

**NEVADA STATE BOARD OF
PHARMACY**

**IMMUNIZATION
REPORT**

April 1, 2012 – March 31, 2013

NEVADA STATE BOARD OF PHARMACY
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INTRODUCTION

A copy of this report is available from the Board of Pharmacy on request.

This report, mandated by Nevada Revised Statute (NRS) 639.065, will look at Nevada's immunization levels compared to national levels and review current administrative code changes to improve the health of the people of Nevada by improving access to pharmacists who provide immunizations and by expanding the role of pharmacists in administering immunizations under physician protocol.

NRS 639.065 Annual report concerning immunizations administered by pharmacists.

The Board shall prepare an annual report concerning immunizations administered by pharmacists that includes, without limitation, the number of immunizations which were administered by pharmacists during the previous year, any problems or complaints reported to the Board concerning immunizations administered by pharmacists, and any other information that the Board determines would be useful in determining whether pharmacists should continue to administer immunizations in the State. The report must be available for public inspection during regular business hours at the office of the Board. (Added to NRS by 1999, 2722)

Nevada remains one of least immunized states in the nation. The Nevada State Board of Pharmacy authorizes pharmacists with the proper training to administer vaccinations to patients.

NRS 454.213 addresses a pharmacist's authority to possess and administer dangerous drugs. [Effective January 1, 2008.]

18. In accordance with applicable regulations of the Board, a registered pharmacist who:
 - (a) Is trained in and certified to carry out standards and practices for immunization programs;
 - (b) Is authorized to administer immunizations pursuant to written protocols from a physician; and
 - (c) Administers immunizations in compliance with the "Standards of Immunization Practices" recommended and approved by the United States Public Health Service Advisory Committee on Immunization Practices.

THE STATE OF IMMUNIZATIONS IN THE STATE OF NEVADA

**National Vaccination Coverage among Children Aged 19--35 Months
Nevada and United States, 2011**

**Estimated Vaccination Coverage* with Individual Vaccines and Selected Vaccination Series
Among Children 19-35 Months of Age by State and Local Area
US, National Immunization Survey, Q1/2011-Q4/2011†**

United States vs. Nevada data

3+DTaP¥	4+DTaP‡	3+Polio§	1+MMR 	3+Hib¶	Hib-PS**
95.5±0.5	84.6±1.0	93.9±0.6	91.6±0.8	94.0±0.6	94.2±0.6
94.6±3.9	75.2±8.0	94.8±3.6	90.5±4.6	94.8±3.6	94.8±3.6
Hib-FS††	3+HepB‡‡	Hep B Birth dose§§	1+Varl l	3+PCV¶¶¶	4+PCV***
80.4±1.1	91.1±0.7	68.6±1.3	90.8±0.7	93.6±0.6	84.4±1.0
77.3±7.7	89.9±5.0	65.2±8.8	88.2±5.3	94.1±3.9	78.9±7.5
1+HepA#	2+HepA†††	Rotavirus‡‡‡	4:3:1§§§	4:3:1:3 l l	(4:3:1:2*)¶¶¶¶
81.2±1.0	52.2±1.4	67.3±1.3	82.6±1.0	81.9±1.0	81.9±1.0
86.5±6.5	52.8±8.9	56.6±9.0	72.7±8.1	72.5±8.1	72.5±8.1
(4:3:1:3*)****	4:3:1:3:3:1€	4:3:1:-:3:1ç	4:3:1:2*:3:1€€	4:3:1:3*:3:1çç	4:3:1:3:3:1:4€€€
75.4±1.2	77.0±1.1	77.6±1.1	77.0±1.1	71.0±1.2	73.3±1.2
70.1±8.3	66.7±8.5	66.9±8.5	66.7±8.5	65.4±8.5	65.8±8.5
4:3:1:-:3:1:4ççç	4:3:1:2*:3:1:4€€€€	4:3:1:3*:3:1:4çççç			
73.6±1.2	73.3±1.2	68.5±1.3			
66.0±8.5	65.8±8.5	64.7±8.5			

* Estimate=NA (Not Available) if the unweighted sample size for the denominator was <30 or (CI half width)/Estimate > 0.588 or (CI half width) >10.

Estimates presented as point estimate (%) ± 95% Confidence Interval.

† Children in the Q1/2011-Q4/2011 National Immunization Survey were born from January 2008 through May 2010.

¥ 3 or more doses of any diphtheria and tetanus toxoids and pertussis vaccines including diphtheria and tetanus toxoids, and any acellular pertussis vaccine (DTaP/DTP/DT).

