

# ***Immunizations in Iowa, 2012***

Iowa Immunization Program  
Annual Report

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## Introduction

The mission of the Iowa Immunization Program is to decrease vaccine-preventable diseases through education, advocacy and partnership. Vaccines are one of the most significant achievements in public health. Infectious diseases once common in the U.S. are now rare because of the widespread use of vaccines. During the past decade many new vaccines were introduced and added to the recommended immunization schedule, which helps protect both individuals and communities. Achieving and maintaining high vaccination rates are two of the most important safeguards to prevent the spread of vaccine-preventable diseases. Annually vaccines save 33,000 lives, prevent 14 million cases of disease, reduce direct health care costs by \$9.9 billion and save \$33.4 billion in indirect costs. Immunization rates in Iowa are consistent with or exceed national averages.

However, viruses and bacteria causing vaccine-preventable diseases still exist and can be passed on to people who are not protected by vaccines. Communities with pockets of unvaccinated and under-vaccinated populations are at increased risk for outbreaks of vaccine-preventable diseases. The Iowa Immunization Program provides immunization services throughout the state and consists of the following programs: Adolescent Immunization, Adult Immunization, Immunization Registry Information System (IRIS), Vaccines for Children (VFC), Perinatal Hepatitis B, and Immunization Assessment.

The purpose of this report is to provide a summary of the activities and achievements of the Immunization Program and Iowa health care providers during the 2012 calendar year. It also serves as an annual informational resource for stakeholders, local partners, policy makers and the general public. Iowa-specific immunization coverage rates, funding sources, and program-specific data appear in tables and maps throughout the report. These tables and maps demonstrate not only immunization coverage levels, but collaboration and work being done at the local level by public and private health care providers. This report also highlights special projects and initiatives underway to increase Iowans' access to vaccines.

# Immunization Program Funding

In calendar year 2012, the Immunization Program received funds from the federal Vaccines for Children Program (VFC), federal 317 grant program, state funds, and Federal Prevention and Public Health funds totaling \$30,075,689 (Table I).

Funding Source	Calendar Year 2012
<i>Federal VFC</i>	\$24,504,342
<i>Federal 317</i>	\$4,008,633
<i>State</i>	\$585,764
<i>Federal PPHF</i>	\$976,950
<b>Total</b>	<b>\$30,075,689</b>

Table I: Calendar year 2012 total program funds

Program expenditures are divided into three main categories: **program infrastructure** (staff salary and operating expenses), **contracts** with local public health agencies and immunization service providers, and **vaccine purchases**. The funding distribution for these three categories is illustrated in Figure I.

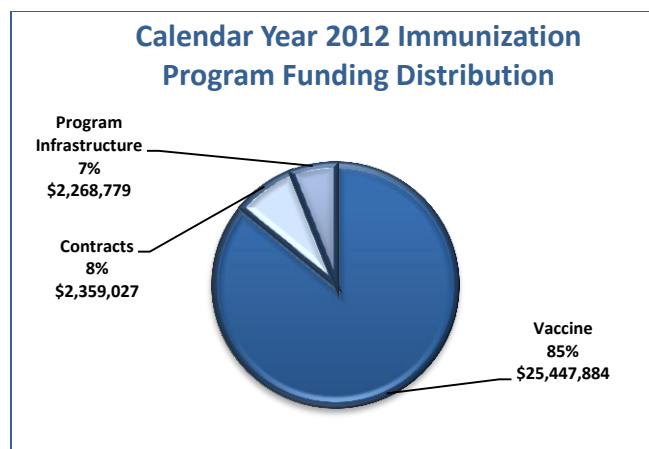


Figure I: Calendar year 2012 distribution of program funds

## Vaccine Funds

The Immunization Program completes annual population estimates and vaccine forecasting for Iowa's population, which is used by CDC to determine vaccine funding for the upcoming year. Of the program's \$30 million dollar 2012 budget, over \$25 million was spent on vaccines. The Immunization Program received funding for vaccines from the federal VFC Program, federal 317 grant vaccine funds, and state funds. Figure 2 includes the vaccine funding distribution for calendar year 2012.

In 2012, Iowa received \$23,659,263 from the federal VFC Program for vaccine. These funds account for 93 percent of the program's total vaccine budget. These funds are used to immunize children birth through 18 years of age who meet the following criteria: Medicaid enrolled, uninsured, underinsured, American Indian or Alaskan Native.

The Immunization Program receives federal 317 vaccine funds through an annual grant process. In calendar year 2012, Iowa received \$1,495,870 in 317 grant funds which comprises six percent of the program's total vaccine budget.

In 2012, Iowa used federal 317 grant funds to vaccinate underinsured children served by select local public health agencies and for high risk adults for hepatitis A and B and are served by local public health agencies offering sexually transmitted disease (STD) clinics.

In 2012, \$292,751 of state funds were used to purchase vaccine which comprised one percent of the program's total vaccine budget. State funds are used to pay for vaccines for children who do not meet VFC eligibility.

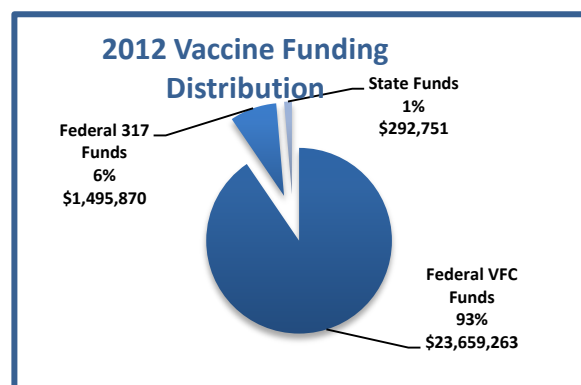


Figure 2: Calendar year 2012 vaccine funding distribution.

# Special Projects

## Local Public Health Billing Project

In 2012, Iowa received a grant award from the Prevention and Public Health Fund (PPHF) to assist in implementing billing programs in Local Public Health Agencies (LPHA) throughout the state. The award will assist LPHA in overcoming barriers identified with initiating a billing program. Funds were used to contract with HS Medical Billing for the following activities: provide one-on-one consultation to Iowa's LPHA to establish successful billing programs; train LPHA staff on contracting, billing, credentialing, coding and other components of billing; and to continue the LPHA Billing Hotline.

## Adult Vaccination Special Project

The Immunization Program received a PPHF grant to improve adult immunizations in Iowa. Award of these grant funds allows the Iowa Immunization Program to establish collaboration between employers, pharmacies, and local public health agencies to improve adult immunization rates.

Grant activities included:

- Evaluate where Iowans receive influenza vaccines (e.g., local public health agencies, pharmacies, employee vaccination programs, or private physician offices) by adding questions to the Behavioral Risk Factor Surveillance System (BRFSS).
- Develop an employer vaccination resources toolkit through Safeguard Iowa Partnership (SIP) to include best practices and sample resources. The goals of the project are to provide education regarding the benefits of employer vaccination programs, enhance relationships with employers and community vaccinators and increase vaccination rates of employees.
- Develop an adult immunization media campaign through a contract with the Iowa Immunization Coalition (IIC). The IIC will collaborate with LPHA to utilize the Coalition's media campaign and tools; provide education to the public and health care providers regarding adult immunizations; partner with local pharmacies and businesses to assist or conduct employer vaccination clinics; and bill third-party payers, including private insurance companies, for the cost of vaccine and vaccine administration.
- Collaborate with the Iowa Department of Human Services, Medicaid Program to ensure all Advisory Committee on Immunization Practices (ACIP) recommended vaccines are included as a preventative benefit for as many Medicaid enrolled adults as possible.
- Evaluate and increase immunization rates among health care workers (HCW) in long-term care facilities and ambulatory surgery centers. Immunization rates of HCW vary greatly by occupational group and demographics. Funds will be utilized by Iowa Healthcare Collaborative to evaluate HCW immunization rates by expanding current strategies used with hospital settings to increase health care worker influenza vaccination rates.

# Immunization Education

## 2012 Vaccine University

In October and November 2012, the Iowa Immunization Program presented Vaccine University, an immunization educational training, to more than 500 participants at 10 locations across the state. The training focused on vaccine education, recommendations for vaccine storage and handling, Vaccines for Children Program guidelines, and immunization requirements to attend Iowa's licensed child care centers and schools – kindergarten through 12<sup>th</sup> grade. The trainings targeted health care professionals, and anyone who is responsible for vaccine accountability, storage and handling or administration.

## Immunization Update Newsletter

The Immunization Update is a quarterly newsletter produced and distributed by the Iowa Immunization Program. This newsletter features important immunization developments, such as the latest vaccine recommendations; pertinent updates or changes regarding the Vaccine for Children program, IRIS; and storage and handling guidelines. Health care providers will also find practical vaccination resources, a question and answer corner, training announcements, and more.

