



Vaccine Coverage 2019

Vermont Immunization Registry Annual Report

September 2020

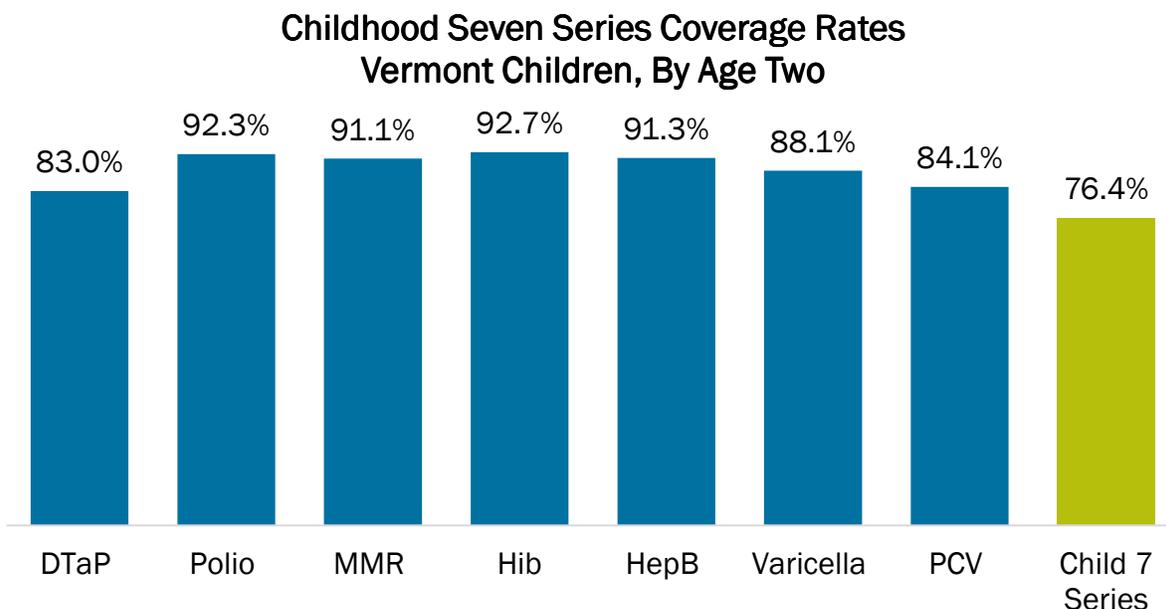
The Vermont Immunization Registry (IMR) is a secure health information system that contains consolidated immunization records for persons living in Vermont. Consolidated records mean easy access to immunization histories – so medical providers know, for instance, whether you need that tetanus shot when you show up in the emergency room with a cut finger. It also helps the Immunization Program identify areas of need and evaluate the impact of strategies implemented to increase vaccination coverage.

Vermont law requires that all immunizations given in Vermont be reported to the IMR. As of January 1, 2020, the IMR contained immunization records for 815,488 individuals, and over 9 million immunizations. While most of the data in the system is for immunizations administered after 1995, it is a valued resource, not only for what it contains in terms of individual records, but for its use as a tool to assess vaccination needs across the state.