‡ 4 or more doses of DTaP.

§ 3 or more doses of any poliovirus vaccine.

|| 1 or more doses of measles-mumps-rubella vaccine.

¶ 3 or more doses of Haemophilus influenzae type b (Hib) vaccine.

** Primary series Hib: ≥2 or ≥3 doses of Haemophilus influenzae type b (Hib), depending on brand type.

†† Full series Hib: ≥3 or ≥4 doses of Hib vaccine depending on product type received (includes primary series plus the booster dose).
‡‡ 3 or more doses of hepatitis B vaccine.
§§ 1 or more doses of hepatitis B vaccine administered between birth and age 3 days.
1 or more doses of varicella at or after child's first birthday, unadjusted for history of varicella illness.
¶¶ 3 or more doses of pneumococcal conjugate vaccine (PCV).
*** 4 or more doses of PCV.
1 or more doses of hepatitis A vaccine
††† 2 or more doses of hepatitis A vaccine.
‡‡‡ ≥2 or ≥3 doses of Rotavirus vaccine, depending on product type received (≥2 doses for Rotarix® [RV1] or ≥3 doses for RotaTeq® [RV5]).
§§§ 4 or more doses of DTaP, 3 or more doses of poliovirus vaccine, and 1 or more doses of any MMR vaccine.
4:3:1 plus 3 or more doses of Hib vaccine of any type.
¶¶¶ 4:3:1 plus the primary series Hib.
**** 4:3:1 plus the full series Hib.
€ 4:3:1 plus 3 or more doses of Hib vaccine of any type, 3 or more doses of HepB vaccine, and 1 or more doses of varicella vaccine.
ç 4:3:1 plus 3 or more doses of HepB vaccine and 1 or more doses of varicella vaccine. Hib vaccine is excluded.
€€ 4:3:1 plus primary series of Hib vaccine, 3 or more doses of HepB vaccine, and 1 or more doses of varicella vaccine.
çç 4:3:1 plus full series of Hib vaccine, 3 or more doses of HepB vaccine, and 1 or more doses of varicella vaccine.
€€€ 4:3:1 plus ≥3 doses of Hib vaccine of any type, 3 or more doses of HepB, 1 or more doses of varicella vaccine, and 4 or more doses of PCV.
ççç 4:3:1 plus 3 or more doses of HepB vaccine, 1 or more doses of varicella vaccine, and 4 or more doses of PCV. Hib vaccine is excluded.
€€€€ 4:3:1 plus primary series Hib vaccine, 3 or more doses of HepB, 1 or more doses of varicella vaccine, and 4 or more doses of PCV.
çççç 4:3:1 plus full series Hib vaccine, 3 or more doses of HepB, 1 or more doses of varicella vaccine, and 4 or more doses of PCV.

Coverage with Individual Vaccines and Vaccination Series

-  Excel file
-  PDF file

By State and Local area (includes birth dose of HepB and 2+doses Hep A)

-  Excel file
-  PDF file

By State (includes birth dose of HepB and 2+doses Hep A)