Current and past issues of the newsletter can be found on the Immunization web site at <http://www.idph.state.ia.us/ImmTB/Immunization.aspx?prog=Imm&pg=Newsletters>

To receive Immunization Program updates directly, send a blank e-mail to: [join-IMMUNIZATION@lists.ia.gov](mailto:join-IMMUNIZATION@lists.ia.gov)

## Brochures and Print Materials

The Immunization Program offers educational materials for parents and health care providers. Materials include brochures, school/child care audit forms, IRIS postcards, temperature logs, posters and VFC program forms. Educational materials can be printed or ordered free of charge from the Health Protection Clearinghouse. In 2012, the Immunization Program shipped 155,665 pieces of educational materials to health care providers throughout Iowa. Immunization educational materials may be ordered by one of the following options:

- Online – Immunization Program webpage [www.idph.state.ia.us/ImmTB/Immunization.aspx](http://www.idph.state.ia.us/ImmTB/Immunization.aspx)
- Fax the order form to 866-499-8846
- Call 888-398-9696

## Immunization Consultation

The Iowa Immunization Program staff are available Monday-Friday 8:00 a.m. - 4:30 p.m. for consultation and direction regarding program requirements and activities and immunization related questions. Please refer to Appendix A, Immunization Staff Directory, for contact information.

# Immunization Registry Information System (IRIS)



Iowa's Immunization Registry Information System (IRIS) is a confidential, computerized repository of individual immunization records from participating public and private

health care providers. IRIS is critical in reducing the occurrence of vaccine-preventable diseases, and allows health care providers to document and search for patients' immunization records.

IRIS includes patient records from all ages and is used to keep patients on schedule for their recommended immunizations by storing immunization records; documenting vaccine contraindications and reactions; validating immunization history; providing vaccine recommendations; producing patient reminder and recall notices; and managing vaccine inventory.

## IRIS Implementation

On June 4, 2012, the Immunization Program implemented a new IRIS application, which is a version of the Wisconsin Immunization Registry (WIR). The Immunization Program contracts with Hewlett Packard Enterprise Services (HPES) to support and maintain the registry application. Transition to the new IRIS application involved data migration which included:

- 2.5 million patient records
- 22 million immunizations
- 13,000 IRIS users
- 1,730 organizations

Multiple training opportunities were offered prior to and following implementation. Between April and June, IRIS staff held 47 classroom trainings in computer labs across Iowa with 738 attendees.

During this same time, 10 live webinars were held with 470 participants.

Features of the new web-based application include the following:

- Ability to exchange data with electronic health records using HL7 messaging
- Links with Iowa Vital Records to create and remove patient records
- Contains a public access feature that allows adults, parents, and guardians to search for their own or their children's records
- Enhanced immunization schedule provides information regarding vaccine(s) due or past due for patients
- Training modules with video clips are included in the application for all users
- Ad Hoc reporting feature increases health care providers' access to data, and data is available in multiple file formats
- Immunization assessments allow health care providers to evaluate immunization rates for their patients
- Medical countermeasure module tracks resources during emergency and pandemic events

## IRIS Users

Enrollment in IRIS is available to all health care providers in Iowa that administer immunizations. In 2012, 186 new provider sites enrolled in IRIS for a total of 1,579 participating health care provider sites. Sites include private health care clinics, local public health agencies, rural health clinics, hospitals, pharmacies, and long-term care centers. Almost 400 public and private schools also have access to IRIS, allowing school nurses to view and print students' immunization records.



The number of patients in IRIS has steadily increased, and nearly all Iowans have a record in IRIS (Table 2). More than 154,000 patient records were added in 2012, and IRIS contains nearly 24 million immunizations. IRIS includes records consisting of two or more immunizations for 93 percent of Iowa's children 4 months to 6 years of age.

Number of patients in IRIS			
Year	Patient Records in IRIS	Population of Iowa	Percent of Population in IRIS
2008	1,740,291	3,002,555	58%
2009	2,108,766	3,007,856	70%
2010	2,436,632	3,046,355	80%
2011	2,526,934	3,062,309	83%
2012	2,680,949	3,074,186	87%

Table 2: Number of patients in IRIS compared to Iowa's population

### IRIS - Interoperability Funding

In 2012, Iowa received funds from the Prevention and Public Health Fund (PPHF) to enhance interoperability between electronic health records (EHRs) and IRIS. Funds were used to contract with Hewlett Packard Enterprise Services (HPES) to make programming enhancements to exchange immunization data between IRIS and the state Health Information Exchange (HIE) and to assist with data exchange between health care providers, EHR vendors and the state HIE.

### IRIS - VTrckS

The Centers for Disease Control and Prevention (CDC) implemented a new vaccine ordering and management program for all immunization projects. Iowa received funds from the PPHF in 2012 to develop a vaccine ordering module in IRIS that interfaces with CDC's VTrckS vaccine ordering and management system. The Immunization Program used these funds to contract with HPES to make enhancements to IRIS. HPES will train IRIS staff and health care providers regarding the new functionality and develop provider education materials including user manual, online help and training videos.

# Vaccines for Children Program (VFC)



The Vaccines for Children (VFC) program is a federally funded program providing vaccines at no cost to eligible children from birth through 18 years of age. Eligible

children include those who are: enrolled in Medicaid, uninsured, underinsured, American Indian or Alaskan Native. The VFC program provides vaccine for approximately 45 percent or 759,097 of Iowa's children from birth through 18 years of age. In 2012, the Iowa VFC program distributed 613,426 doses of vaccine (Table 3), valued at more than \$26.5 million, to VFC-enrolled health care providers.

As of December 31, 2012, Iowa's VFC program had 617 participating providers enrolled throughout the state. Enrolled providers include local public health agencies, Indian Health Services, Women Infants and Children (WIC) clinics, private health care providers, hospitals, pharmacies, rural health clinics and Federally Qualified Health Centers. Figure 3 includes the number of VFC providers by county compared to the number of children in the county, less than 18 years of age. There is a direct correlation to the size of the county population to the number of VFC program providers, larger populace counties have more VFC program providers. All of Iowa's 99 counties have at least one participating VFC program provider.

Vaccines	Doses Distributed
DT	16
DTaP	21,410
DTaP-IPV (Kinrix)	14,890
DTaP-IPV/Hib (Pentacel)	20,825
DTaP-IPV-Hep B (Pediarix)	36,500
Tdap	23,295
Td	570
Hep A	54,700
Hep B	27,690
Hep A-Hep B: (Twinrix)	1,170
Hep B/Hib: (Comvax)	240
Hib	44,245
HPV	27,400
IPV	9,710
MMR	37,560
MMR-Varicella (MMRV)	2,920
MCV	17,385
PCV 13	75,150
Rotavirus	44,420
Varicella	44,380
Influenza	108,300
<b>Total Doses Distributed</b>	<b>613,426</b>

Table 3: 2012 VFC vaccine doses distributed

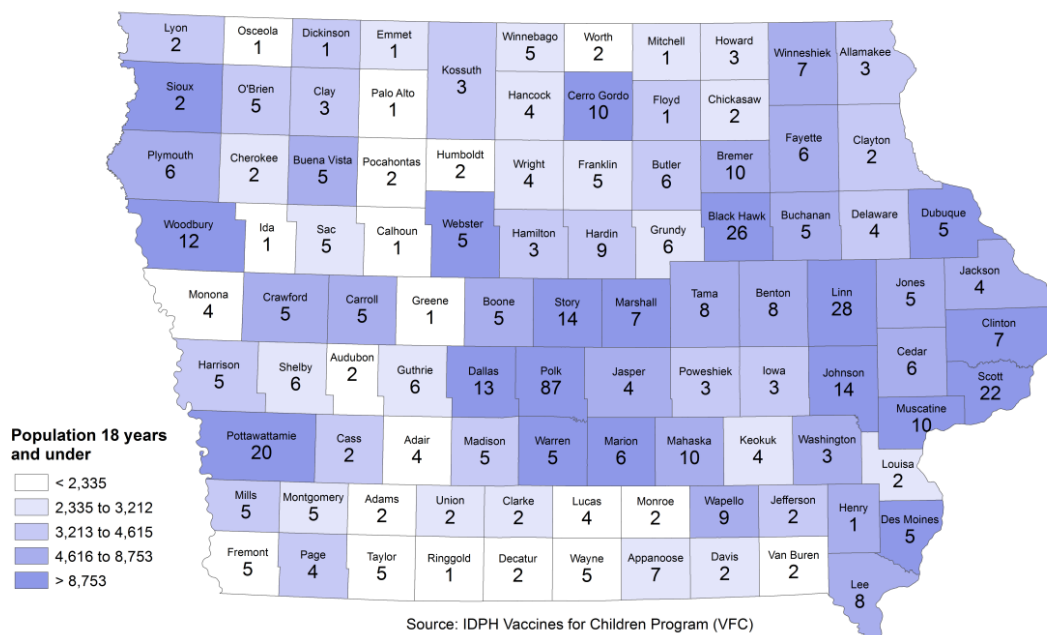


Figure 3: Number of VFC Providers in Iowa by County

# Hepatitis B Program

## Perinatal Hepatitis B Program

Iowa's Perinatal Hepatitis B Program works to prevent transmission of hepatitis B infection from mothers to infants by conducting parent and health care provider education, case management of mothers and babies, administration of hepatitis B vaccine and hepatitis B immune globulin (HBIG) and laboratory testing. Hepatitis B is a serious disease caused by the hepatitis B virus (HBV), which can be transmitted from an infected mother to her infant at birth. In 2011, there were 72 infants born to hepatitis B positive mothers, which is an additional 12 children from the previous year (Figure 4).

