

## Chicken pox incidence in Valencia (Spain) in the period 2008-2010

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Chicken pox is a highly contagious disease caused by primary infection with varicella zoster virus. It is an airborne disease spread easily through coughing or sneezing of ill individuals or through direct contact with secretions from the rash. Primary varicella is a disease that is endemic to all countries worldwide. Varicella has a prevalence that is stable from generation to generation. In temperate countries, chickenpox is primarily a disease of children. Varicella is highly communicable, with an infection rate of 90% in close contacts. In temperate countries, most people become infected before adulthood, and 10% of young adults remain susceptible.

Our aim is to analyze chicken pox incidence in Valencia (Spain). The data consists in weekly declared cases during the time period 2008-2010. We aggregate the data for each year and for each of the 564 census sections of the city.

A first spatial approach has been carried out separately for every year. We assume a Besag-York-Mollie (BYM) specification to analyze cases of chicken pox. Using INLA we manage to find several focus areas with high relative risk, areas also confirmed by cluster techniques.

Using intensity points maps we can clearly see a spatio-temporal evolution of the cases throughout the period. At this time, a spatio-temporal analysis is being carried out.