Varicella

Varicella is a Class C Disease and must be reported to the state within five business days.

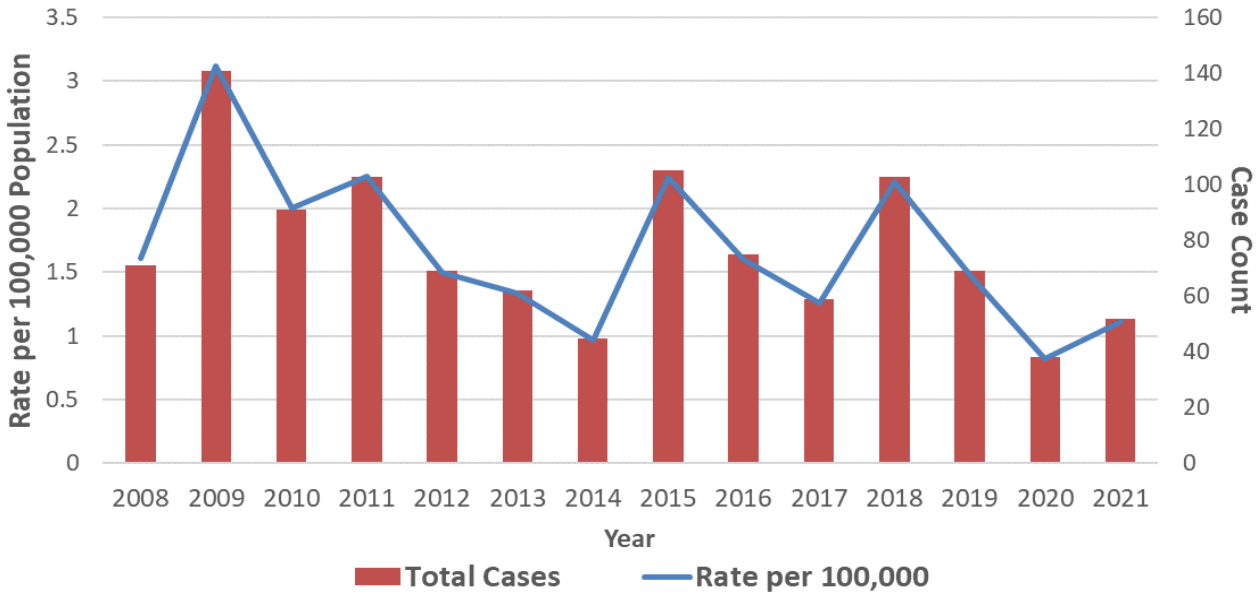
Varicella (chickenpox) is the primary infection caused by the varicella-zoster virus (VZV), which consists of blister-like rash, itching, fatigue and fever. Illness usually lasts five to ten days. Humans are the only source of infection. Varicella is highly infectious with secondary infection rates in susceptible household contacts approaching 90%. Transmission occurs from person-to-person, by direct contact with patients with either varicella or zoster lesions, or by airborne spread from respiratory secretions.

The varicella vaccine has been available since 1995 and is recommended in two doses, one at 12 to 15 months of age and the other at four to six years of age. Prior to the availability of the varicella vaccine, almost everyone developed varicella during their lifetime. Each year, about four million people would get chickenpox; each year there were about 10,500 to 13,000 hospitalizations and 100 to 150 deaths from chickenpox. In February 1999, the Advisory Committee on Immunization Practices (ACIP) recommended that varicella vaccine be required for childcare and school entry. The ACIP also strengthened recommendations for the vaccination of susceptible adults at high risk for exposure. The ACIP continues to recommend that vaccination be considered for all susceptible adolescents and adults. In 2016 in the U.S., 90.3% of children aged 0 to 24 months had received one dose of varicella vaccine; 92% of adolescents 13 to 17 years old had received two doses as recommended according to the CDC's National Immunization survey. Increase in coverage has led to declines of >97% in varicella incidence and ≥90% in varicella-related hospitalizations and deaths (94% and 97% among persons age <50 years) over the 25 years (1995-2019) of the vaccination program.

Varicella in Louisiana

Varicella became a reportable disease in 1997. In Louisiana, rates steadily declined from 1998 to 2003, but peaked again in 2009 with a rate of 3.11 cases per 100,000 population. Since 2006, rates have continued to trend downward to 1.1 per 100,000 in 2021 (Figure 1).