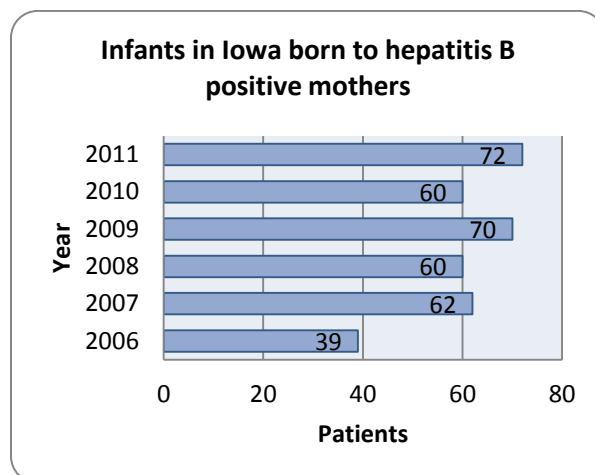


Figure 4: Iowa infants born to hepatitis B positive mothers

## Universal Hepatitis B Vaccine Birth Dose Program

The Immunization Program provides hepatitis B vaccine to hospitals to universally administer the birth dose of hepatitis B vaccine to all newborns regardless of insurance coverage. In 2012, 22 of 77 birthing hospitals in Iowa were enrolled in the Universal Hepatitis B Vaccine Birth Dose Program.

The 2011, National Immunization Survey (NIS) for hepatitis B vaccine among infants birth to 3 days of age indicates Iowa has a hepatitis B birth dose rate of 69.4 percent. Iowa ranks 45 out of the 66 assessed immunization projects. Despite the low ranking, the hepatitis B birth dose rate increased by 17 percentage points from 2010. The program continues initiatives to increase the number of Iowa infants who receive a birth dose of vaccine. These efforts include the Universal Hepatitis B Vaccine Birth Dose Program, promoting birthing hospitals' enrollment in the VFC program, and partnering with the University of Iowa, College of Public Health to complete chart audits of birthing hospitals.

## Testing Mothers and Neonates in Iowa

The Perinatal Hepatitis B Program assesses maternal hepatitis disease, HBsAg positive documentation, and birth-dose administration rates through hospital medical chart reviews every five years. These chart reviews assist the program and hospitals in adopting policies, procedures, and standing orders to reduce the incidence of hepatitis B transmission from mother to infant during birth. Medical record reviews involve auditing a sampling of paired maternal and neonatal dyads. This method provides the most precise measurement of universal birth dose administration and maternal HBsAg documentation. The Program contracted with the Iowa Registry for Congenital and Inherited Disorders, within the University of Iowa, College of Public Health, to collect these data in 2010 and 2011. The final report was issued to the Iowa Immunization Program in 2012 for distribution.

The following is a summary of the 2011 mother-infant chart review of all birthing hospitals in Iowa:

- Of the 5,994 mothers, 5,060 (84%) were white, non-Hispanic
- 3,623 (60%) had insurance either in addition to or other than Medicaid
- Most mothers, 5,723 (96%) received a prenatal hepatitis B test prior to admission

- Among neonates, 4,279 (71%) had results for maternal hepatitis B testing documented in the neonatal chart
- Of the 5,994 neonates, 4,942 (82%) received the hepatitis B vaccine
- 2,784 neonates received hepatitis B vaccine within 24 hours and 1,246 neonates received hepatitis B vaccine within 48 hours
- 984 neonates did not receive the vaccine and vaccination status could not be confirmed for 68 neonates
- Of the 9 neonates born to mothers with positive hepatitis B tests, each infant received Hepatitis B Immune Globulin within 12 hours of delivery
- Among the 984 neonates who did not receive the hepatitis B vaccine, the most frequently document reasons were the guardian refused (42%), the infant was transferred (11%), or the facility did not offer the vaccine (6%)
  - Neonates of mothers 20-24 years of age were more likely to be transferred before receiving the hepatitis B vaccine
  - White, non-Hispanic mothers 30-34 years of age were more likely to refuse vaccination
  - Hispanic mothers 25-29 years of age tended to have no documented reason

## High-Risk Adult Hepatitis B Program

The Immunization Program in collaboration with the Hepatitis Program provides hepatitis A and hepatitis B vaccine for high-risk patients seen at local public health agencies' sexually transmitted disease (STD) clinics. High-risk patients include injection drug users, men who have sex with men, persons with a current STD diagnosis, human immunodeficiency virus (HIV) or hepatitis C infected persons, and sexual partners of persons infected with HIV, hepatitis A, or hepatitis B. In 2012, the Immunization Program distributed 1,570 doses of adult hepatitis A/hepatitis B vaccine (Twinrix), 10 doses of adult hepatitis A vaccine, and 60 doses of adult hepatitis B vaccine to local public health agencies.

# Immunization Assessments

Immunizations assessments serve as a means to evaluate immunization practices and the progress towards achieving established goals. Immunization records are assessed to determine the percentage of patients who are age appropriately vaccinated consistent with the recommended immunization schedule. Immunization assessment data are used to improve health care providers' standard immunization practices, immunization delivery systems and guide strategies and policies, which directly impact the overall immunization rates of their patients.

## School and Child Care Audits

Assessments of children attending elementary or secondary school or licensed child care centers are conducted annually to ensure attendees have received the required immunizations and have an appropriate Iowa Department of Public Health, Certificate of Immunization, Certificate of Immunization Exemption, or Provisional Certificate of Immunization. Local public health agencies perform annual audits of immunization records for students enrolled in public, private, and parochial K-12 schools and children in licensed child care centers. Audits for the 2011-2012 school year indicate 99.10 percent of children enrolled in kindergarten through 12<sup>th</sup> grade were compliant with the law and had an appropriate immunization certificate (Table 4), while 94.78 percent of children audited in child care centers were compliant with the law (Table 5).

## County and State Immunization Rates

The Immunization Program uses data from the Immunization Registry Information System (IRIS) to calculate county and state immunization rates for 2-year-old children and adolescents 13 -15 years of age. These data provide immunization rates based upon a standard vaccination series identified by the Advisory Committee on Immunization Practices (ACIP) and the Centers for Disease Control and Prevention (CDC).

The report includes patients served by both public and private health care providers. Data collected and analyzed include patients with a record in IRIS

that have a zip code and are an 'active' patient with in a health care provider organization. A patient's status becomes active in an organization when an immunization is administered or when the health care provider selects this status on a patient record.

The report for each age group includes the estimated number of children in the county, the number of records meeting the assessment criteria and the corresponding percentage of records in IRIS. These data are used to calculate the percentage of records in IRIS for each county. The population percentage by county ranges from 23-135 percent with a state average of 70 percent for 2-year-old children and range from 29-111 percent with a state average of 81 percent for adolescents, 13-15 years of age. Counties that have a percentage rate greater than 100 percent can be attributed to the difference between the actual numbers of children in the county compared to the county population estimates.

## 2-Year-Old Immunization Rates

The 2-year-old county immunization rate for the 4-3-1-3-3-1-4 series (4 DTaP, 3 Polio, 1 MMR, 3 Hib, 3 Hep B, 1 Varicella, 4 PCV by 24 months of age) ranges from 39 to 86 percent, with a state immunization rate of 71 percent. The state immunization rate includes the assessment of 27,379 patient records, which is approximately 70 percent of Iowa's 2-year-old population (Table 6).

## Adolescent, 13-15-Year-Old Immunization Rates

The adolescent, 13-15-year-old, county immunization rate for the 3-1-2-1-2 (3 Hep B, 1 Meningococcal, 2 MMR, 1 Td or Tdap, 2 Varicella) series ranges from 4 to 60 percent, with an average state immunization rate of 33 percent. The state immunization rate includes the assessment of 97,385 patient records, which is approximately 81 percent of Iowa's 13-15-year-old population. The county immunization rate for HPV vaccine received by adolescent girls, 13-15 years of age, ranges from 8 to 40 percent, with an average state immunization rate of 24 percent (Table 7).

## Conclusion

Iowa's Immunization Program is committed to promoting the importance of immunizations and implementing strategies to achieve and maintain high vaccination levels. The vision of the Immunization Program is healthy Iowans living in communities free of vaccine-preventable diseases. Vaccine-preventable diseases, once common, are now rare due to the development of vaccines and the achievement of high immunization rates. The absence of these diseases no longer serves as a reminder of their severity and potential life threatening complications.

Iowa health care providers must remain diligent to promote vaccines and provide sound science-based immunization education. Numerous resources are available to assist health care providers in communicating accurate information about vaccines, their safety and effectiveness. We have overcome many of the barriers once limiting the widespread availability of vaccines. Among the many successes, pockets of unimmunized and under immunized people remain and are susceptible to vaccine-preventable diseases. We cannot rest on our past achievements and successes but must remain diligent in promoting and protecting the health of Iowans. We cannot forget the history of these diseases or we may be doomed to repeat it. Vaccines prevent diseases and save lives, immunize for a better life.

