% of 7<sup>th</sup> grade students had invalid or no immunization certificates (956 records) (Figure 5 and Table 8).

Figure 5. Percent of Immunization Certificates by Type 7th Grade, Iowa, 2018-18 to 2022-23

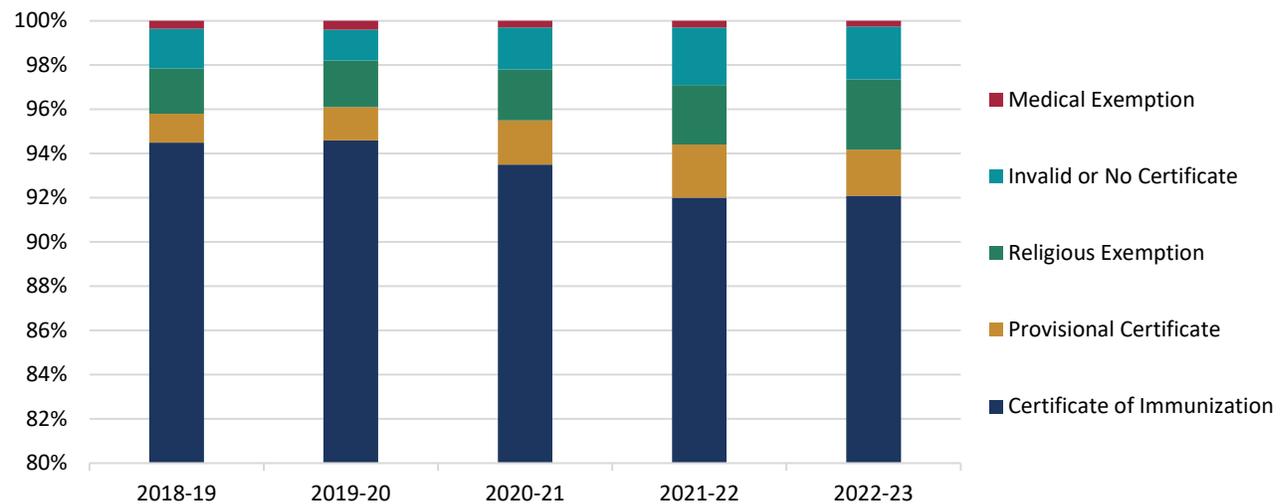


Figure Note: Vertical axis begins at 80%.

Table 8. Immunization Certificates by Type 7th Grade, Iowa, 2018-19 to 2022-23

Grade	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates		Under and Un-Immunized	
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	Total	%	Total	%
2018-19	39,262	94.5	537	1.3	152	0.4	850	2.1	749	1.8	41,550	40,801	98.2	2,288	5.5
2019-20	39,782	94.6	621	1.5	151	0.4	896	2.1	607	1.4	42,057	41,450	98.6	2,275	5.4
2020-21	38,997	93.5	825	2.0	150	0.4	957	2.3	789	1.9	41,718	40,929	98.1	2,721	6.5
2021-22	37,169	92.0	954	2.4	107	0.3	1,104	2.7	1,047	2.6	40,381	39,334	97.4	3,212	8.0
2022-23	36,800	92.1	836	2.1	104	0.3	1,266	3.2	956	2.4	39,962	39,006	97.6	3,162	7.9

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

- During the 2022-23 school year, 2.1% of 7<sup>th</sup> grade students had a Provisional Certificate of Immunization (836 records).
- The number of Provisional Certificates decreased from 2.4% (954 records) during the 2021-22 school year to 2.1% (836 records), which is a 12.4% decrease (Figure 5 and Table 8).

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

- During the 2022-23 school year, 3.4% of 7<sup>th</sup> grade students were reported to have an exemption, representing 1,370 students (Figure 6).
- Of the 1,370 exemptions, 1,266 (92.4%) were categorized as religious and 104 (7.6%) as medical.
- The number of Certificates of Immunization Exemptions increased 13.1% (159 records) from the previous year and 36.7% (358 records) since the 2018-19 school year.

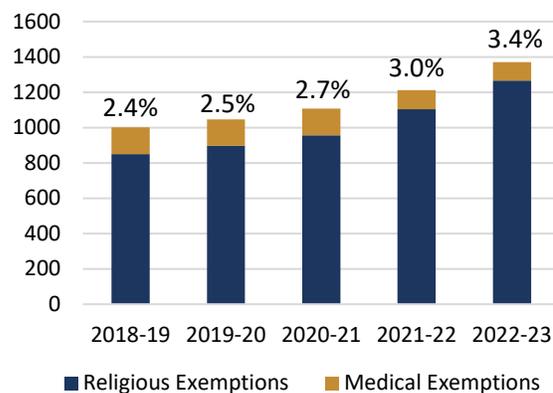
#### Medical Exemptions:

- During the 2022-23 school year, 0.3% of 7<sup>th</sup> grade students were reported to have a medical Certificate of Immunization Exemption, representing 104 students.

#### Religious Exemptions:

- During the 2022-23 school year, 3.2% of 7<sup>th</sup> grade students were reported to have a religious Certificate of Immunization Exemption, representing 1,266 students.

Figure 6. Number and Percent of Exemptions by Type, 7th Grade, Iowa, 2018-19 to 2022-23



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

- During the 2022-23 school year, 7.9% of 7<sup>th</sup> grade students were under or un-immunized (3,162 records), as indicated by a Provisional Certificate of Immunization, Certificate of Immunization Exemption, or an invalid or no certificate.
- The number of under and un-immunized students decreased 1.6% from the previous year and 38.2% since 2018-19 school year.
- A percent increase in under immunized students was observed in the number of religious Certificates of Immunization Exemption (14.7%) while percent decreases were observed in the number of Provisional Certificates (-12.4%), invalid or no certificate (-8.7%) and medical Certificates of Immunization Exemption (-2.8%) (Table 9).