**Difference
Difference Between (Q1/2011-Q4/2011) - (Q1/2010-Q4/2010) Year's Estimates**

-  Excel file
-  PDF file

Difference in estimated coverage levels over one year period

Urbanicity Vaccination Coverage Levels by Urbanicity

-  Excel file
-  PDF file

Living in a MSA Central City by State and Local Area

-  Excel file
-  PDF file

Living in a MSA Non Central City by State and Local Area

-  Excel file
-  PDF file

Living in a Non MSA Central City by State and Local Area

**Race/Ethnicity
Vaccine - Specific Coverage Levels by Race/Ethnicity and Poverty Level**

-  Excel file
-  PDF file

3+DTaP by State and Local Area

 Excel file

 PDF file

4+DTaP by State and Local Area

 Excel file

 PDF file

3+Polio by State and Local Area

 Excel file

 PDF file

1+MMR by State and Local Area

 Excel file

 PDF file

Primary Series of Hib by State and Local Area

 Excel file

 PDF file

Full Series Hib by State and Local Area

 Excel file

 PDF file

3+HepB by State and Local Area

 Excel file

 PDF file

Hep B Birth Dose by State and Local Area

 Excel file

 PDF file

1+Varicella by State and Local Area

 Excel file

 PDF file

3+PCV by State and Local Area

 Excel file

 PDF file

4+PCV by State and Local Area

 Excel file

 PDF file

1+HepA by State and Local Area

 Excel file

 PDF file

2+HepA by State and Local Area

 Excel file

 PDF file

Rotavirus by State and Local Area

 Excel file

 PDF file

4:3:1 by State and Local Area

 Excel file

 PDF file

4:3:1:3 Primary Series by State and Local Area

 Excel file

 PDF file

4:3:1:4 Full Series by State and Local Area

 Excel file

 PDF file

4:3:1:0:3:1 by State and Local Area

 Excel file

 PDF file

4:3:1:3:3:1-PS by State and Local Area

 Excel file

 PDF file

4:3:1:4:3:1-FS by State and Local Area

 Excel file

 PDF file

4:3:1:0:3:1:4 by State and Local Area

 Excel file

 PDF file

4:3:1:3:3:1:4 Primary Series by State and Local Area

 Excel file

 PDF file

4:3:1:4:3:1:4 Full Series by State and Local Area

 Excel file

 PDF file

National Coverage by Race/Ethnicity

 Excel file

 PDF file

National Coverage by Poverty Level and Race/Ethnicity

Facility and VFC

Coverage by Provider Characteristics (Facility Type and VFC participation)

 Excel file

 PDF file

National Coverage by Provider Facility Type

 Excel file

 PDF file

3+DTaP by Provider Facility Type

 Excel file

 PDF file

4+DTaP by Provider Facility Type

 Excel file

 PDF file

3+Polio by Provider Facility Type

 Excel file

 PDF file

1+MMR by Provider Facility Type

 Excel file

 PDF file

Hib-PS by Provider Facility Type

 Excel file

 PDF file

Hib-FS by Provider Facility Type

 Excel file

 PDF file

HepB by Provider Facility Type

 Excel file

 PDF file

Hep B Birth dose by Provider Facility Type

 Excel file

 PDF file

1+Varicella by Provider Facility Type

 Excel file

 PDF file

3+PCV by Provider Facility Type

 Excel file

 PDF file

4+PCV by Provider Facility Type

 Excel file

 PDF file

2+HepA by Provider Facility Type

 Excel file

 PDF file

Rotavirus by Provider Facility Type

 Excel file

 PDF file

4:3:1 by Provider Facility Type

 Excel file

 PDF file

4:3:1:3-PS by Provider Facility Type

 Excel file

 PDF file

4:3:1:4-FS by Provider Facility Type

 Excel file

 PDF file

4:3:1:0:3:1 by Provider Facility Type

 Excel file

 PDF file

4:3:1:3:3:1-PS by Provider Facility Type

 Excel file

 PDF file

4:3:1:4:3:1-FS by Provider Facility Type

 Excel file

 PDF file

4:3:1:0:3:1:4 by Provider Facility Type

 Excel file

 PDF file

4:3:1:3:3:1:4-PS by Provider Facility Type

 Excel file

 PDF file

4:3:1:4:3:1:4-FS by Provider Facility Type

 Excel file

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Participating in Vaccines for Children (VFC) Program by State and Local area

 Excel file

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Not Participating in VFC by State and Local Area

**Demographics
Selected Socio-Demographics**

 Excel file

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Socio-Demographics: Poverty, Provider Type, Race, MSA, and VFC eligibility

Table data can be found at: http://www.cdc.gov/vaccines/stats-surv/nis/data/tables_2011.htm