## Tables and Maps

**Table 4:** Iowa Department of Public Health - Immunization Program  
Immunization Audit 2011-2012 School Year  
K-12 Summary Report by County

County	Valid Certificate	Provisional	Medical Exemptions	Religious Exemptions	Invalid	Total with Certificates	Total Enrollment	Percent with Certificates
Adair	840	13	7	0	8	860	868	99.08%
Adams	466	1	3	6	9	476	485	98.14%
Allamakee	2098	0	17	11	201	2126	2327	91.36%
Appanoose	1893	37	1	5	0	1936	1936	100.00%
Audubon	710	4	2	5	1	721	722	99.86%
Benton	4078	48	7	57	18	4190	4208	99.57%
Black Hawk	19148	132	41	97	310	19418	19728	98.43%
Boone	3841	62	15	20	0	3938	3938	100.00%
Bremer	4485	14	14	30	30	4543	4573	99.34%
Buchanan	3035	29	7	217	16	3288	3304	99.52%
Buena Vista	3793	165	40	13	30	4011	4041	99.26%
Butler	1718	22	3	4	0	1747	1747	100.00%
Calhoun	1808	29	3	7	6	1847	1853	99.68%
Carroll	3400	19	26	23	1	3468	3469	99.97%
Cass	2344	24	16	12	46	2396	2442	98.12%
Cedar	3298	9	8	28	45	3343	3388	98.67%
Cerro Gordo	6182	76	12	39	53	6309	6362	99.17%
Cherokee	1599	29	10	13	0	1651	1651	100.00%
Chickasaw	2079	25	5	40	22	2149	2171	98.99%
Clarke	1546	64	4	10	4	1624	1628	99.75%
Clay	2410	30	12	11	13	2463	2476	99.47%
Clayton	1917	10	2	20	4	1949	1953	99.80%
Clinton	7826	143	43	103	3	8115	8118	99.96%
Crawford	3673	121	14	11	21	3819	3840	99.45%
Dallas	14189	89	53	117	10	14448	14458	99.93%
Davis	1276	6	1	15	0	1298	1298	100.00%
Decatur	1113	27	9	70	23	1219	1242	98.15%

County	Valid Certificate	Provisional	Medical Exemptions	Religious Exemptions	Invalid	Total with Certificates	Total Enrollment	Percent with Certificates
Delaware	2798	15	8	6	0	2827	2827	100.00%
Des Moines	6604	43	10	47	76	6704	6780	98.88%
Dickinson	2141	14	41	17	0	2213	2213	100.00%
Dubuque	16215	90	60	169	152	16534	16686	99.09%
Emmet	1499	39	9	8	6	1555	1561	99.62%
Fayette	3329	98	21	107	4	3555	3559	99.89%
Floyd	2559	20	56	77	36	2712	2748	98.69%
Franklin	1678	31	1	13	13	1723	1736	99.25%
Fremont	1139	9	3	7	19	1158	1177	98.39%
Greene	1476	18	4	14	7	1512	1519	99.54%
Grundy	2622	48	2	2	5	2674	2679	99.81%
Guthrie	2049	30	13	11	23	2103	2126	98.92%
Hamilton	2568	35	2	18	4	2623	2627	99.85%
Hancock	1607	51	0	2	4	1660	1664	99.76%
Hardin	2576	57	2	9	43	2644	2687	98.40%
Harrison	2395	37	9	21	2	2462	2464	99.92%
Henry	3299	10	11	20	31	3340	3371	99.08%
Howard	1793	49	8	44	17	1849	1911	99.11%
Humboldt	1466	47	2	19	54	1534	1588	96.60%
Ida	1086	14	5	19	5	1124	1129	99.56%
Iowa	3219	32	8	18	13	3277	3290	99.60%
Jackson	2949	6	7	80	95	3042	3137	96.97%
Jasper	5689	51	68	35	19	5843	5862	99.68%
Jefferson	1713	63	3	181	17	1960	1977	99.14%
Johnson	15599	404	44	244	158	16291	16449	99.04%
Jones	2982	27	4	14	3	3027	3030	99.90%
Keokuk	1754	13	5	5	0	1777	1777	100.00%
Kossuth	2234	38	7	24	11	2303	2314	99.52%
Lee	5402	70	15	16	7	5503	5510	99.87%
Linn	36177	387	264	442	884	37270	38154	97.68%
Louisa	2392	39	5	10	0	2446	2446	100.00%
Lucas	1338	22	5	46	19	1411	1430	98.67%
Lyon	1922	34	6	19	19	1981	2000	99.05%
Madison	3205	58	10	58	3	3331	3334	99.91%
Mahaska	3077	49	4	19	21	3149	3170	99.34%
Marion	5991	29	49	44	161	6113	6247	97.43%
Marshall	7144	116	9	17	29	7286	7315	99.60%
Mills	2459	32	3	20	18	2514	2532	99.29%



County	Valid Certificate	Provisional	Medical Exemptions	Religious Exemptions	Invalid	Total with Certificates	Total Enrollment	Percent with Certificates
Mitchell	1638	7	3	39	89	1687	1776	94.99%
Monona	1290	7	2	12	5	1311	1316	99.62%
Monroe	1153	0	10	6	5	1169	1174	99.57%
Montgomery	1676	25	0	4	16	1705	1721	99.07%
Muscatine	7127	42	32	67	52	7268	7320	99.29%
O'Brien	2515	37	10	16	27	2578	2605	98.96%
Osceola	745	2	5	4	3	756	759	99.60%
Page	2288	25	5	13	390	2331	2721	85.67%
Palo Alto	1636	16	4	11	0	1667	1667	100.00%
Plymouth	4598	53	25	19	33	4695	4728	99.30%
Pocahontas	792	10	8	7	13	817	830	98.43%
Polk	75187	467	383	514	165	76551	76716	99.78%
Pottawattamie	15530	92	80	55	12	15757	15769	99.92%
Poweshiek	2672	6	6	18	53	2702	2755	98.08%
Ringgold	697	3	0	0	1	700	701	99.86%
Sac	1490	17	14	14	13	1535	1548	99.16%
Scott	28493	227	55	455	9	29230	29239	99.97%
Shelby	1967	9	8	10	27	1994	2021	98.66%
Sioux	6429	92	70	160	77	6751	6828	98.87%
Story	10665	187	67	113	38	11032	11070	99.66%
Tama	2562	24	7	10	3	2603	2606	99.88%
Taylor	957	19	4	10	10	990	1000	99.00%
Union	2022	0	5	4	59	2031	2090	97.18%
Van Buren	928	16	3	11	146	958	1104	86.78%
Wapello	5118	65	6	18	197	5207	5404	96.35%
Warren	8622	167	81	80	31	8950	8981	99.65%
Washington	3940	86	31	177	113	4234	4347	97.40%
Wayne	865	2	5	15	25	887	912	97.26%
Webster	5376	83	3	22	13	5484	5497	99.76%
Winnebago	2282	5	17	10	2	2314	2316	99.91%
Winneshiek	2924	1	12	53	54	2990	3044	98.23%
Woodbury	18648	223	49	87	26	19007	19033	99.86%
Worth	915	0	0	0	3	915	918	99.67%
Wright	2295	44	16	18	18	2373	2391	99.25%
<b>Total</b>	<b>492952</b>	<b>5512</b>	<b>2184</b>	<b>4958</b>	<b>4580</b>	<b>505606</b>	<b>510186</b>	<b>99.10%</b>

**Table 5:** Iowa Department of Public Health, Immunization Program  
Immunization Audit 2011-2012 School Year  
Child Care Immunization by County Summary Report

County	Valid Certificate	Provisional	Medical Exemptions	Religious Exemptions	Invalid	Total with Certificates	Total Enrollment	Percent with Certificates
Adair	149	15	2	0	0	166	166	100.00%
Adams	131	0	0	0	14	131	145	90.34%
Allamakee	384	3	2	6	35	395	430	91.86%
Appanoose	266	20	4	0	7	290	297	97.64%
Audubon	85	0	0	2	1	87	88	98.86%
Benton	670	46	1	5	12	722	734	98.37%
Black Hawk	352	4	1	1	195	358	445	80.45%
Boone	451	21	2	2	0	476	476	100.00%
Bremer	568	18	1	3	41	590	631	93.50%
Buchanan	581	19	3	4	1	607	608	99.84%
Buena Vista	486	48	19	1	3	554	557	99.46%
Butler	334	32	0	0	0	366	366	100.00%
Calhoun	274	26	0	4	21	304	325	93.54%
Carroll	737	42	5	3	4	787	791	99.49%
Cass	517	1	1	1	68	520	588	88.44%
Cedar	341	4	0	1	75	346	421	82.19%
Cerro Gordo	1375	5	2	9	147	1391	1538	90.44%
Cherokee	319	29	2	3	0	353	353	100.00%
Chickasaw	320	18	0	3	0	341	341	100.00%
Clarke	347	7	0	0	10	354	364	97.25%
Clay	432	27	1	2	12	462	474	97.47%
Clayton	504	9	2	9	26	524	550	95.27%
Clinton	1258	90	8	15	40	1371	1411	97.17%
Crawford	489	48	1	0	26	538	564	95.39%
Dallas	415	10	2	1	12	428	440	97.27%
Davis	187	9	0	2	4	198	202	98.02%
Decatur	119	3	1	3	29	126	155	81.29%
Delaware	366	8	0	1	6	375	381	98.43%
Des Moines	1128	5	0	8	108	1141	1249	91.35%