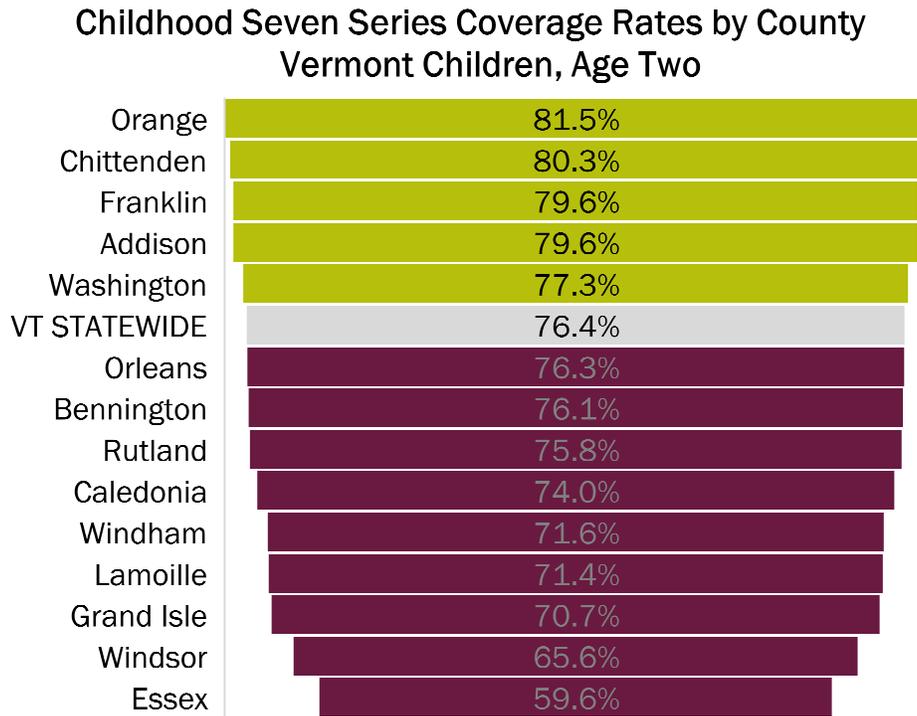
This is the inaugural IMR annual report, for the year 2019. Ages used in this report are calculated as of 12/31/2019, and rates are based on immunizations given through that date. An annual report will allow us to demonstrate coverage improvements or declines from year to year and focus efforts to improve the health of all Vermonters. [Annual Influenza Vaccine Coverage Rates](#) for the most recent flu season are published each summer. The Influenza document includes rates for Vermonters in many age groups including children and teens.

Vaccine Coverage among Vermont children born in 2017

Traditionally, vaccine coverage is assessed in young children after the age of 18 months, by which time CDC recommends children should have received 4 doses of DTaP, 3 doses of Polio, 1 dose MMR, 4 doses of Hib, 3 doses of Hepatitis B, 1 dose Varicella, and 4 doses of Pneumococcal vaccine, otherwise termed “the Childhood Seven Series.” This measurement allows a grace period and assesses vaccination coverage “by the age of two.”

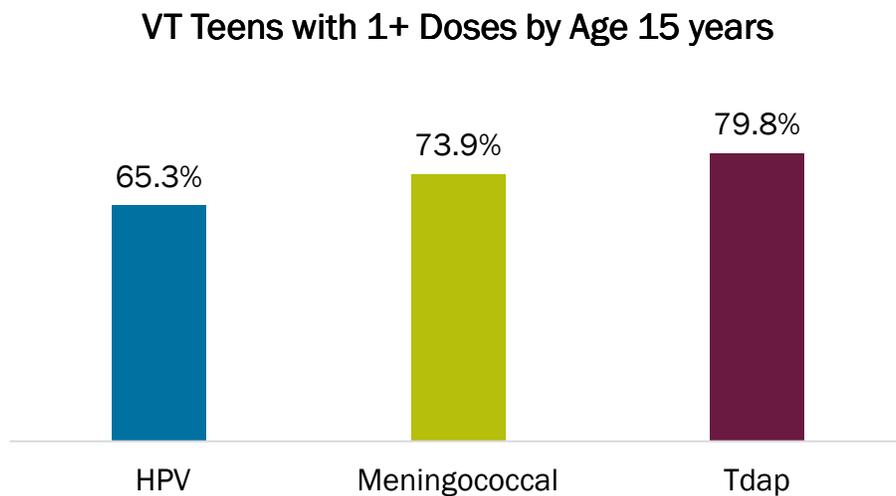


Three-quarters (76.4%) of Vermont children have received their recommended immunizations by age two. However, rates differ by county. This “funnel chart” shows county level rates from highest to lowest and includes the statewide coverage rate.