Table 9. Under-Immunized Students, 7th Grade, Iowa, 2018-19 to 2022-23

7 <sup>th</sup> Grade	2018-19	2019-20	2020-21	2021-22	2022-23
Total Enrollment	41,550	42,057	41,718	40,381	39,962
Percent Change in total enrollment	3.8%	1.2%	-0.8%	-3.2%	-1.0%
Certificate of Immunization Exemption-Medical	152	151	150	107	104
Percent Change in Number of Medical Exemptions from previous year	-8.4%	-0.7%	-0.7%	-28.7%	-2.8%
Certificate of Immunization Exemption-Religious	850	896	957	1,104	1,266
Percent Change in Number of Religious Exemptions from previous year	3.7%	5.4%	6.8%	15.4%	14.7%
Provisional Certificate	537	621	825	954	836
Percent Change in Number of Provisional Certificates from previous year	7.0%	15.6%	32.9%	15.6%	-12.4%
Invalid or No Certificate	749	607	789	1,047	956
Percent Change in Number of Invalid or No Certificates from previous year	-5.9%	-19.0%	30.0%	32.7%	-8.7%
Total Under and Un-immunized	2,288	2,275	2,721	3,212	3,162
Percent of Under and Un-immunized Students	5.5%	5.4%	6.5%	8.0%	7.9%
Percent change in number of Under and Un-immunized from previous year	2.0%	-0.6%	19.6%	18.0%	-1.6%

### SCHOOL IMMUNIZATION AUDIT DATA – 12<sup>TH</sup> GRADE STUDENTS

Iowa has an additional vaccine requirement for students enrolling in 12<sup>th</sup> grade. Beginning with the 2017-18 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.

Compared to other grades in the 2022-23 school year, 12<sup>th</sup> grade students were reported to have:

- Lowest percent of Certificates of Immunization at 87.1% (34,753 records)
- Highest percent of Provisional Certificates of Immunization at 7.5% (2,995 records)
- Highest percent of medical Certificates of Immunization Exemption at 0.5% (182 records)
- Highest percent of under and un-immunized students at 12.9%, (5,127 records)

Figure 7. Percent of Immunization Certificates by Type, 12th Grade, Iowa, 2018-19 to 2022-23

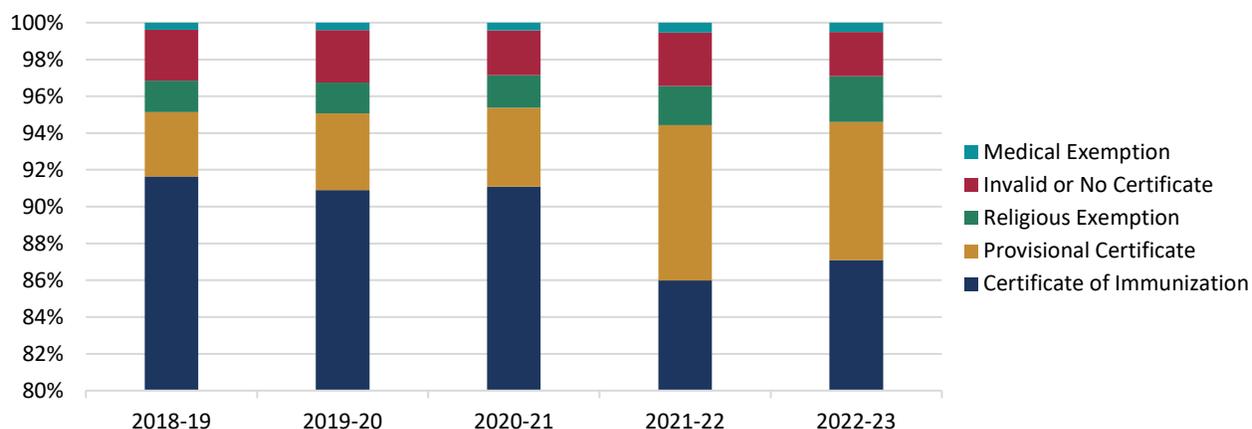


Figure Note: Vertical axis begins at 80%.

Table 10. State Immunization Summary, 12th Grade, Iowa, 2018-19 to 2022-23

Year	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates		Under and Un-Immunized	
	Total	%	Total	%	Medical	%	Religious	%	Total	%	Total	Total	%	Total	%
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	3,239	8.4
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	3,549	9.1
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	3,467	8.9
2021-22	33,948	86.0	3,335	8.4	211	0.5	844	2.1	1,146	2.9	39,484	38,338	97.1	5,536	14.0
2022-23	34,753	87.1	2,995	7.5	182	0.5	1,004	2.5	946	2.4	39,880	38,934	97.6	5,127	12.9

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

- During the 2022-23 school year, 7.5% of 12<sup>th</sup> grade students had a Provisional Certificate of Immunization (2,995 records).
- The number of Provisional Certificates decreased from 8.4% (3,335 records) during the 2021-22 school year to 7.5%, which is 10.2% decrease (Figure 7 and Table 11).
- Twelfth grade accounted for 31.7% of all Provisional Certificates issued to K-12 students.

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

- During the 2022-23 school year, 3.0% (1,186 records) of 12<sup>th</sup> graders were reported to have an exemption.
- Of the 1,186 exemptions, 1,004 (84.7%) were categorized as religious and 182 (15.3%) as medical (Table 10 and Figure 8).
- The number of Certificates of Immunization Exemptions increased 12.4% (131 records) from the previous year and 46.8% (378 records) since the 2018-19 school year.

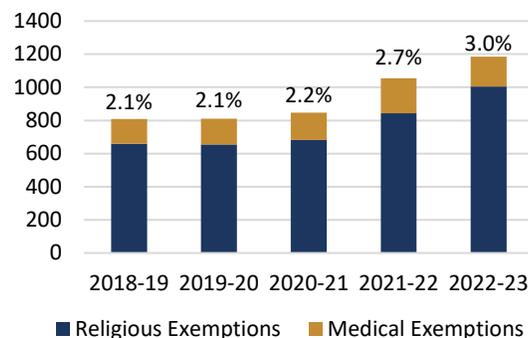
#### Medical Exemptions:

- During the 2022-23 school year, 0.5% of 12<sup>th</sup> grade students were reported to have a medical Certificate of Immunization Exemption, representing 182 students.

#### Religious Exemptions:

- During the 2022-23 school year, 2.5% of 12<sup>th</sup> grade students were reported to have a religious Certificate of Immunization Exemption, representing 1,004 students.

Figure 8. Number and Percentage of Exemptions by Type, 12th Grade, Iowa, 2017-18 to 2021-22



### 12<sup>th</sup> Grade Students - Under and Un-Immunized

- During the 2022-23 school year, 12.9% of 12<sup>th</sup> grade students were under or un-immunized (5,127 records), as indicated by a Provisional Certificate of Immunization, Certificate of Immunization Exemption, or an invalid or no certificate.
- The number of under and un-immunized students decreased 7.5% from the previous year but increased 58.3% since the 2018-19 school year.
- A percent increase in under immunized students was observed in the number of religious Certificates of Immunization Exemption (19.0%) while percent decreases were observed in the number of invalid or no certificate (-17.5%), medical Certificates of Immunization Exemption (-13.7%) and Provisional Certificates (-10.2%) (Table 11).