County	Valid Certificate	Provisional	Medical Exemptions	Religious Exemptions	Invalid	Total with Certificates	Total Enrollment	Percent with Certificates
Dickinson	546	29	8	7	38	590	628	93.95%
Dubuque	1874	30	6	24	71	1934	2005	96.46%
Emmet	293	44	1	0	6	338	344	98.26%
Fayette	585	38	0	2	3	625	628	99.52%
Floyd	297	0	2	12	37	311	348	89.37%
Franklin	343	25	2	1	3	371	374	99.20%
Fremont	180	6	0	1	4	187	191	97.91%
Greene	211	19	0	4	8	234	242	96.69%
Grundy	413	38	2	0	2	453	455	99.56%
Guthrie	221	14	1	1	10	237	247	95.95%
Hamilton	391	15	2	0	5	408	413	98.79%
Hancock	239	36	0	2	20	277	297	93.27%
Hardin	518	31	2	2	7	553	560	98.75%
Harrison	190	25	0	1	0	216	216	100.00%
Henry	339	7	1	1	31	348	379	91.82%
Howard	380	15	0	5	1	400	401	99.75%
Humboldt	229	30	0	0	31	259	290	89.31%
Ida	206	19	0	0	0	225	225	100.00%
Iowa	263	26	0	2	2	291	293	99.32%
Jackson	424	0	1	9	114	434	548	79.20%
Jasper	812	118	7	5	35	942	977	96.42%
Jefferson	276	60	0	12	5	348	353	98.85%
Johnson	3270	27	12	31	408	3340	3748	89.11%
Jones	375	47	1	2	6	425	431	98.61%
Keokuk	223	14	1	1	1	239	240	99.58%
Kossuth	449	27	1	3	49	480	529	90.74%
Lee	947	39	2	6	4	994	998	99.60%
Linn	132	5	2	2	7	141	148	95.27%
Louisa	277	31	2	0	5	310	315	98.41%
Lucas	164	0	0	0	7	164	171	95.91%
Lyon	268	28	1	10	11	307	318	96.54%
Madison	334	23	1	2	0	360	360	100.00%
Mahaska	568	21	0	2	7	591	598	98.83%
Marion	769	14	5	11	125	799	924	86.47%
Marshall	743	103	1	4	29	851	880	96.70%
Mills	362	4	0	1	53	367	420	87.38%

County	Valid Certificate	Provisional	Medical Exemptions	Religious Exemptions	Invalid	Total with Certificates	Total Enrollment	Percent with Certificates
Mitchell	687	3	0	0	62	690	752	91.76%
Monona	246	18	0	3	0	267	267	100.00%
Monroe	147	8	0	3	13	158	171	92.40%
Montgomery	211	31	1	0	3	243	246	98.78%
Muscatine	1053	11	0	4	51	1068	1119	95.44%
O'Brien	402	66	2	1	9	471	480	98.13%
Osceola	135	8	0	0	0	143	143	100.00%
Page	437	1	1	2	143	441	584	75.51%
Palo Alto	360	7	0	2	0	369	369	100.00%
Plymouth	660	57	2	3	16	722	738	97.83%
Pocahontas	156	6	1	1	9	164	173	94.80%
Polk	14797	117	96	101	15111	15920	15920	94.92%
Pottawattamie	1814	29	4	6	181	1853	2034	91.10%
Poweshiek	316	1	2	2	57	321	378	84.92%
Ringgold	173	9	0	1	2	183	185	98.92%
Sac	282	16	6	1	9	305	314	97.13%
Scott	4047	208	10	110	37	4375	4412	99.16%
Shelby	267	1	3	1	32	272	304	89.47%
Sioux	865	100	3	9	133	977	1110	88.02%
Story	1805	111	4	10	18	1930	1948	99.08%
Tama	424	43	2	0	1	469	470	99.79%
Taylor	142	18	0	0	3	160	163	98.16%
Union	325	1	0	2	86	328	414	79.23%
Van Buren	120	8	0	0	5	128	133	96.24%
Wapello	749	71	0	3	64	823	887	92.78%
Warren	1060	90	7	4	33	1161	1194	97.24%
Washington	537	63	1	3	23	604	627	96.33%
Wayne	114	0	0	0	41	114	155	73.55%
Webster	1074	115	3	4	54	1196	1250	95.68%
Winnebago	125	8	1	2	7	136	143	95.10%
Winneshek	495	1	0	16	72	512	584	87.67%
Woodbury	2670	337	11	21	68	3039	3107	97.81%
Worth	104	0	0	0	0	104	104	100.00%
Wright	335	20	1	1	35	357	392	91.07%
<b>Total</b>	<b>68830</b>	<b>3158</b>	<b>285</b>	<b>571</b>	<b>4118</b>	<b>72844</b>	<b>76854</b>	<b>94.78%</b>

**Table 6:** Iowa Department of Public Health, Immunization Program  
2012 County Immunization Assessment  
2-Year-Old Coverage of Individual Vaccines and Selected Vaccination Series

County	County Population Born in 2010 Estimate <sup>1</sup>	Total Records Analyzed from IRIS <sup>2</sup>	Percent of Population in IRIS	4 DTap Coverage Percent	3 Polio Coverage Percent	1 MMR Coverage Percent	3 Hib Coverage Percent	3 Hep B Coverage Percent	1 Varicella Coverage Percent	4 PCV Coverage Percent	Up-To-Date 4-3-1-3-3-1-4 Coverage Percent <sup>3</sup>	Late Up-To-Date 4-3-1-3-3-1-4 Coverage Percent <sup>4</sup>
Adair	71	61	86	84	95	95	93	93	93	87	82	5
Adams	44	48	109	79	100	96	100	85	98	88	67	6
Allamakee	181	120	66	72	90	85	91	87	78	75	59	11
Appanoose	143	127	89	68	89	87	91	72	87	67	48	9
Audubon	54	52	96	81	92	88	92	96	88	85	77	2
Benton	312	210	67	79	94	85	91	92	83	84	74	5
Black Hawk	1,646	1,540	93	84	96	90	96	94	90	87	77	7
Boone	274	209	76	89	94	94	95	95	92	91	84	3
Bremer	227	219	97	88	95	92	94	91	91	89	82	4
Buchanan	310	238	77	82	95	91	92	90	91	86	76	5
Buena Vista	279	352	126	71	93	85	95	88	80	78	59	9
Butler	198	131	66	82	97	93	96	93	92	92	76	8
Calhoun	118	108	92	84	96	97	97	93	96	93	81	5
Carroll	276	241	87	76	95	92	96	93	91	80	71	5
Cass	167	161	96	83	94	92	93	93	92	81	79	8
Cedar	218	96	44	69	92	83	88	84	75	73	54	7
Cerro Gordo	483	472	98	78	96	93	95	92	93	78	72	12
Cherokee	144	100	69	77	95	87	94	89	86	89	67	9
Chickasaw	149	130	87	75	92	88	92	86	85	74	67	8
Clarke	110	90	82	74	96	89	92	93	86	77	68	10
Clay	178	201	113	87	96	96	96	94	93	89	84	4
Clayton	213	117	55	79	93	88	93	92	87	81	72	6
Clinton	604	444	74	77	95	89	94	94	91	85	71	11
Crawford	272	262	96	73	93	89	93	88	89	77	66	9
Dallas	1,221	315	26	78	94	87	93	88	85	81	68	10
Davis	155	88	57	59	92	85	89	84	77	63	45	11

<sup>1</sup> Source from <http://wonder.cdc.gov/bridged-race-population.html>.

<sup>2</sup> Data retrieved from Iowa's Immunization Registry Information System (IRIS) by county zip codes and with a status of Active in an organization.

