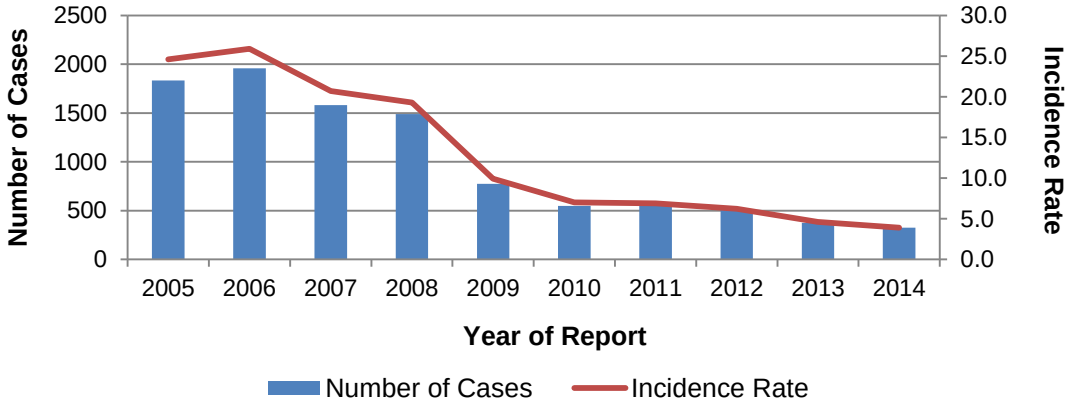
Chickenpox (Varicella)

Agent: Varicella-zoster virus (VZV)
Mode of Transmission: Person-to-person transmission by direct contact or through droplet or airborne spread of vesicular lesion fluids or respiratory secretions from an infected person.
Signs/Symptoms: Acute onset of fever and generalized, pruritic, vesicular rash typically consisting of 250-500 lesions. Successive crops of lesions appear first on the head and progress to the trunk and extremities. Lesions can appear on the scalp, armpit, and mucous membranes of the mouth, respiratory tract, and eye.
Prevention: Administration of vaccine should occur for children starting at age 12 months followed by a second dose at age 4-6 years.
Other Important Information: The disease is highly transmissible; susceptible household contacts have an 80-90% risk of becoming infected. In healthy children, acute varicella is generally mild and self-limited; however, severe complications may occur, especially in adults. Herpes zoster, or shingles, occurs when latent VZV reactivates and causes recurrent disease.

Chickenpox: 2014 Data Summary	
Number of Cases:	324
5-Year Average Number of Cases:	549.8
% Change from 5-Year Average:	-41%
Incidence Rate per 100,000:	3.9

In 2014, 324 cases of chickenpox were reported in Virginia. This represents a 15% decrease from the 374 cases reported in 2013 and a 41% decrease from the five-year average of 549.8 cases per year (Figure 8). Requirements for chickenpox vaccination among school and daycare attendees and updated vaccine dosages have most likely contributed to the steady decline in reported cases since 2006.

Figure 8. Chickenpox: Ten-Year Trend for Number of Cases and Incidence Rate, Virginia, 2005-2014



Varicella continues to be a childhood disease based on the fact that 80% of reported cases in 2014 occurred in young children and teenagers. Incidence rates for all age groups demonstrated a linear decline as age increased with 19.5 per 100,000 population for infants, followed by 17.9 per 100,000 among children 1-9 years of age, and 7.2 per 100,000 among children 10 -19 years of age. The rates continued to decline in the remaining age groups, ranging from 1.8 per 100,000 in the 20-29 year age group to 0.2 per 100,000 for those age 60 years and older. The incidence rate was higher in males (4.2 per 100,000) compared to females (3.6 per 100,000). Race was reported for 70% of cases. For cases with reported race information, the "other" race population had the highest incidence rate at 4.5 cases per 100,000, followed by the white population (2.8 per 100,000) and the black population (2.0 per 100,000).

As seen in the map below, incidence rates varied widely by locality. The northwest region had the highest incidence rate with 5.6 cases per 100,000, followed by the northern region with 4.8 cases per 100,000. The rates in other regions ranged from 2.3 to 3.6 cases per 100,000. The overall incidence across all regions was 3.9 cases per 100,000. Chickenpox continued to show a seasonal trend with most cases occurring in the second and third quarters (28% and 31%, respectively) of the year.

Chickenpox outbreaks have continued to decline when compared to previous years. One outbreak was reported in 2014 and was limited to an unvaccinated household. Implementation of self-isolation prevented further spread of this outbreak to susceptible individuals in the public. While chickenpox cases have occurred in vaccinated persons, these cases are typically mild with less than 50 skin lesions, low or no fever, and a short duration of illness. One death was attributed to chickenpox in Virginia during 2014. The death occurred in an adult female from the 40-49 year age group.

Chickenpox Incidence Rate by Locality
Virginia, 2014