Table 11. Under-Immunized Students, 12th Grade, Iowa, 2018-19 to 2022-23

12 <sup>th</sup> Grade	2018-19	2019-20	2020-21	2021-22	2022-23
Total Enrollment	38,779	38,984	38,882	39,484	39,880
Percent change in total enrollment	-0.2%	0.5%	-0.3%	1.5%	1.0%
Certificate of Immunization Exemption-Medical	148	156	165	211	182
Percent change in number of Medical Exemptions from previous year	-5.1%	5.4%	5.8%	27.9%	-13.7%
Certificate of Immunization Exemption-Religious	660	655	683	844	1,004
Percent change in number of Religious Exemptions from previous year	36.1%	-0.8%	4.3%	23.6%	19.0%
Provisional Certificate	1,355	1,627	1,671	3,335	2,995
Percent change in number of Provisional Certificates from previous year	33.8%	20.1%	2.7%	99.6%	-10.2%
Invalid or No Certificate	1,076	1,111	948	1,146	946
Percent change in number of Invalid or No Certificates from previous year	-5.6%	3.3%	-14.7%	20.9%	-17.5%
Total Under and Un-immunized	3,239	3,549	3,467	5,536	5,127
Percent of Under and Un-immunized Students	8.4%	9.1%	8.9%	14.0%	12.9%
Percent change in number of Under and Un-immunized from previous year	15.9%	9.6%	-2.3%	59.7%	-7.4%

## 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, five states do not allow religious exemptions and four (California, Mississippi, New York and West Virginia) do not allow exemptions for religious or philosophical reasons. Iowa law allows for medical and religious exemptions. Iowa's 2022-23 exemption rates are comparable to available national data from the 2021-22 school year (Table 12).

Table 12. Immunization Summary and Exemptions in Iowa and United States, 2021-22 and 2022-23

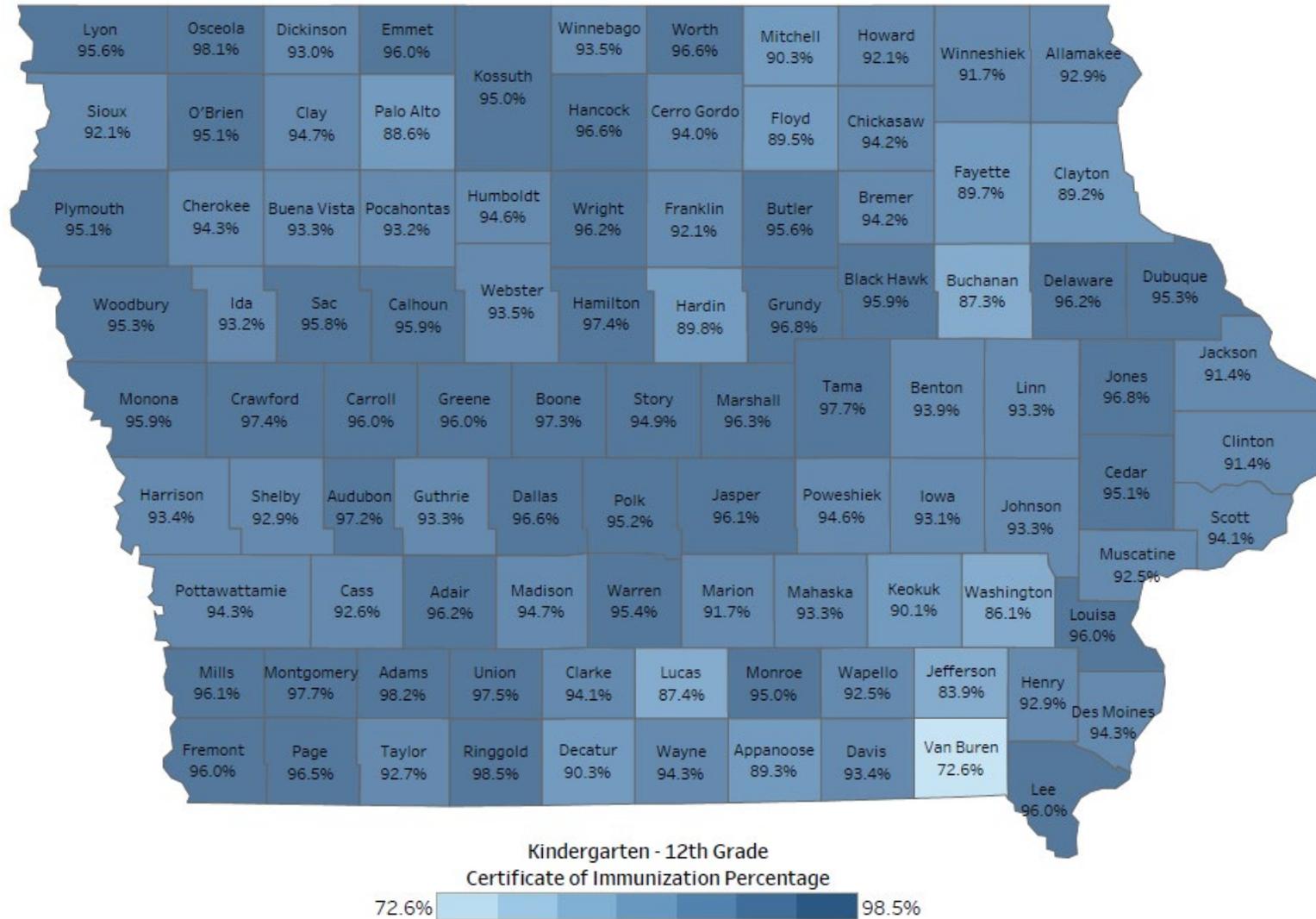
	Iowa Kindergarten (2022-2023)	Iowa Kindergarten - 12th grade (2022-2023)	National 2021-2022 (Kindergarten only)
Percent Valid Certificates	98.2%	98.9%	--
Certificate of Immunization	89.9%	94.2%	--
Provisional Certificates	5.3%	1.8%	2.4% (Range <0.1 – 7.5%)
Certificate of Immunization Exemption-Medical	0.2%	0.2%	0.2% (Range <0.1 – 1.5%)
Certificate of Immunization Exemption-Religious	2.8%	2.6%	2.3% (Non-medical Exemptions Range 0.3– 9.2%)

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 HHS 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.