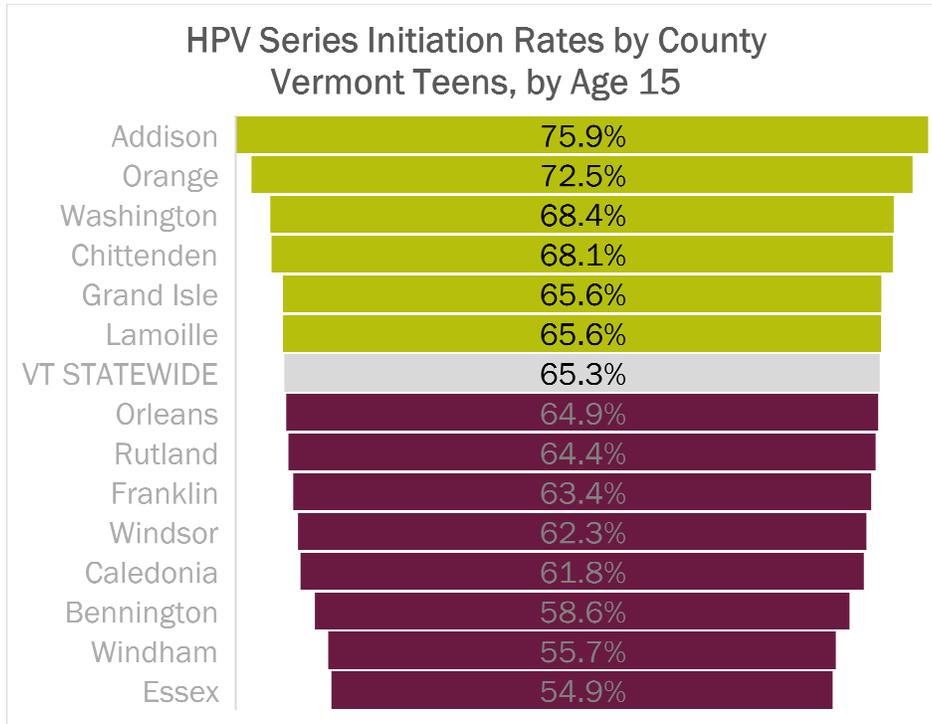
Vaccine Coverage Among Vermont Teens born in 2004

Measuring vaccine coverage in teens is focused on vaccines administered during the teen years: Human Papilloma Virus (HPV), Meningococcal vaccine, and Tdap. Although eight in ten teens have received a dose of Tdap by the time they are 15 years old, nearly three quarters have received the meningococcal vaccine (73.9%), and only 65% have received a dose of HPV by that age.



Human Papilloma Virus Vaccine by age 15, by County

HPV vaccination is routinely recommended for teens at age 11-12. Teens who receive the first dose by the age of 15 need only one more dose to complete the series. Those who start after age 15 will need a third dose to be protected.