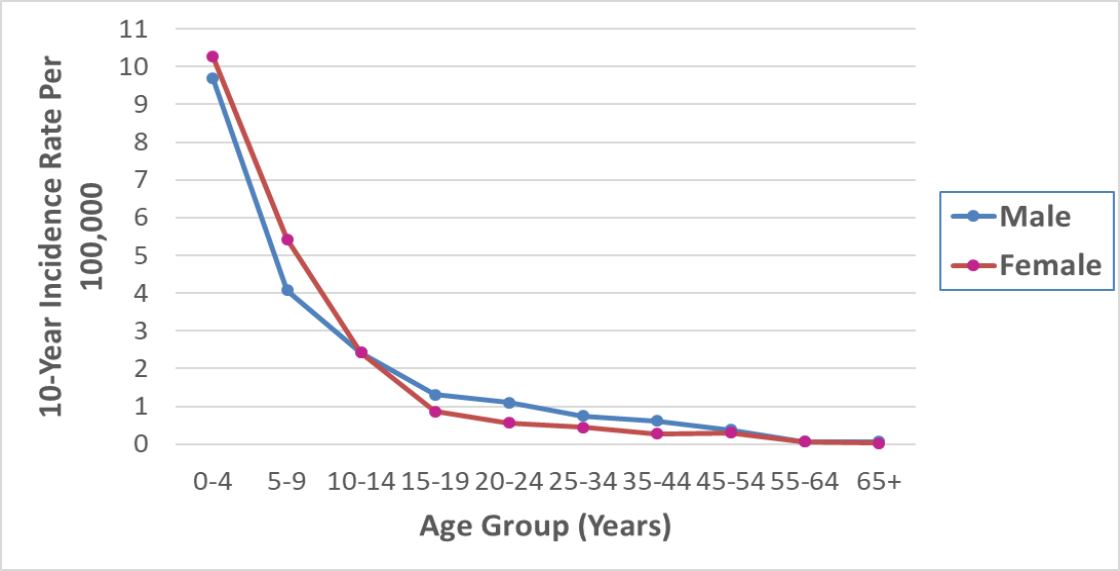
Figure 1: Varicella Cases and Incidence Rates - Louisiana, 2008-2021



Age, Sex and Race

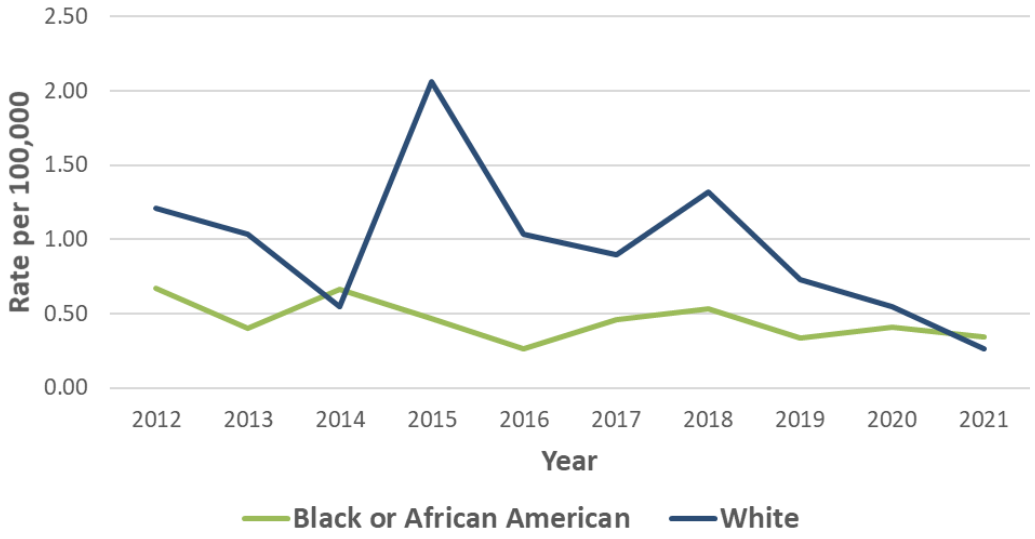
Varicella affects mainly children, with approximately 82% of cases occurring before the age of 15 years. Younger age groups continue to be the demographic with the highest rates. Most cases among older individuals are the result of gaps in immunization coverage. The highest rate of reported varicella cases is among female infants, with an incidence rate of 10.23 reported cases per 100,000 population. For 2012-2021, rates for females age 0-14 are higher than males of the same age, while the rates for males age 15-54 is higher than females The incidence rates for all genders evened out around age 55+. Overall, male incidence rates for the years 2012 to 2021 are slightly higher than female incidence rates, 1.53 and 1.36 cases per 100,000 respectively (Figure 2).

Figure 2: Varicella Incidence Rates by Gender and Age - Louisiana, 2012-2021



The cases by race show that the white population have the highest rates of disease. Overall, Whites make up 43% of all Varicella cases in Louisiana compared to African Americans, who account for 17% (Figure 3).