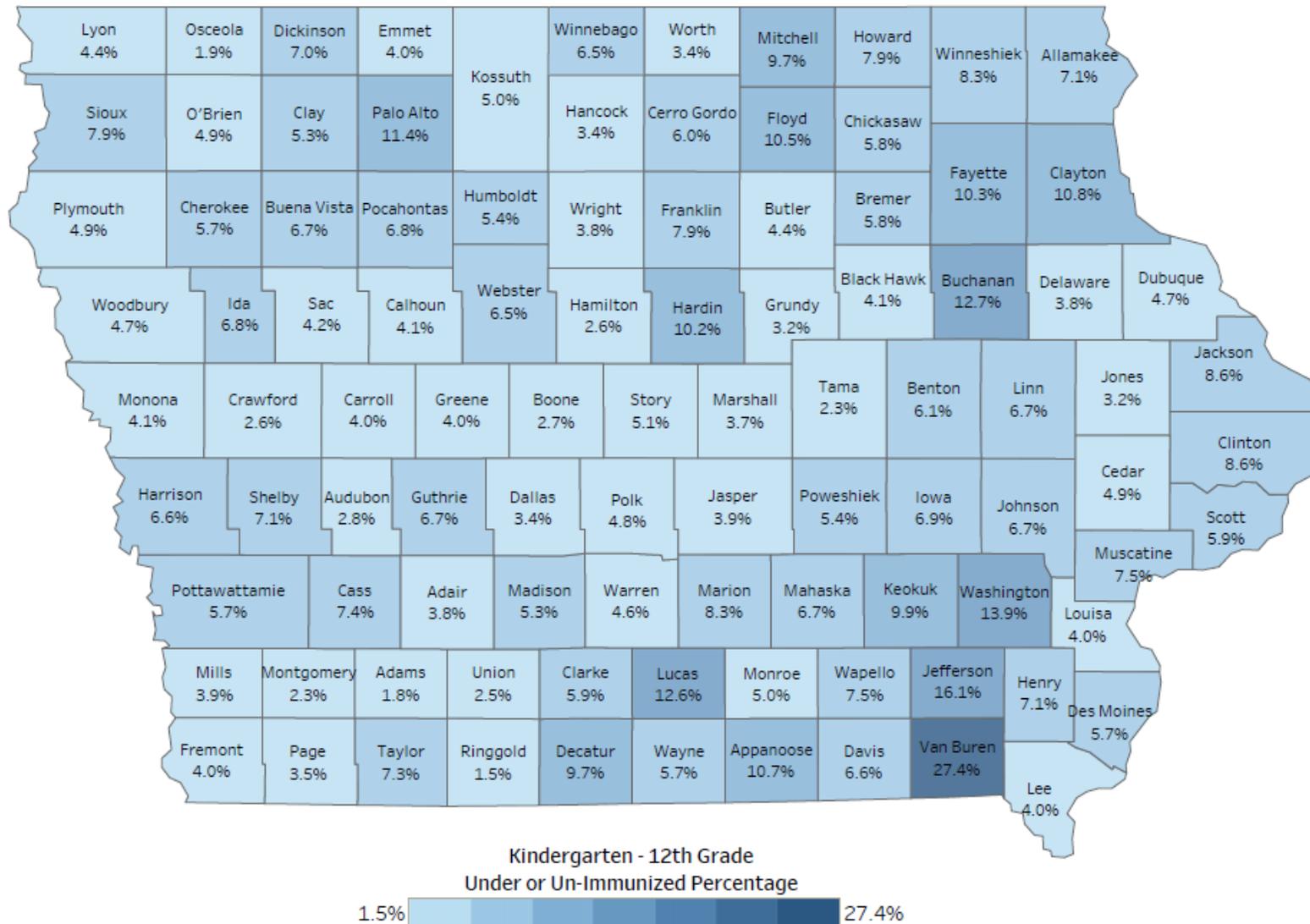
## Appendix A - Supplemental Maps

*Appendix I. Percent of Students Kindergarten through 12th Grade with a Certificate of Immunization by County, Iowa, 2022-23 School Year*