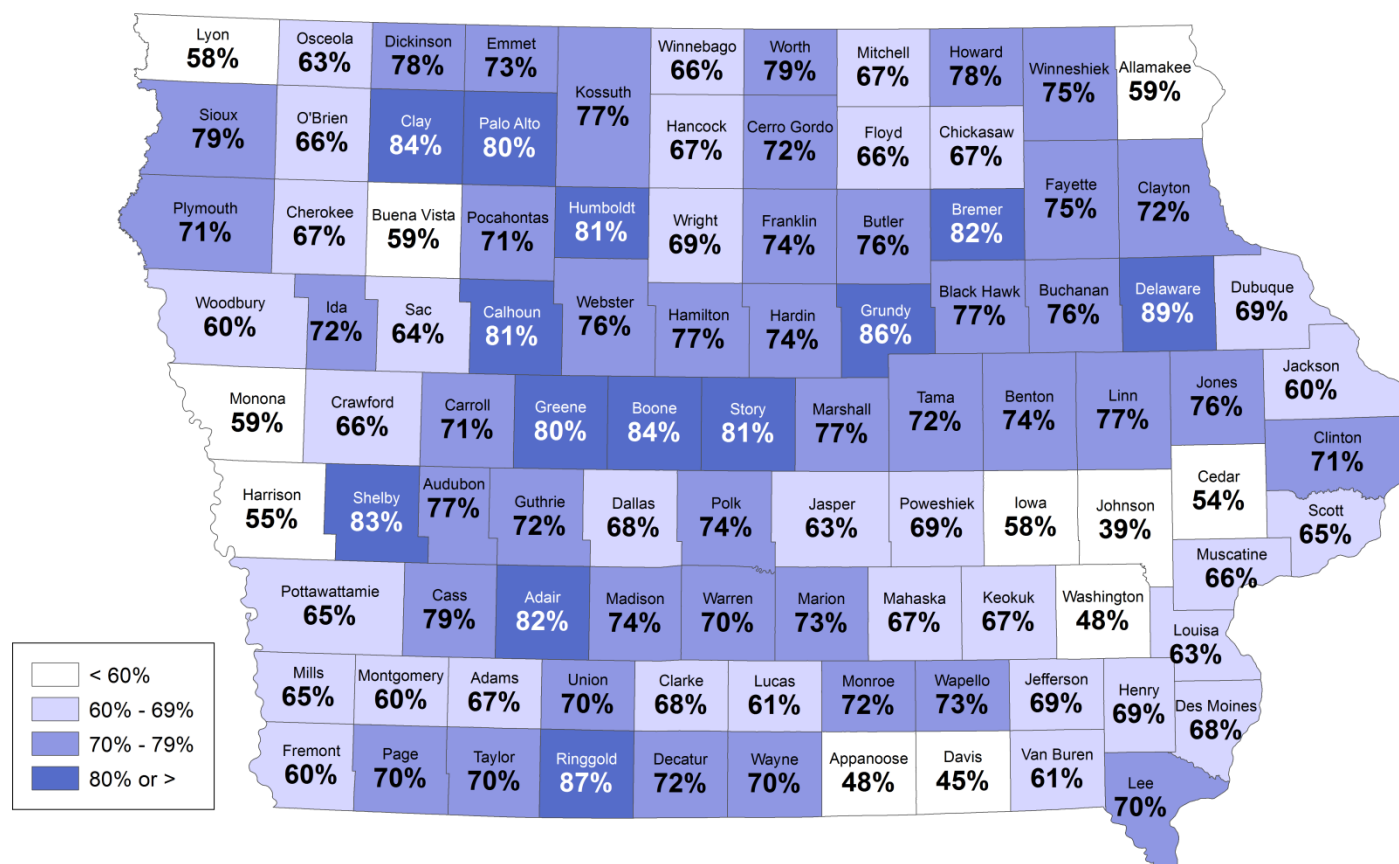
<sup>3</sup> Up-To-Date are children who have completed the 4 DTap, 3 Polio, 1 MMR, 3 Hib, 3 Hep B, 1 Varicella, 4 PCV by 24 months of age.

<sup>4</sup> Late Up-To-Date are children who have completed the 4 DTap, 3 Polio, 1 MMR, 3 Hib, 3 Hep B, 1 Varicella, 4 PCV after 24 months of age.

County	County Population Born in 2010 Estimate <sup>1</sup>	Total Records Analyzed from IRIS <sup>2</sup>	Percent of Population in IRIS	4 DTap Coverage Percent	3 Polio Coverage Percent	1 MMR Coverage Percent	3 Hib Coverage Percent	3 Hep B Coverage Percent	1 Varicella Coverage Percent	4 PCV Coverage Percent	Up-To-Date 4-3-1-3-3-1-4 Coverage Percent <sup>3</sup>	Late Up-To-Date 4-3-1-3-3-1-4 Coverage Percent <sup>4</sup>
Decatur	96	69	72	80	96	93	93	93	90	81	72	9
Delaware	190	156	82	92	96	95	95	96	94	90	89	3
Des Moines	508	416	82	73	93	91	93	91	90	83	68	7
Dickinson	141	153	109	85	95	93	95	93	90	83	78	7
Dubuque	1,165	265	23	73	90	87	88	91	85	80	69	7
Emmet	128	98	77	81	91	91	91	89	90	84	73	5
Fayette	279	177	63	83	95	88	96	92	88	86	75	3
Floyd	170	152	89	83	96	95	95	86	88	84	66	8
Franklin	131	133	102	83	95	93	96	92	94	83	74	7
Fremont	96	50	52	68	94	82	94	78	80	70	60	10
Greene	81	110	136	82	94	93	94	95	91	82	80	5
Grundy	163	110	68	88	100	95	98	97	92	93	86	5
Guthrie	131	79	60	76	94	90	91	91	87	84	72	10
Hamilton	171	127	74	86	97	92	97	93	88	91	77	5
Hancock	128	99	77	74	95	88	95	90	83	78	67	9
Hardin	182	204	112	76	94	93	91	90	90	84	74	6
Harrison	184	99	54	68	87	82	87	75	81	73	55	8
Henry	237	236	100	75	92	87	87	90	87	75	69	8
Howard	135	116	86	84	95	89	94	93	88	86	78	7
Humboldt	108	131	121	87	99	97	99	99	96	88	81	7
Ida	122	54	44	81	93	89	93	89	87	85	72	4
Iowa	190	104	55	64	89	82	85	83	74	70	58	5
Jackson	211	98	46	67	89	89	90	78	84	71	60	11
Jasper	379	279	74	69	86	87	87	84	86	71	63	8
Jefferson	132	95	72	75	93	93	93	89	91	76	69	9
Johnson	1,670	422	25	45	67	60	68	62	56	50	39	6
Jones	223	156	70	83	95	91	92	92	90	84	76	4
Keokuk	119	90	76	78	91	87	90	84	86	79	67	8
Kossuth	165	154	93	82	99	98	97	97	96	81	77	12
Lee	451	172	38	77	91	90	91	88	90	76	70	7
Linn	2,814	1,541	545	83	94	88	93	92	87	86	77	5
Louisa	113	124	110	73	96	85	93	89	85	79	63	4
Lucas	85	69	81	70	88	88	93	84	88	68	61	16
Lyon	164	105	64	68	93	87	93	90	81	70	58	10
Madison	223	167	75	81	93	92	89	89	90	83	74	4
Mahaska	274	220	80	80	93	90	95	86	89	79	67	6
Marion	450	342	76	80	95	86	93	92	89	81	73	9

County	County Population Born in 2010 Estimate <sup>1</sup>	Total Records Analyzed from IRIS <sup>2</sup>	Percent of Population in IRIS	4 DTaP Coverage Percent	3 Polio Coverage Percent	1 MMR Coverage Percent	3 Hib Coverage Percent	3 Hep B Coverage Percent	1 Varicella Coverage Percent	4 PCV Coverage Percent	Up-To-Date 4-3-1-3-3-1-4 Coverage Percent <sup>3</sup>	Late Up-To-Date 4-3-1-3-3-1-4 Coverage Percent <sup>4</sup>
Marshall	556	576	104	82	97	94	96	95	93	84	77	5
Mills	166	110	66	74	87	87	85	80	85	73	65	8
Mitchell	109	96	88	81	96	90	96	94	80	79	67	9
Monona	92	66	72	65	85	88	83	83	85	68	59	6
Monroe	95	74	78	82	97	89	95	89	89	82	72	7
Montgomery	115	120	104	65	89	87	89	88	87	71	60	13
Muscatine	592	430	73	73	93	87	90	91	83	81	66	9
O'Brien	170	177	104	71	93	93	94	92	89	72	66	12
Osceola	76	54	71	72	93	85	93	89	85	74	63	13
Page	173	135	78	76	90	90	88	86	90	81	70	6
Palo Alto	104	109	105	82	94	93	94	94	92	87	80	6
Plymouth	308	183	59	78	91	89	89	88	89	87	71	5
Pocahontas	80	55	69	76	96	89	96	91	85	80	71	5
Polk	6,446	4,069	63	80	93	89	90	92	89	81	74	8
Pottawattamie	1,307	1,069	82	74	92	86	92	82	86	79	65	6
Poweshiek	180	196	109	77	92	90	93	91	91	83	69	4
Ringgold	61	45	74	91	98	98	98	96	96	93	87	7
Sac	109	87	80	75	94	84	93	85	78	77	64	7
Scott	2,229	1,956	88	75	94	88	91	89	86	80	65	10
Shelby	150	88	59	84	98	99	95	95	98	94	83	5
Sioux	533	462	87	84	97	95	97	94	94	88	79	8
Story	899	706	79	87	96	94	96	93	93	90	81	6
Tama	192	209	109	78	96	92	95	94	90	80	72	8
Taylor	72	70	97	81	99	91	94	91	89	84	70	6
Union	180	132	73	78	95	95	95	96	89	83	70	10
Van Buren	111	75	68	67	89	87	87	89	85	68	61	12
Wapello	438	460	105	78	97	93	94	95	92	80	73	9
Warren	566	381	67	80	96	90	89	94	87	82	70	10
Washington	262	151	58	58	89	79	87	83	78	73	48	15
Wayne	79	70	89	79	86	91	93	79	91	79	70	4
Webster	439	440	100	78	96	93	96	94	92	87	76	8
Winnebago	101	97	96	76	93	88	92	89	86	73	66	9
Winneshek	199	165	83	81	96	92	93	93	91	87	75	7
Woodbury	1,505	752	50	66	89	83	89	86	84	70	60	7
Worth	75	52	69	81	94	92	94	88	90	85	79	6
Wright	163	158	97	77	98	91	98	91	90	82	69	10
<b>Total</b>	<b>39,188</b>	<b>27,379</b>	<b>70</b>	<b>78</b>	<b>93</b>	<b>89</b>	<b>92</b>	<b>90</b>	<b>88</b>	<b>81</b>	<b>71</b>	<b>7</b>

Figure 5: County Immunization Assessment Map, 2-Year-Old Coverage<sup>5</sup>



<sup>5</sup> Shows coverage for 4 DTaP, 3 Polio, 1 MMR, 3 Hib, 3 Hep B, 1 Varicella, 4 PCV vaccine series by 24 months of age.