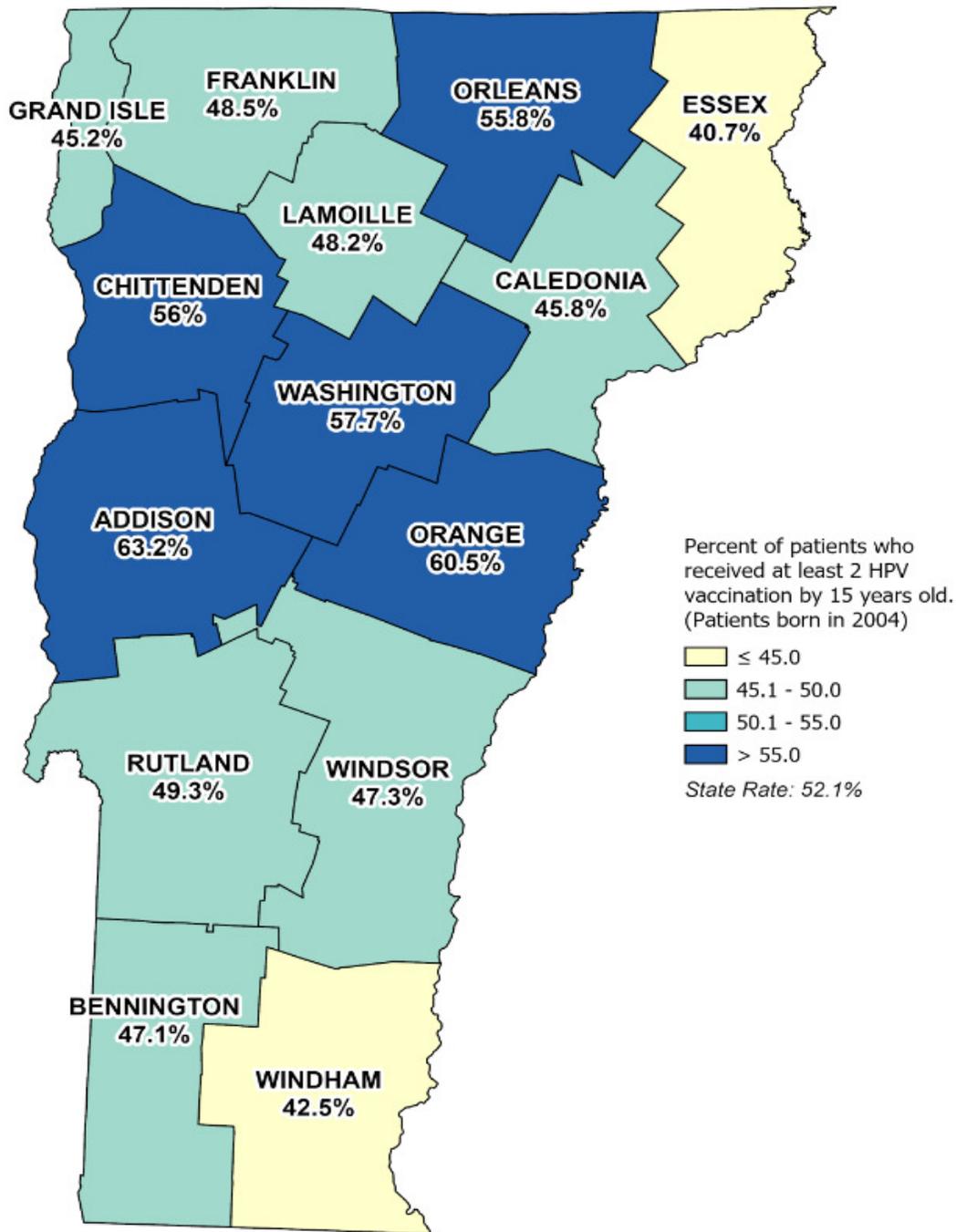


IMR Basic Statistics as of 12/31/2019

- Number of Patients with Immunization Records: 815,488
- Number of Immunizations in the IMR: 9,091,086
- Number of Immunizations added in 2019: 872,501
- Hospitals reporting to the IMR: All VT Hospitals except the VA. Dartmouth Hitchcock Medical Center in NH also reports.
- Percent of Pharmacies reporting: 78%
- Number of Provider Sites (all types) reporting: 359
- Percent of Public Elementary Schools using the IMR: 99%
- Percent of Public Middle and High Schools using the IMR: 100%
- Primary Care Sites receiving quarterly IMR assessments of child and teen coverage in 2019: 153
- How to get more information about the IMR: (888) 688-4667