**Vaccine-Preventable Diseases
ACIP: Advisory Committee on Immunization Practices**

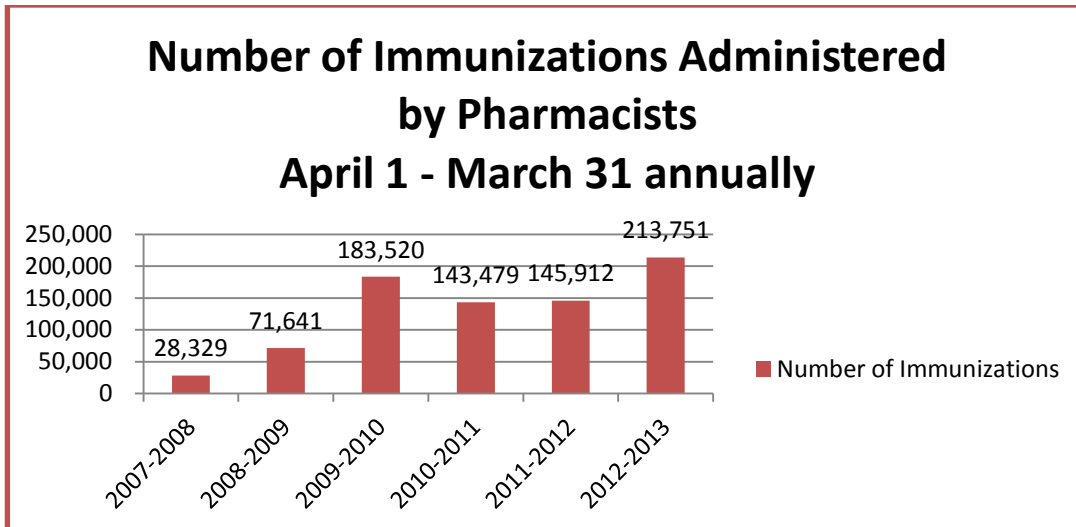
Anthrax Cervical Cancer Diphtheria Hepatitis A Hepatitis B Haemophilus influenzae type b (Hib) Human Papillomavirus (HPV) H1N1 Flu (Swine Flu) Influenza (Seasonal Flu)	Japanese Encephalitis (JE) Lyme Disease Measles Meningococcal Monkeypox Mumps Pertussis (Whooping Cough) Pneumococcal Poliomyelitis (Polio)	Rabies Rotavirus Rubella (German Measles) Shingles (Herpes Zoster) Smallpox Tetanus (Lockjaw) Tuberculosis Typhoid Fever Varicella (Chickenpox)	Yellow Fever
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Table Data can be found at: <http://www.cdc.gov/vaccines/vpd-vac/default.htm>

PHARMACIST ADMINISTERED IMMUNIZATIONS

The following table is the most accurate data available on immunizations administered by pharmacists in the time frame of this report (April 1, 2012– March 31, 2013).

Vaccines	Administered
Diphtheria	12
Hepatitis A	259
Hepatitis B	345
[Hepatitis A Inactivated & Hepatitis B (Recombinant) Vaccine] TWINRIX [®]	129
Herpes Zoster (shingles)	17,101
HIB (Haemophilus influenza type b)	1
HPV (Human Papillomavirus)	236
Influenza(includes nasal)	181,864
Japanese encephalitis (JE)	0
Measles Mumps Rubella (MMR)	184
Meningococcal diseases	428
Pneumococcal diseases	7,351
Polio Vaccine (IPV)	7
Rabies (Imovax/Rabavert)	4
Rotavirus	0
Rubella	0
Smallpox	0
Tetanus	20
Tetanus/Diphtheria Td	14
Tetanus-Diphtheria-Pertussis Tdap Tdap	5,402
Typhoid (oral/injectable)	195
Varicella (chickenpox)	191
Yellow Fever	0
Other	8
Total doses administered	213,751



Note: In the 2009-2010 flu season, the H1N1 vaccine was a separate vaccine from the seasonal influenza vaccine.

ADVERSE DRUG REACTIONS

Less than a dozen adverse reactions were reported by patients to pharmacies. These adverse reactions are based on patient reporting only, not from health care practitioners who may have seen the patient after administration of the vaccine.

- Flu Vaccine (4)
 - Needle did not retract. Twelve days later patient returned to pharmacy complaining of inflammation and pain. The patient stated the practitioner had diagnosed bursitis in the shoulder.
 - Patient had no allergies or history of adverse reactions to eggs. Patient called several hours after administration and complained of dizziness. Patient was recommended to, and did go, to the Emergency Room where a diagnosis of a potential allergic reaction was given.
 - Patient received High Dose Flu vaccine. Patient reported symptoms of an allergic response resulting in hospitalization with throat closing up and heart palpitations. Patient was released and will see her doctor.
 - Patient came in to have the Zostavax Vaccine administered. The patient stated that the patient was administered the Flu Vaccine and was on antibiotics for cellulitis. Patient stated his doctor had told the patient the vaccine was administered in the wrong area.
- Flu Vaccine/Pneumonia Vaccine (2)
 - Patient received both the Flu and Pneumonia vaccine. Patient had gone to her doctor and stated she had “extensive infection” in her arm. There was a bruise at the site of injection.

- Patient received both the Flu and Pneumonia vaccine. Patient reported numbness and tingling pain in the left arm, and a blue discoloration of one finger a day later. Patient was referred to her doctor.
- Pneumonia Vaccine (3)
 - Patient's spouse called to say the patient had a swollen arm radiating to the neck, but no shortness of breath. The patient was referred to the patient's health care practitioner.
 - Patient had swollen arm a day after administration of vaccine. Patient was referred to patient's health care practitioner.
 - Nurse from a hospital called about a patient who had been administered Pneumonia vaccine. The patient had a swollen arm and fever approximately two hours after the administration of the vaccine. The patient subsequently went to the emergency room. A diagnosis after admission to a hospital Intensive Care Unit was an auto-immune disease. The patient is in rehabilitation with paralysis on one side of the body.
- Gardasil Vaccine
 - Patient received several administrations. When the Gardasil was administered, the patient passed out. The pharmacy called 911. The patient was asked by the paramedics and the patient denied having a history of seizures or diabetes. The parent of the patient stated the lightheadedness was most likely due to anxiety.
- Zostavax Vaccine
 - Patient had a red swollen arm with burning and an itching sensation. Center of injection site is reddish purple.