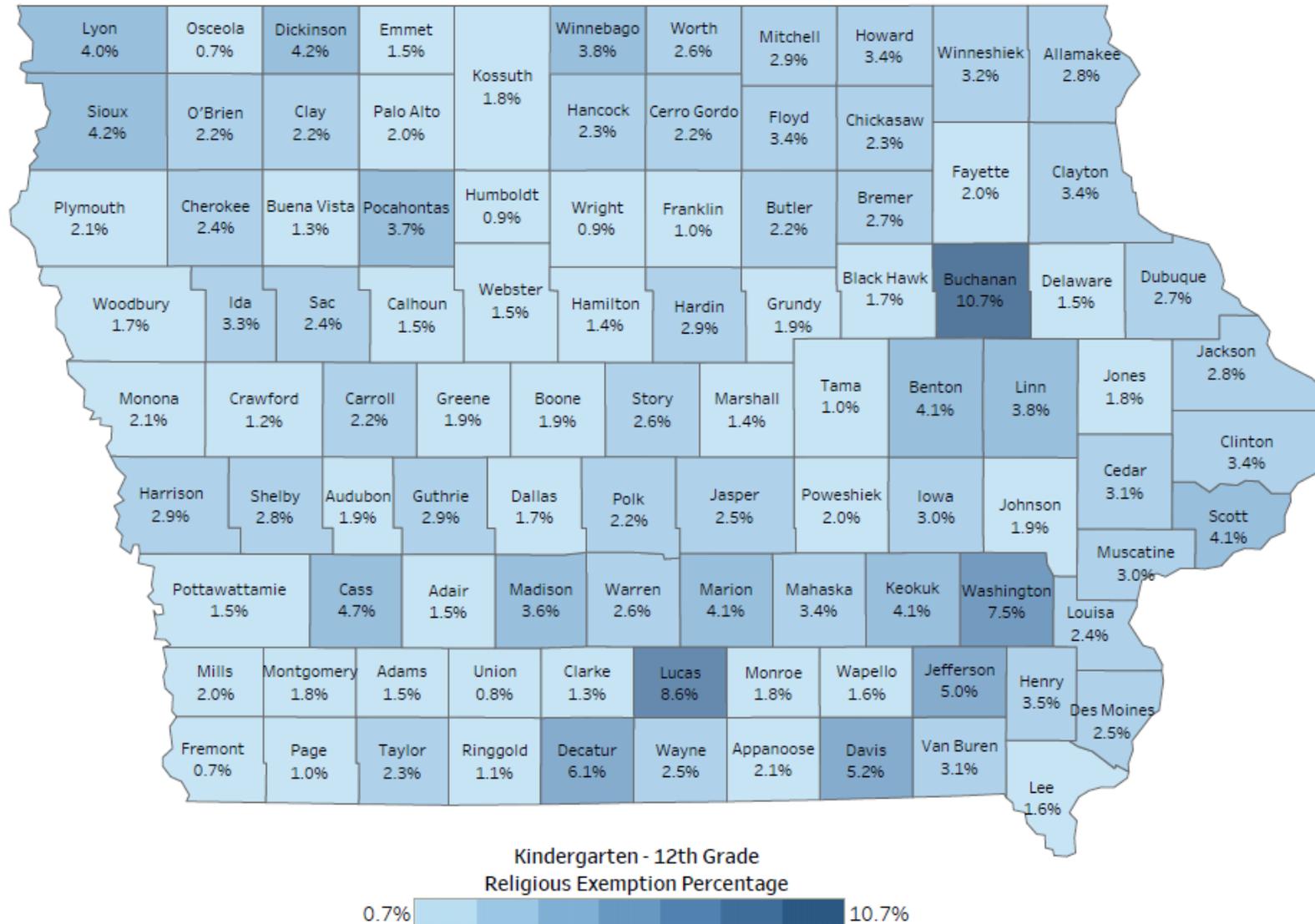


## Appendix 2. Percent of Students Kindergarten through 12th Grade who are Under or Un-immunized by County, Iowa, 2022-23 School Year

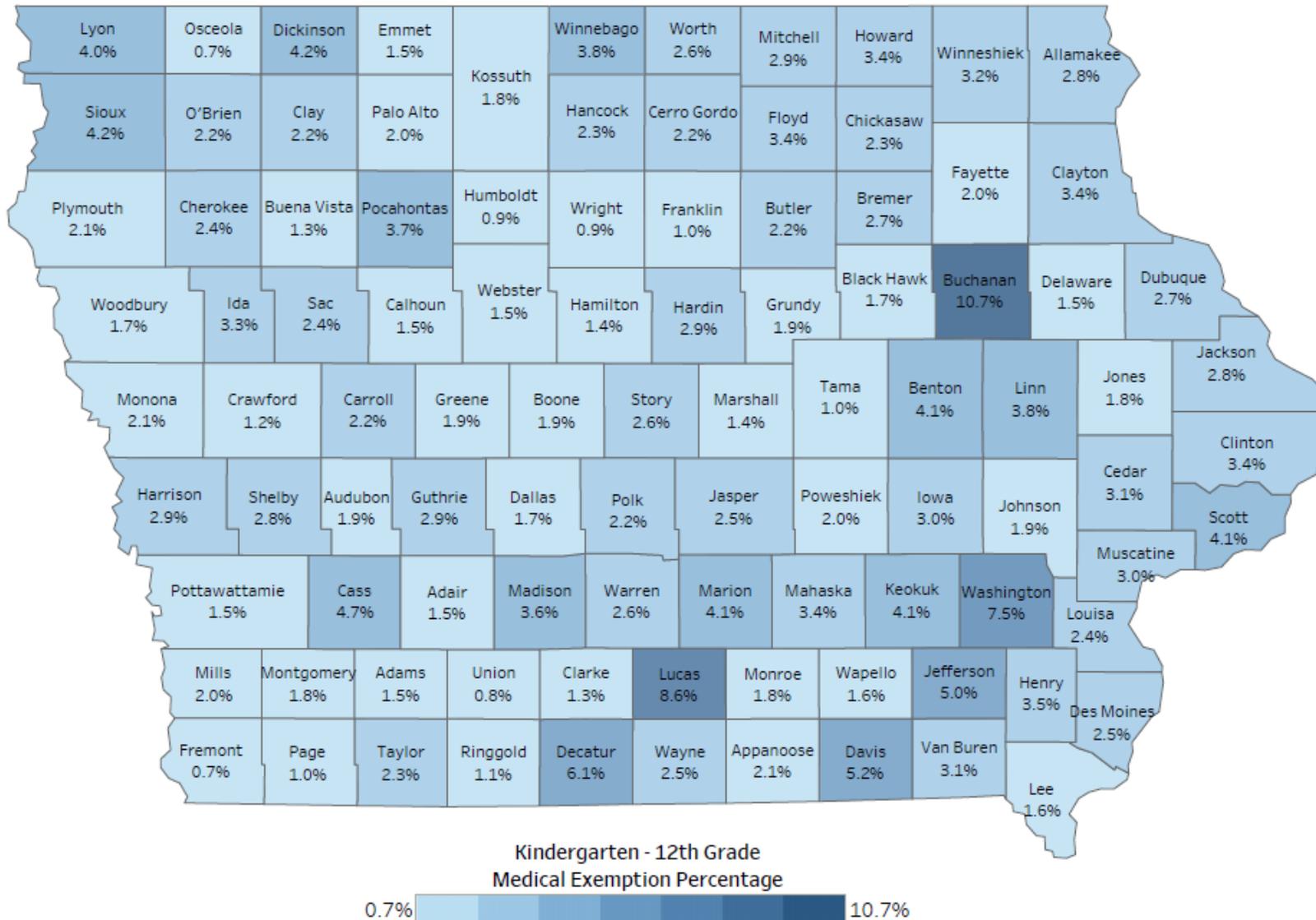
*Students with a Certificate of Religious or Medical Exemption, Provisional Certificate, or Invalid/No Certificate*