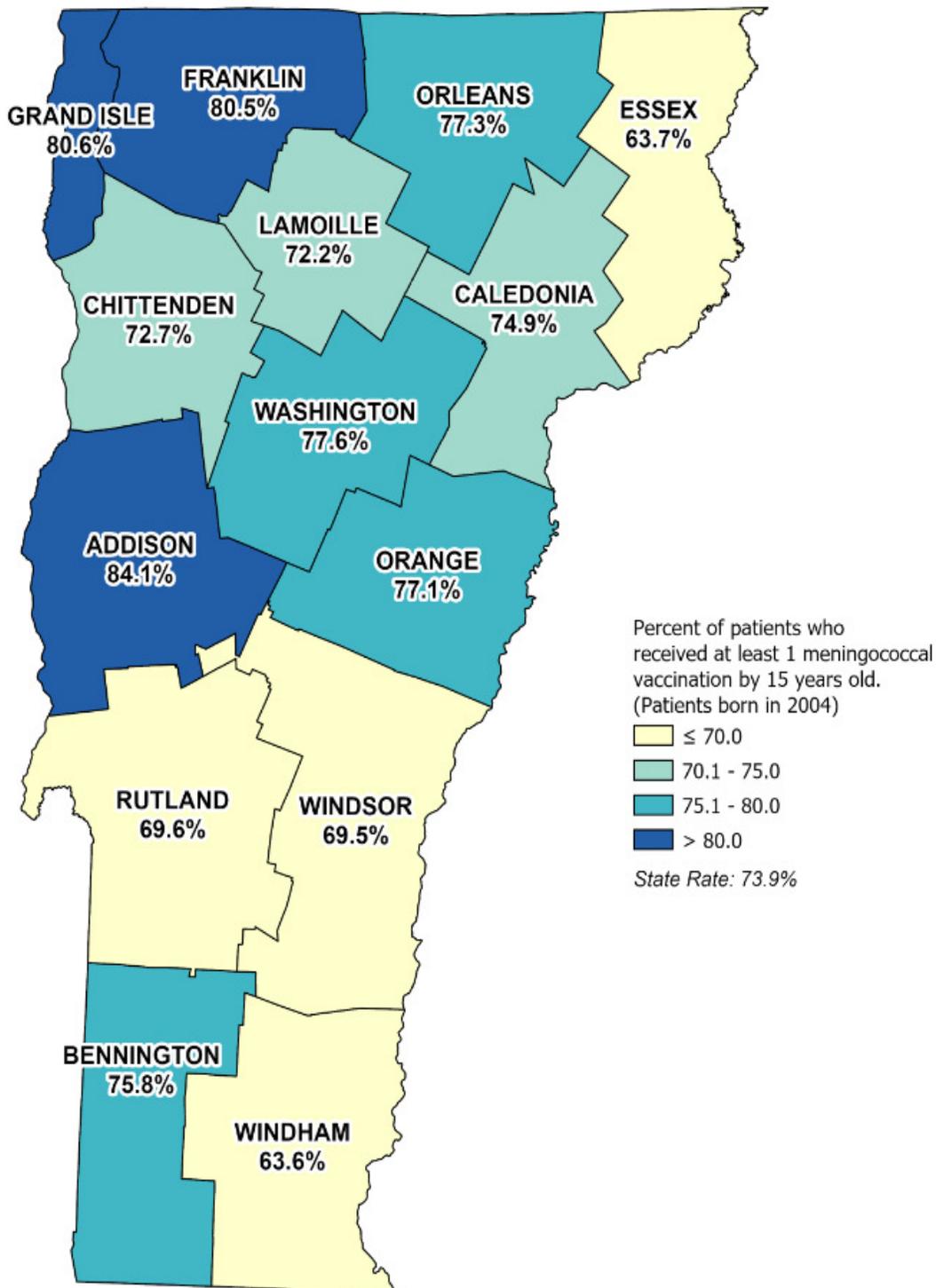
Vermont Teens born in 2004 - HPV Series Completion, by County

Statewide, more than half (52%) of 15-year old youth have completed the Human Papilloma Virus (HPV) vaccine series, below Vermont's coverage goal of 80%. In five Vermont counties, more than 55% of 15-year olds have completed the series. These teens are protected against cervical, oral, genital, and rectal cancers caused by this virus. In other areas of the state, vaccine coverage is lower: Essex, Windham, Grand isle, Caledonia, Bennington, and Windsor are all below 48%.



