

**P0066**

**Paper Poster Session**

**What is hot in diagnosis of viral infections**

**Epidemiology of primary rubella infection in the Central African Republic: data from measles surveillance, 2007–2014**

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**Background:** Although rubella is generally considered a benign childhood disease, infection of a pregnant woman can cause foetal congenital rubella syndrome, which results in embryo-foetal disease and malformations. The syndrome is still a public health problem in developing countries where the vaccine has not yet been introduced, such as the Central African Republic (CAR). The aim of the study reported here was to define the epidemiology of primary rubella infection, in order to determine its effect on morbidity rates in the country.

**Material/methods:** Data derived from epidemiological surveillance of measles and rubella were analysed retrospectively between 1 January 2007 and 31 December 2014. The database includes cases of suspected measles, according to the WHO clinical case definition. In this algorithm, samples that are negative or doubtful by ELISA for measles (presence of immunoglobulin M) are tested in another ELISA for detection of rubella-specific IgM. Descriptive analyses were conducted for socio-demographic characteristics, including age, sex and health region, for patients tested for rubella.

**Results:** Of the sera tested for rubella, 30.2% (425/1409) were positive, 62.3% (878/1409) were negative, and 7.5% (106/1409) were doubtful. The highest prevalence (47.3%) was seen in 2007 and the lowest in 2012 (8.9%). Primary infections were always more frequent during the first 3 months of

the year, with a peak at the same time, between January and February, which is the hottest period of the year in the CAR. The sex ratio was 1.03. In both sexes, rubella IgM was rarely found before the age of 1 year (0.5%; 18/213). The highest rate was observed at ages 5–9 years (43.5%); the mean age was 8 years (range, 6–37 years); however, at least 8% of girls aged 15 or more (18/213) had primary infections.

**Conclusions:** Sentinel sites for surveillance of congenital rubella syndrome are urgently needed, and introduction of vaccination against rubella in the Expanded Programme of Immunization should be considered, to ensure immunization of girls of reproductive age.