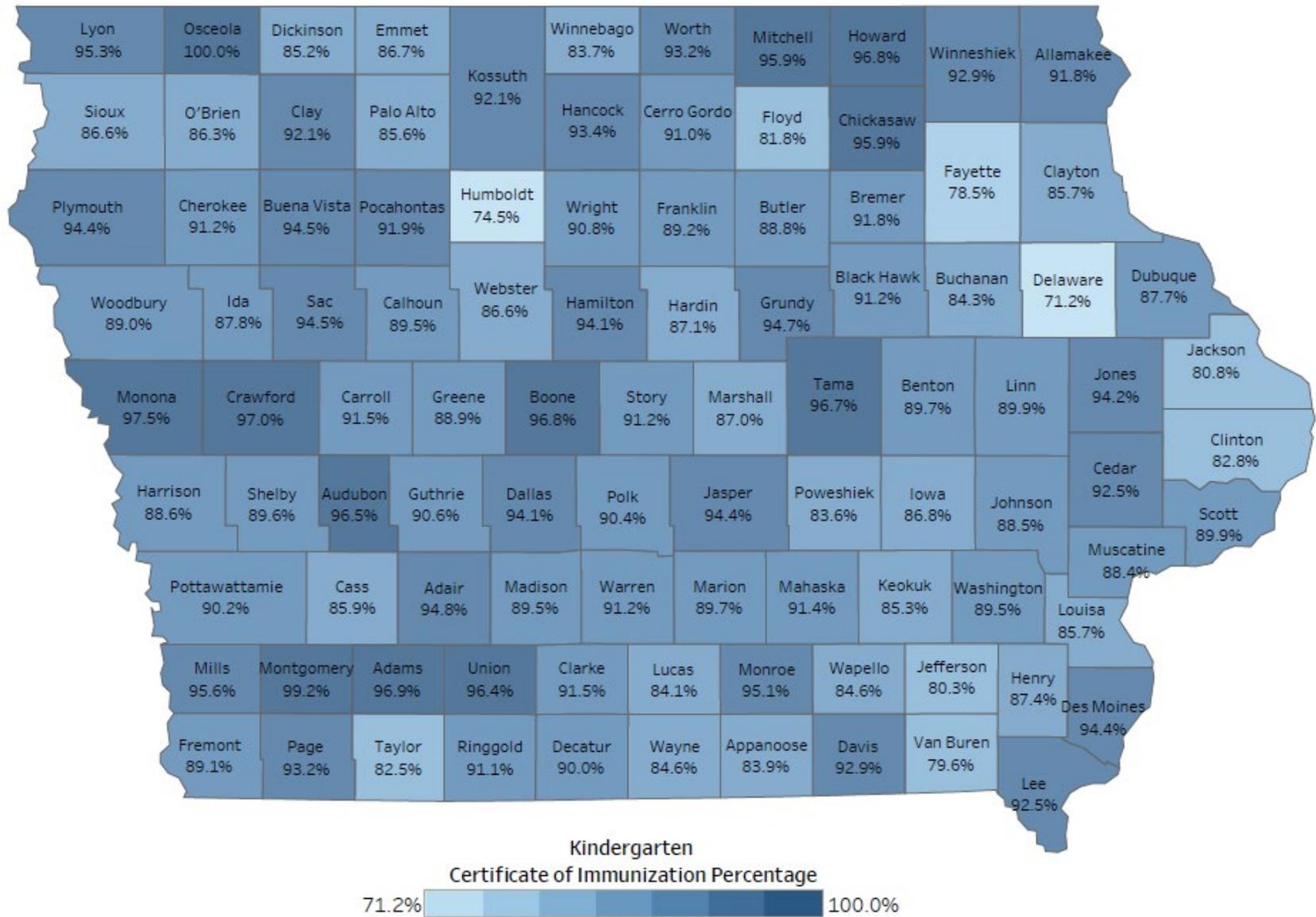
**Appendix 3. Percent of Students Kindergarten through 12th Grade with a Religious Certificate of Immunization Exemption by County, Iowa, 2022-23 School Year**



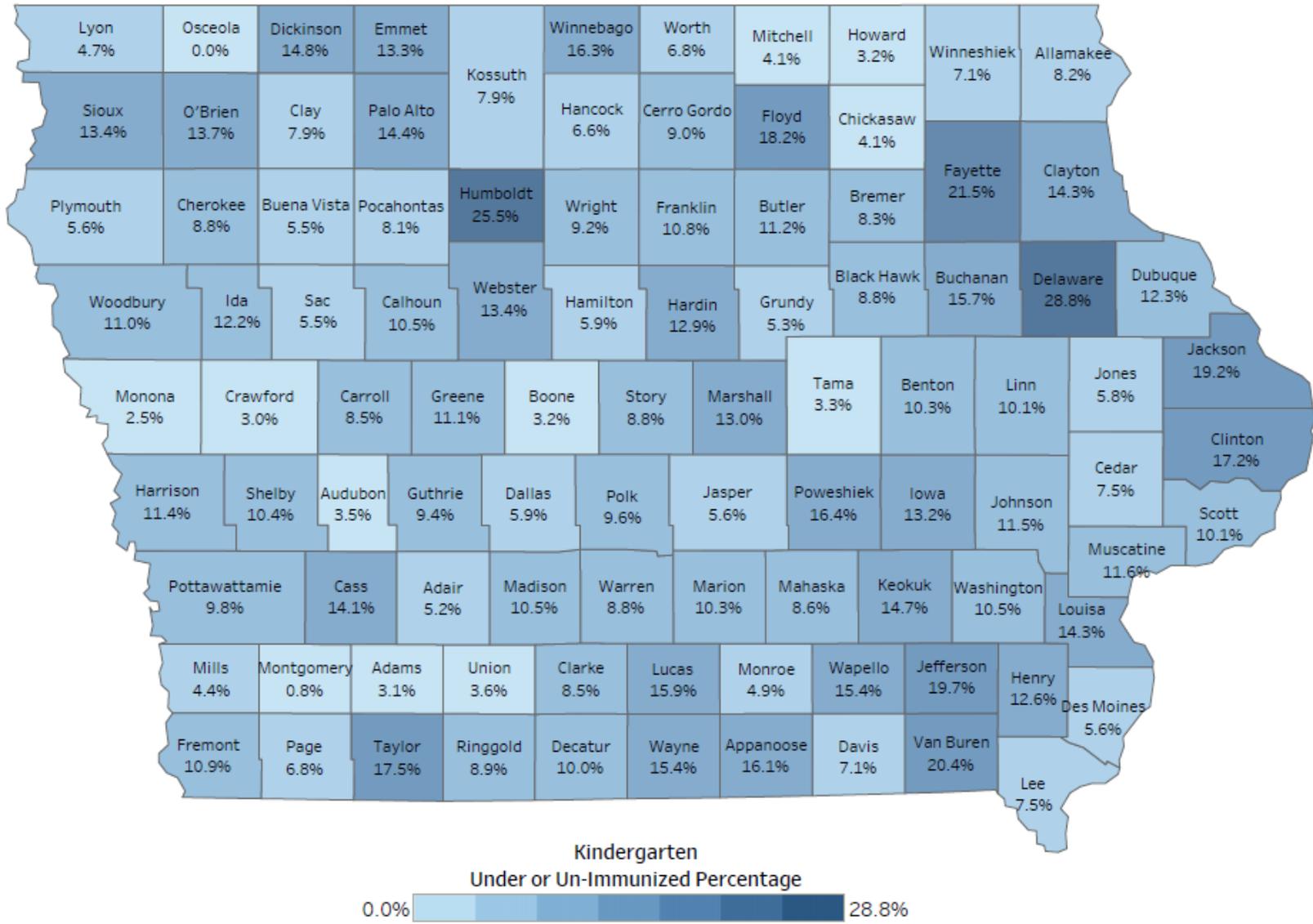
**Appendix 4. Percent of Students Kindergarten through 12th Grade with a Medical Certificate of Immunization Exemption by County, Iowa, 2022-23 School Year**