**Table 7:** Iowa Department of Public Health, Immunization Program  
2012 County Adolescent Immunization Assessment  
13-15-Year-Old Coverage of Individual Vaccines and Selected Vaccination Series

County	County Population 2009 Estimate <sup>6</sup>	Total Records Analyzed from IRIS <sup>7</sup>	Percent of Population in IRIS	3 Hep B Coverage Percent	1 Meningitis Coverage Percent	2 MMR Coverage Percent	1 Td Coverage Percent	1 Tdap Coverage Percent	2 Varicella Coverage Percent	Up-to-Date 3-1-2-1-2 Coverage Percent <sup>8</sup>	13- to 15-Yr-Old Female Records	3 HPV Female Coverage Percent
Adair	302	218	72	94	59	90	1	72	64	45	113	35
Adams	144	108	75	76	28	76	3	33	3	17	49	35
Allamakee	526	582	111	86	31	83	2	38	39	17	282	13
Appanoose	437	359	82	67	24	67	1	45	21	12	168	23
Audubon	248	211	85	93	42	91	2	65	46	33	101	27
Benton	1094	927	85	8	59	84	1	68	58	40	415	32
Black Hawk	4512	4677	104	90	71	91	1	72	67	53	2245	38
Boone	1156	925	80	84	69	83	1	71	52	42	445	30
Bremer	907	782	86	76	60	76	3	64	47	29	367	31
Buchanan	910	881	97	89	63	92	1	76	68	51	397	31
Buena Vista	803	857	107	87	35	86	3	48	42	20	407	16
Butler	572	513	90	79	55	81	2	65	54	31	257	35
Calhoun	338	348	103	84	55	79	0	71	29	17	192	17
Carroll	837	831	99	81	37	77	0	62	22	11	399	14
Cass	462	548	119	95	64	91	1	71	68	56	282	32
Cedar	749	490	65	75	47	79	1	68	40	22	243	33
Cerro Gordo	1600	1509	94	92	68	85	1	76	63	52	731	31
Cherokee	433	397	92	92	64	92	0	65	62	46	196	37
Chickasaw	469	418	89	87	55	88	1	75	51	33	196	29
Clarke	356	346	97	83	56	83	0	57	45	32	167	24
Clay	631	587	93	90	38	80	1	46	28	16	287	13
Clayton	716	496	69	77	23	67	1	64	29	13	227	11
Clinton	1955	1439	74	87	36	84	0	61	35	23	673	15
Crawford	755	631	84	87	47	84	3	68	52	33	278	28
Dallas	3177	1614	51	79	60	80	2	66	49	34	709	22
Davis	466	280	60	86	18	85	0	32	22	12	152	8

<sup>6</sup> Source from <http://wonder.cdc.gov/bridged-race-population.html>.

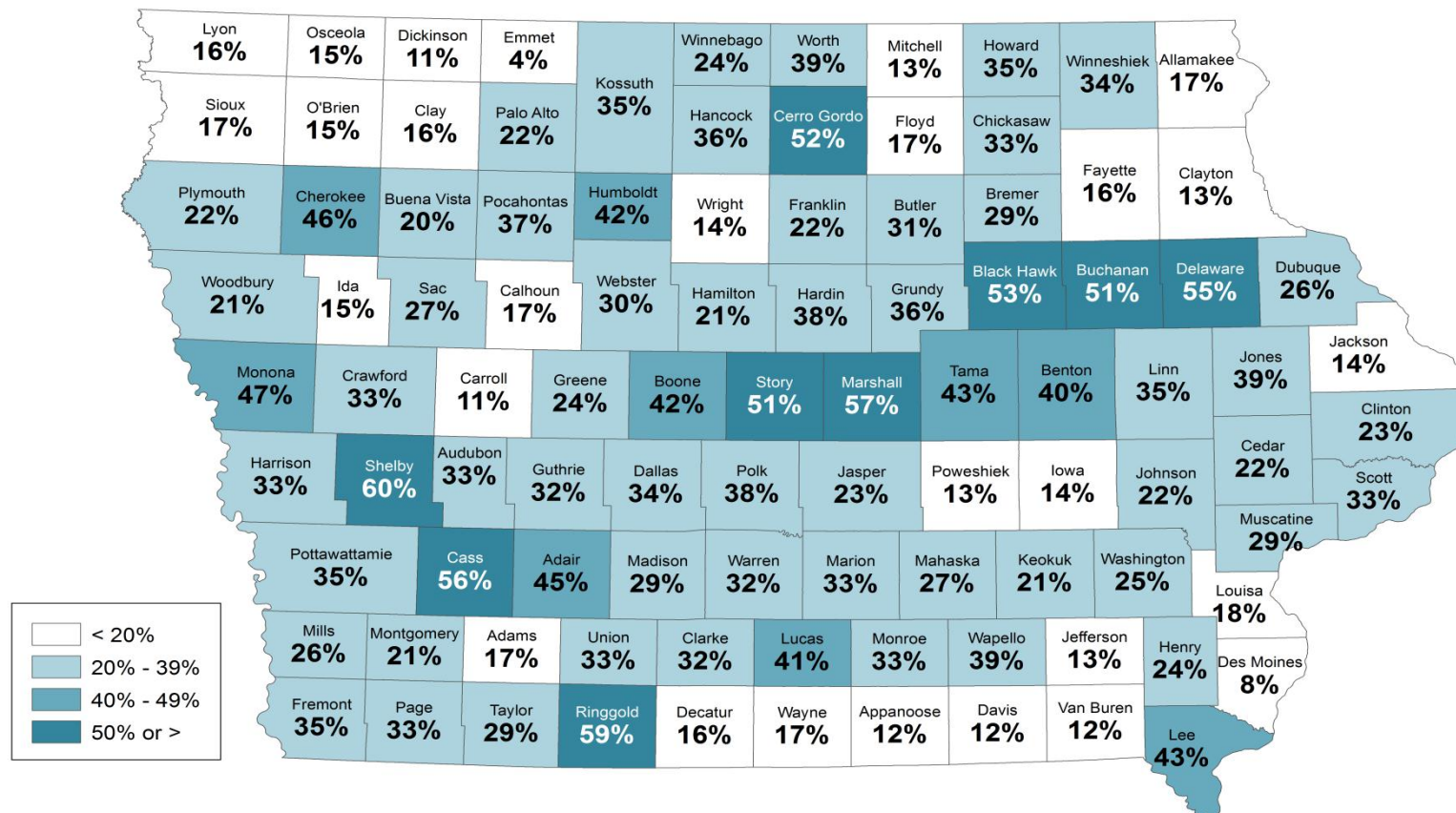
<sup>7</sup> Data retrieved from Iowa's Immunization Registry Information System (IRIS) by county zip codes and with a status of Active in an organization.

<sup>8</sup> "Up-to-Date" refers to adolescents 13- to 15-year-olds that have completed the 3 Hep B, 1 Meng, 2 MMR, 1 Td or Tdap, 2 Varicella series.