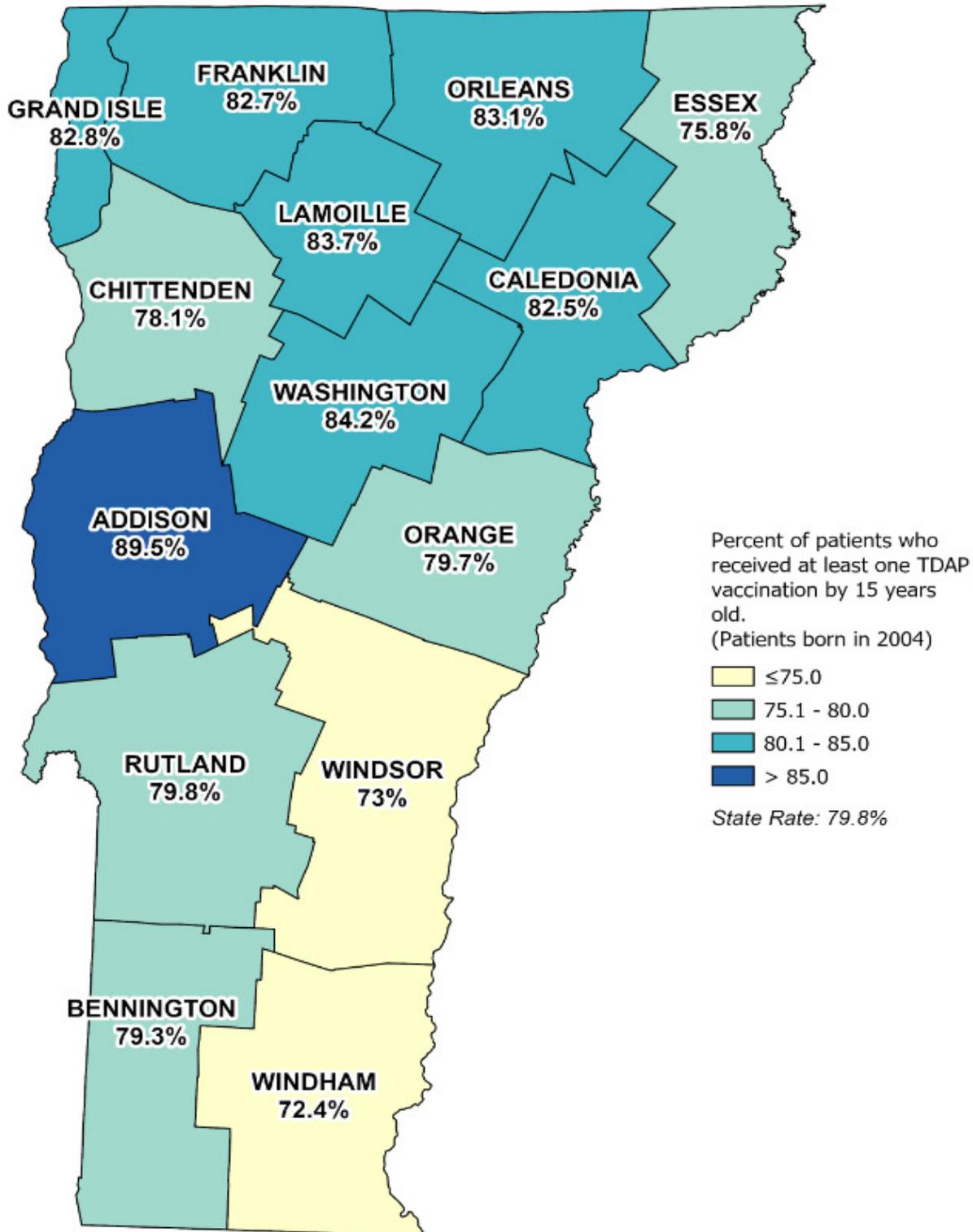
Vermont Teens born in 2004 – 1 Dose of Meningococcal by Age 15, by County

Meningococcal vaccine coverage by age 15 is 74%. It also varies by county, but in a completely different pattern. Addison, Grand Isle, and Franklin counties have over 80% coverage. Windham, Essex, Windsor, and Rutland are at less than 70%.