**Appendix 5. Percent of Kindergarten Students with a Certificate of Immunization by County, Iowa, 2022-23 School Year**

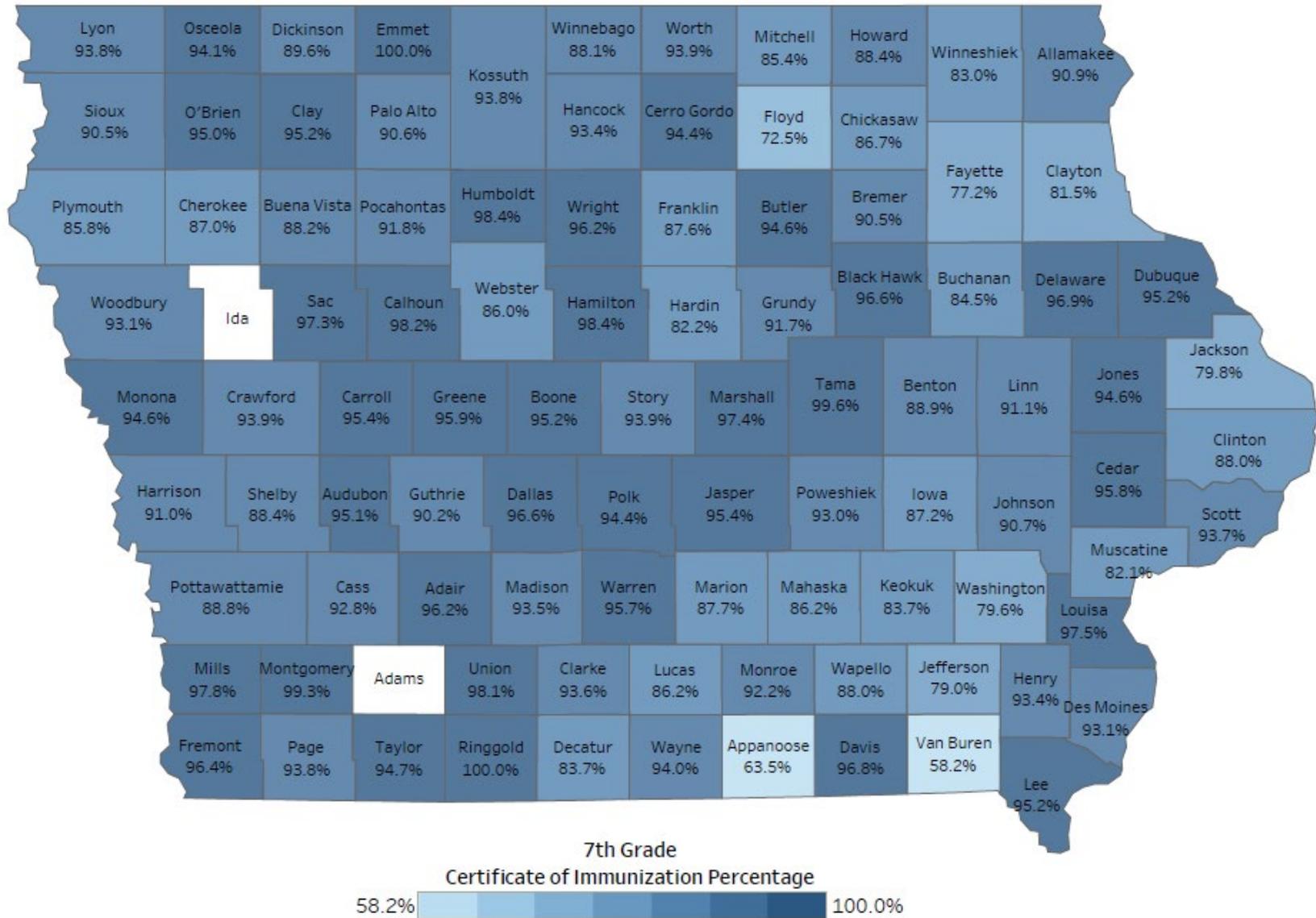


**Appendix 6. Percent of Kindergarten Students who are Under or Un-immunized by County, Iowa, 2022-2023 School Year**  
*Students with a Certificate of Religious or Medical Exemption, Provisional Certificate, or Invalid/No Certificate*



### Appendix 7. Percent of Seventh Grade Students with a Certificate of Immunization by County, Iowa, 2022-2023 School Year