County	County Population 2009 Estimate <sup>6</sup>	Total Records Analyzed from IRIS <sup>7</sup>	Percent of Population in IRIS	3 Hep B Coverage Percent	1 Meningitis Coverage Percent	2 MMR Coverage Percent	1 Td Coverage Percent	1 Tdap Coverage Percent	2 Varicella Coverage Percent	Up-to-Date 3-1-2-1-2 Coverage Percent <sup>8</sup>	13- to 15-Yr-Old Female Records	3 HPV Female Coverage Percent
Decatur	301	237	79	90	32	86	2	38	22	16	120	14
Delaware	778	616	79	92	65	91	0	76	76	55	325	35
Des Moines	1559	1448	93	90	13	83	1	55	38	8	720	13
Dickinson	555	573	10	97	26	94	1	30	19	11	265	13
Dubuque	3765	986	26	81	36	75	2	38	40	26	470	18
Emmet	362	233	64	80	28	60	2	46	11	4	115	26
Fayette	820	718	88	89	28	87	1	70	44	16	324	21
Floyd	621	527	85	83	34	68	1	47	29	17	270	15
Franklin	412	341	83	78	35	78	0	66	43	22	170	28
Fremont	274	209	76	79	54	82	0	59	55	35	97	24
Greene	399	368	92	86	47	84	2	63	36	24	163	28
Grundy	498	388	78	80	54	80	1	72	51	36	196	24
Guthrie	469	456	97	88	48	87	4	67	51	32	209	20
Hamilton	694	633	91	93	38	94	1	48	33	21	326	22
Hancock	463	442	96	93	53	92	2	71	56	36	195	24
Hardin	646	620	96	82	61	85	0	76	56	38	289	31
Harrison	563	418	74	76	67	68	1	66	44	33	203	37
Henry	858	742	87	92	37	89	1	54	48	24	359	15
Howard	387	383	99	79	56	77	1	76	48	35	185	28
Humboldt	379	390	103	89	60	87	2	68	55	42	184	30
Ida	289	199	69	85	30	82	2	35	32	15	91	19
Iowa	693	376	54	83	35	80	1	62	31	14	167	22
Jackson	805	233	29	77	32	72	1	5	33	14	113	20
Jasper	1394	808	58	64	50	60	1	62	34	23	385	17
Jefferson	536	346	65	77	23	68	2	36	19	13	163	12
Johnson	3978	1884	47	74	41	70	1	50	43	22	866	19
Jones	763	628	82	78	69	76	1	73	49	39	306	17
Keokuk	422	305	72	73	45	69	0	55	36	21	16	21
Kossuth	581	589	101	96	50	93	1	58	60	35	289	18
Lee	1336	803	60	89	54	85	1	67	59	43	392	31
Linn	8783	6771	77	80	57	77	1	65	46	35	3160	23
Louisa	536	426	80	85	30	84	0	47	34	18	210	19
Lucas	391	241	62	81	62	78	0	68	54	41	124	30
Lyon	517	393	76	75	33	72	1	53	37	16	191	12
Madison	763	687	90	77	53	73	2	70	48	29	323	24
Mahaska	898	542	60	73	57	66	0	67	36	27	257	21
Marion	1379	1203	87	82	57	78	1	70	45	33	568	17

County	County Population 2009 Estimate <sup>6</sup>	Total Records Analyzed from IRIS <sup>7</sup>	Percent of Population in IRIS	3 Hep B Coverage Percent	1 Meningitis Coverage Percent	2 MMR Coverage Percent	1 Td Coverage Percent	1 Tdap Coverage Percent	2 Varicella Coverage Percent	Up-to-Date 3-1-2-1-2 Coverage Percent <sup>8</sup>	13- to 15-Yr- Old Female Records	3 HPV Female Coverage Percent
Marshall	1661	1757	106	96	71	93	1	69	70	57	818	37
Mills	696	417	60	54	52	55	0	55	35	26	212	28
Mitchell	444	322	73	62	56	67	1	75	18	13	160	30
Monona	365	318	87	92	60	90	1	65	72	47	151	36
Monroe	321	226	70	72	61	71	0	82	58	33	88	33
Montgomery	454	335	74	76	60	68	1	64	30	21	171	29
Muscatine	1854	1044	56	76	49	6	1	55	46	29	507	21
O'Brien	552	512	93	88	48	85	1	53	32	15	242	31
Osceola	255	246	97	91	28	79	0	32	25	15	125	14
Page	622	553	89	80	64	81	1	59	56	33	275	25
Palo Alto	321	339	106	91	33	89	1	60	43	22	156	16
Plymouth	1132	818	72	87	34	80	0	48	38	22	362	20
Pocahontas	241	241	100	88	62	85	1	68	49	37	117	29
Polk	17801	15826	89	78	63	77	2	66	52	38	7564	24
Pottawattamie	3664	2709	74	72	60	71	0	64	50	35	1343	35
Poweshiek	676	551	82	85	32	84	0	55	22	13	244	16
Ringgold	210	182	87	95	70	93	1	76	71	59	88	40
Sac	402	327	81	85	45	81	2	61	45	27	160	26
Scott	6755	6176	91	77	48	74	1	64	46	33	2952	23
Shelby	503	551	110	97	74	92	1	76	69	60	261	34
Sioux	1429	1308	92	80	31	78	2	44	35	17	628	9
Story	2435	2388	98	85	66	81	1	73	61	51	1137	26
Tama	806	719	89	85	66	87	1	69	60	43	326	35
Taylor	263	231	88	88	49	84	1	56	48	29	118	35
Union	497	489	98	89	49	84	1	50	52	33	260	27
Van Buren	287	238	83	86	21	83	2	42	37	12	127	20
Wapello	1298	1284	99	77	59	76	1	63	52	39	631	26
Warren	2208	1922	87	72	57	76	1	71	48	32	878	24
Washington	922	642	70	85	43	80	3	45	48	25	291	24
Wayne	215	125	58	72	36	69	1	63	36	17	66	24
Webster	1417	1489	105	87	53	88		43	58	30	719	25
Winnebago	426	332	78	77	36	68	0	62	35	24	153	12
Winneshiek	748	676	90	88	47	84	1	73	53	34	334	27
Woodbury	4393	3232	74	83	32	72	1	33	30	21	1573	20
Worth	330	245	74	89	60	81	1	78	54	39	126	36
Wright	492	479	97	84	36	83	1	53	30	14	244	26
<b>Total</b>	<b>120,517</b>	<b>97,385</b>	<b>81</b>	<b>82</b>	<b>53</b>	<b>79</b>	<b>1</b>	<b>62</b>	<b>48</b>	<b>33</b>	<b>46,538</b>	<b>24</b>

**Figure 6: County Immunization Assessment Map, 13- to 15-Year-Old Coverage<sup>9</sup>**



<sup>9</sup> Shows coverage for 3 Hep B, 1 Meningitis, 2 MMR, 1 Td or Tdap and 2 Varicella vaccine series.

## Appendix A: Immunization Program Directory

### Immunization Program Directory

[www.idph.state.ia.us/ImmTb/immunization.aspx](http://www.idph.state.ia.us/ImmTb/immunization.aspx)

Phone: 1-800-831-6293

Fax: 1-800-831-6292

Don Callaghan	Bureau Chief	515-281-7301	<a href="mailto:Donald.Callaghan@idph.iowa.gov">Donald.Callaghan@idph.iowa.gov</a>
Bethany Kintigh	Immunization Program Manager	515-281-7228	<a href="mailto:Bethany.Kintigh@idph.iowa.gov">Bethany.Kintigh@idph.iowa.gov</a>
Sharon Kasper	VFC/AFIX Manager	515-725-2081	<a href="mailto:Sharon.Kasper@idph.iowa.gov">Sharon.Kasper@idph.iowa.gov</a>
Becky Danilson	Program Secretary	515-281-4923	<a href="mailto:Rebecca.Danilson@idph.iowa.gov">Rebecca.Danilson@idph.iowa.gov</a>
Kelli Smith	Nurse Consultant/Hepatitis B Program Coordinator	515-281-4938	<a href="mailto:Kelli.Smith@idph.iowa.gov">Kelli.Smith@idph.iowa.gov</a>
Marnell Kretschmer	CDC Public Health Advisor	515-281-4917	<a href="mailto:Marnell.Kretschmer@idph.iowa.gov">Marnell.Kretschmer@idph.iowa.gov</a>
Rose Anthony	Immunization Services Contracts/Fiscal Liaison	515-281-5424	<a href="mailto:Rose.Anthony@idph.iowa.gov">Rose.Anthony@idph.iowa.gov</a>
<b>IRIS Help Desk 800-374-3958</b>			
Kim Tichy	IRIS Coordinator	515-281-4288	<a href="mailto:Kimberly.Tichy@idph.iowa.gov">Kimberly.Tichy@idph.iowa.gov</a>
Tory King	IRIS Help Desk Staff	515-281-7992	<a href="mailto:Tory.King@idph.iowa.gov">Tory.King@idph.iowa.gov</a>
Cindy Oliver	IRIS Help Desk Staff	515-281-6983	<a href="mailto:Cindy.Oliver@idph.iowa.gov">Cindy.Oliver@idph.iowa.gov</a>
<b>Vaccine for Children Program</b>			
Tina Patterson	VFC Program Coordinator	515-281-7053	<a href="mailto:Tina.Patterson@idph.iowa.gov">Tina.Patterson@idph.iowa.gov</a>
Janean Iddings	Vaccine Distribution Coordinator	515-281-7787	<a href="mailto:Janean.Iddings@idph.iowa.gov">Janean.Iddings@idph.iowa.gov</a>
<b>Immunization Assessments</b>			
Kelly Rooney-Kozak	Assessments/Adolescent Program Coordinator	515-281-0916	<a href="mailto:Kelly.Rooney-Kozak@idph.iowa.gov">Kelly.Rooney-Kozak@idph.iowa.gov</a>
Sharon Monroe	Assessments/Nurse Consultant	515-473-2473	<a href="mailto:Sharon.Monroe@idph.iowa.gov">Sharon.Monroe@idph.iowa.gov</a>
Alison Van De Pol	Assessments/Nurse Consultant	515-494-4442	<a href="mailto:Alison.Monsma@idph.iowa.gov">Alison.Monsma@idph.iowa.gov</a>
John Fiedler	Assessments/Nurse Consultant	515-954-9859	<a href="mailto:John.Fiedler@idph.iowa.gov">John.Fiedler@idph.iowa.gov</a>