CENTRALIZED RECORDKEEPING

LCB file R115-08 adopted by the Board made changes to reporting requirements under NAC 639.2976. These changes simplified the reporting requirements, requiring only reporting to the Immunization Information System established by the Department of Health and Human Services.

This data may be entered electronically directly into WebIZ or manually through the use of a written form. In addition to mandatory reporting as of July 1, 2009, all providers must give both children and adults a form that explains the purpose of the registry and allows them to opt-out of inclusion in the registry.

NRS 439.265: Reporting vaccinations to Nevada WebIZ

Effective January 28, 2010 all ACIP recommended vaccinations administered to children and adults must be recorded in Nevada WebIZ. This means that patients of all ages who receive a vaccination must be entered in Nevada WebIZ. Some providers have thought that the law only applies to VFC (Vaccines for Children) vaccines. The law requires entry for all vaccines, regardless of purchase method.

Individuals may “opt-out” by completing the Participation Form, and the provider must mail or fax the form to the WebIZ program.

Go to the “Reports/Forms” page in Nevada WebIZ to download and study the new regulations, forms and instructions.

http://health.nv.gov/Immunization_WebIZ_Policies_Forms.htm

Registry Regulation Instructions

http://health.nv.gov/PDFs/Immunizations/2010WebIZ/RegistryRegInstructions_Flowchart2010.pdf

IMMUNIZATION CHANGES/RECOMMENDATIONS

Advisory Committee for Immunization Practices (ACIP) updated recommendations can be found at: <http://www.cdc.gov/vaccines/pubs/ACIP-list.htm>

Nevada State Health Division Technical Bulletin

Summary of Nevada Immunization Requirements for Public and Private School Attendance Bureau/Program: Bureau of Child, Family and Community Wellness/Immunization Program
Bulletin #: BCFCW-IZ-03-11

Date: June 1, 2011

To: Immunization Providers, School Nurses, County Health Officers, School District Administrators, Boards of Trustees of School Districts, and Private School Officials

Contact: Erin Seward (775) 684-3209

The new immunization requirements will go into effect for all K-12 students new to the school districts beginning with the 2011-2012 school year.

Changes going into effect are:

- ☑ Polio Vaccine - 1 dose of Polio Vaccine is required after the child’s 4th birthday. If a 4th dose is provided prior to the 4th birthday, it is invalid.
- ☑ Varicella Vaccine - Second dose of Varicella is required.
- ☑ These new requirements are for children new to a school district. This includes children enrolling in school for the first time (kindergarten) and children who have moved from a different school district (within Nevada and to Nevada).

- ☒ ACIP’s recommended ages and intervals between doses of routinely recommended vaccines are required for school entry.
 - ☒ Utilize ACIP’s recommended minimum age and intervals when a child is behind on required immunizations.
 - ☒ Doses are only valid if they follow the ACIP’s recommended ages and intervals (for “on time” or “behind” children).
 - ☒ A medical exemption requires a contraindication or precaution to the receipt of a given vaccine.
- Prior to administering any vaccine, review and understand the complete manufacturer literature.

CONCLUSION

In addition to increasing accessibility, and with the changing recommendations increasing the number of individuals who should be immunized, the burden on other healthcare professionals is reduced by allowing and encouraging pharmacists to participate in immunization administration. As changes are made to NRS 439.265 and NAC 639.297, healthcare providers administering immunizations must be aware of new or updated recordkeeping requirements as well as changes with regard to the current recommended age and other requirements for vaccines the healthcare provider administers.

Website Information:

CDC :

Immunization schedules

<http://www.cdc.gov/vaccines/schedules/index.html>

Advisory Committee for Immunization Practices (ACIP) Recommendations

<http://www.cdc.gov/vaccines/pubs/ACIP-list.htm>

Nevada State Health Division: WebIZ contact information

http://health.nv.gov/Immunization_ContactUs.htm#WebIZContact

Nevada Immunization Coalition

<http://www.immunizenevada.com>