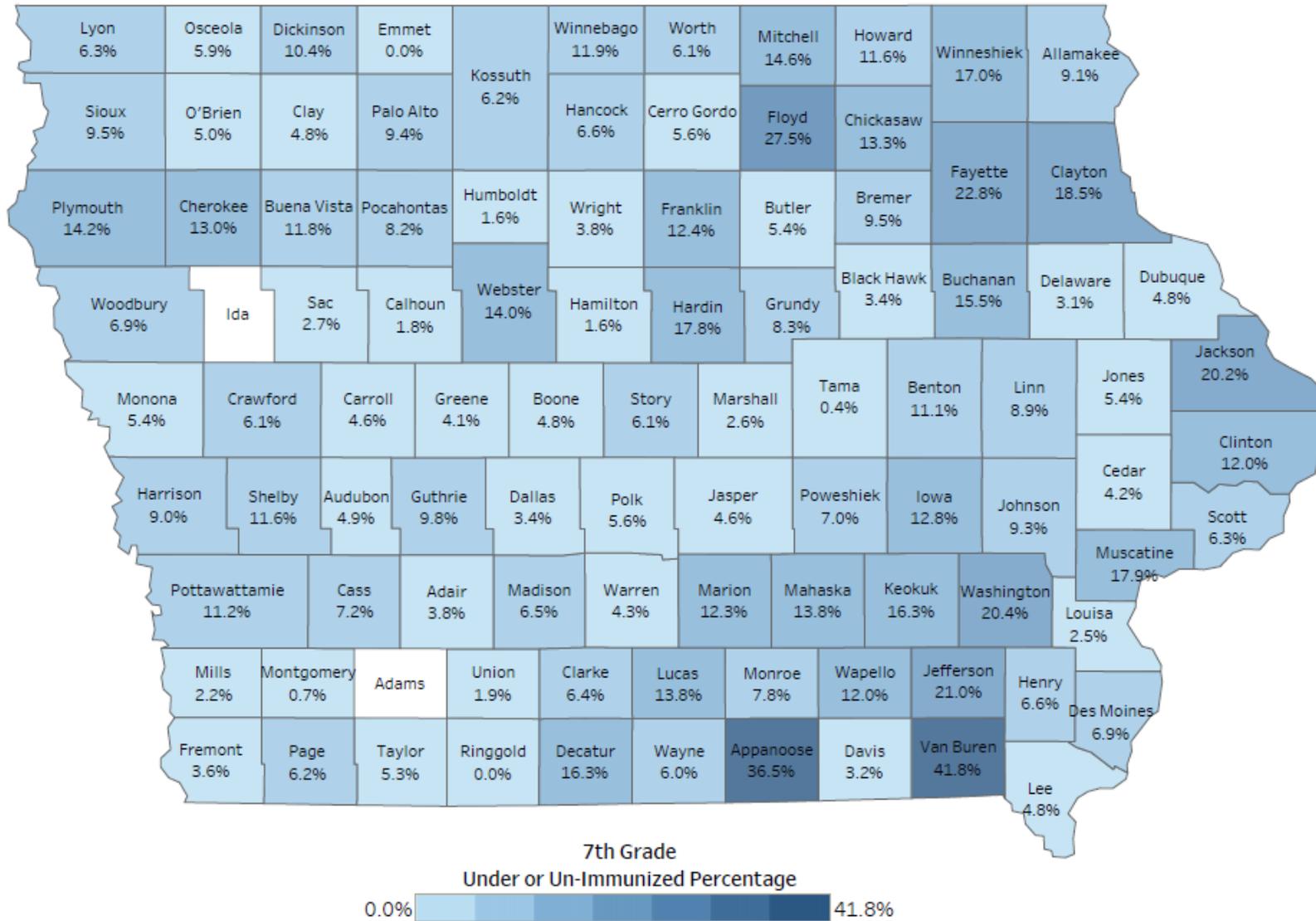
Map Note: Data are collected by location of school, not county of residence of students. Ida and Adams counties do not include 7th grade students.



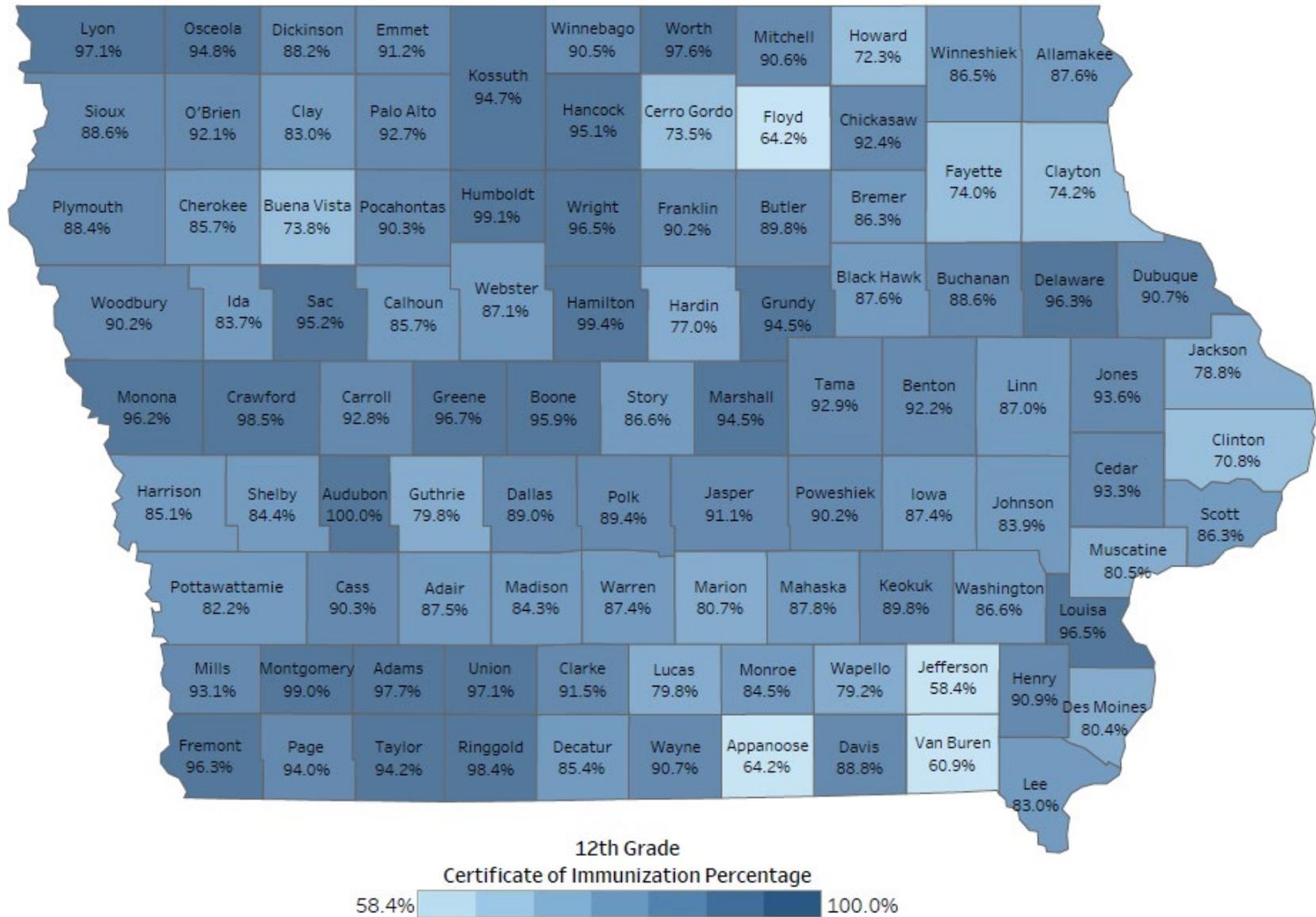
### Appendix 8. Percent of Seventh Grade Students who are Under or Un-immunized by County, Iowa, 2022-2023 School Year

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 9. Percent of 12th Grade Students with a Certificate of Immunization by County, Iowa, 2022-2023 School Year**



**Appendix 10.** Percent of 12th Grade Students who are Under or Un-immunized by County, Iowa, 2022-2023 School Year  
 Students with a Certificate of Religious or Medical Exemption, Provisional Certificate, or Invalid/No Certificate