Vermont Teens born in 2004 – 1 Dose of Tdap by Age 15, by County

Tdap coverage by age 15 is nearly 80%, but Windsor and Windham counties are more than five percentage points below the state rate. Tdap, Meningococcal, and HPV vaccines are all recommended for teens in this age group by the Advisory Committee for Immunization Practices (ACIP.)



Teen Rates by age 15 years, by County

Vaccine Coverage Rates by Age 15 for Teens Born in 2004

	Tdap 1+ dose		Meningococcal 1+ dose		HPV 1+ dose		HPV 2+ dose		Total
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count
Addison	382	89.5%	359	84.1%	324	75.9%	270	63.2%	427
Bennington	433	79.3%	414	75.8%	320	58.6%	257	47.1%	546
Caledonia	382	82.5%	347	74.9%	286	61.8%	212	45.8%	463
Chittenden	1,752	78.1%	1,632	72.7%	1,528	68.1%	1,257	56.0%	2,244
Essex	69	75.8%	58	63.7%	50	54.9%	37	40.7%	91
Franklin	607	82.7%	591	80.5%	465	63.4%	356	48.5%	734
Grand Isle	77	82.8%	75	80.6%	61	65.6%	42	45.2%	93
Lamoille	328	83.7%	283	72.2%	257	65.6%	189	48.2%	392
Orange	307	79.7%	297	77.1%	279	72.5%	233	60.5%	385
Orleans	301	83.1%	280	77.3%	235	64.9%	202	55.8%	362
Rutland	614	79.8%	535	69.6%	495	64.4%	379	49.3%	769
Washington	663	84.2%	611	77.6%	538	68.4%	454	57.7%	787
Windham	403	72.4%	354	63.6%	310	55.7%	237	42.5%	557
Windsor	558	73.0%	531	69.5%	476	62.3%	361	47.3%	764
Statewide	6,876	79.8%	6,367	73.9%	5,624	65.3%	4,486	52.1%	8,614

Hepatitis A Vaccine Coverage, Various Age Groups

There is a new CDC “catch up” recommendation for all children 2-18 years who have not been immunized against Hepatitis A. The vaccine for Hepatitis A is a two-dose series beginning at age 12 months, with a second dose at least 6 months after the first. Unvaccinated persons through 18 years should complete the 2-dose series.

Hepatitis A uptake and completion is strong in younger children in Vermont, but rates are not as high yet in among teens. With the new CDC recommendation, we encourage providers to be sure their teenaged patients are caught up with their Hepatitis A, not just their HPV, Meningococcal, and Tdap doses.

Hepatitis A Vaccine Coverage Rates by Age Group Vermont Children



Definitions:

Vermont Immunization Registry (IMR): is a secure health information system that contains immunization records for persons living in Vermont. It has been live since 2004. The IMR is connected with Vermont's Electronic Births and Deaths Registries. VT law requires that all immunizations be reported to the Vermont Immunization Registry, and most providers serving children and teens do actively report.

As of January 1, 2020, there were 815,488 patients and over 9 million immunizations in the system.

In 2019, 66% of the 872,501 immunizations added to the IMR came directly from electronic health records in provider offices and hospitals. Another 29% were loaded as flat files – many of these came from health insurers and large chain pharmacies, and others were historical information that medical practices and health clinics were able to provide. It is also possible for immunizers to directly enter information into the IMR, and this accounted for 5% of our 2019 data.

Limitations:

We are reporting these data using an IMR based denominator. We believe this is the most accurate way to report, since our numbers are based on actual individuals and not annual census estimates. We acknowledge this can make our denominators too large (and our rates, subsequently somewhat lower), as it is difficult to identify and exclude individuals who did live in Vermont but have now moved out of state. To control for this in the teen reporting only, we used the Ogive hybrid method recommended in the American Immunization Registry Association Analytic Guide for Assessing Vaccination Coverage and excluded individuals who have not received any immunizations in 10+ years.

For More Information:

Contact the Vermont Immunization Registry manager at (802) 951-4094.