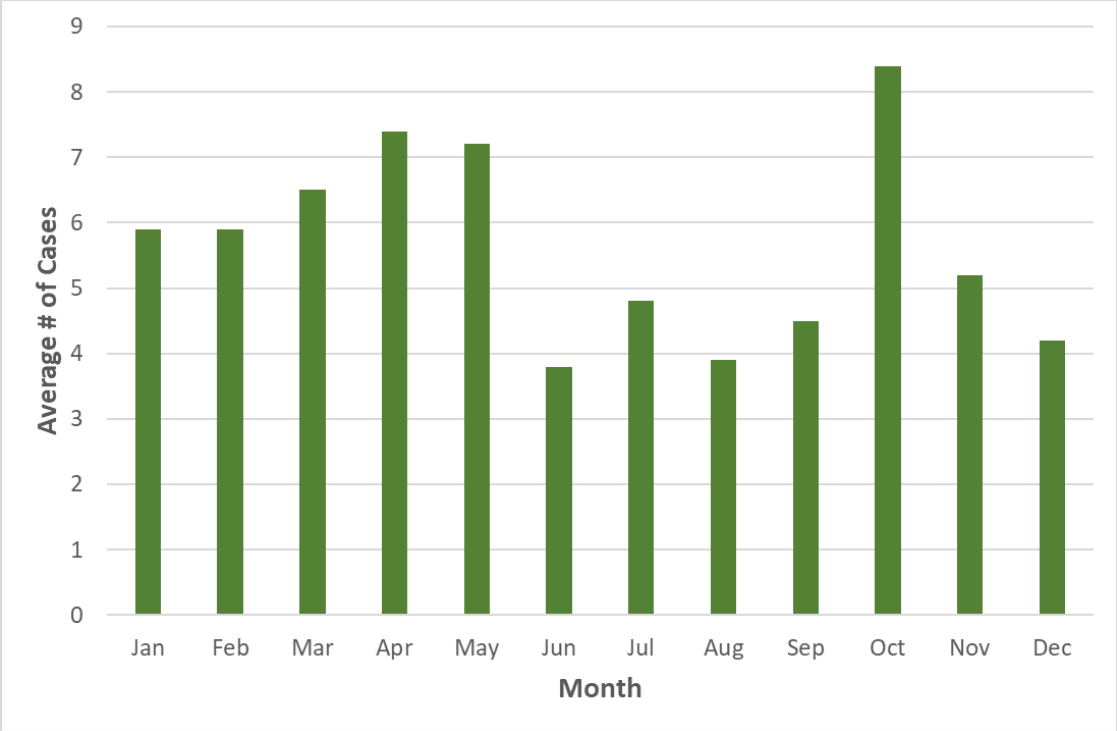
Figure 3: Varicella Incidence Rates by Race - Louisiana, 2012-2021



Seasonality

Varicella is a disease that exhibits a seasonal trend with the majority of cases occurring in the winter and spring from January to May. October 2012 and 2015 experienced a higher than average number cases, contributing to the peak demonstrated in the 10 year incidence rate (Figure 4).

Figure 4: Varicella average monthly case distribution - Louisiana, 2012-2021



Varicella by Parish

Varicella occurs in both urban and rural parishes. The following table shows average incidence rates by parish. The parishes highlighted in yellow had particularly high incidence rates. Higher incidence rates are most often a result of outbreaks that inflate average incidence rates.

Table: Varicella Rates per 100,000 Population by Parish – Louisiana, 2012-2021

Parish	Rate 2012-2021	Parish	Rate 2012-2021
Acadia	1.79	**Madison**	0.00
Allen	0.80	**Morehouse**	1.93
Ascension	1.40	**Natchitoches**	0.26
Assumption	0.00	**Orleans**	0.99
Avoyelles	0.25	**Ouachita**	1.53
Beauregard	0.54	**Plaquemines**	4.70
Bienville	0.00	**Pointe Coupee**	5.49
Bossier	0.55	**Rapides**	0.84
Caddo	1.26	**Red River**	0.00
Calcasieu	1.14	**Richland**	1.47
Caldwell	0.00	**Sabine**	0.00
Cameron	0.00	**Saint Bernard**	2.45
Catahoula	1.03	**Saint Charles**	1.14
Claiborne	0.63	**Saint Helena**	3.79
Concordia	1.01	**Saint James**	0.95
De Soto	0.74	**Saint John the Baptist**	1.39
East Baton Rouge	1.17		
East Carroll	2.75	**Saint Landry**	0.60
East Feliciana	1.03	**Saint Martin**	2.45
Evangeline	5.99	**Saint Mary**	2.53
Franklin	1.98	**Saint Tammany**	1.93
Grant	0.90	**Tangipahoa**	2.84
Iberia	1.39	**Tensas**	0.00
Iberville	2.47	**Terrebonne**	1.07
Jackson	0.00	**Union**	1.35
Jefferson	1.06	**Vermilion**	1.86
Jefferson Davis	0.32	**Vernon**	0.20
La Salle	0.42	**Washington**	1.95
Lafayette	4.91	**Webster**	0.26
Lafourche	17.47	**West Baton Rouge**	1.16
Lincoln	0.63	**West Carroll**	0.00
Livingston	2.96	**West Feliciana**	0.65
		Winn	0.70