

**P0071**

**Paper Poster Session**

**Emerging and pre-emerging viruses**

### **Epidemiology of microcephaly in Colombia, 2009-2013: implications for surveillance of Zika**

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**Background:** Causes of microcephaly include genetic syndromes, environmental teratogens, structural brain anomalies but also some infectious disease pathogens, such as CMV. Recently, following an outbreak of Zika virus infection in Brazil in 2015, there have been concerns regard its relationship and possibly etiology of significantly increase in the number of microcephaly cases in the areas where Zika are reported. Now that there is a Zika virus outbreak ongoing in Colombia, increase in microcephaly cases from infected pregnant women should be under surveillance. Nevertheless, there are not previous baseline studies regard the incidence of microcephaly.

**Material/methods:** Observational, retrospective study in which incidence of microcephaly (ICD-10 code Q02.X) in Colombia, 2009-2013, was estimated based on data extracted from the personal health records system (Registro Individual Prestación Servicios, RIPS). Using official population estimates of National Statistics (DANE), crude and adjusted incidence rates were estimated (cases/1000 births).

**Results:** During the period, 5,598 cases were reported (median 1,202/year), for a mean national rate of 1.3 cases/1000 births (range 0.77-1.57); 52.8% were female. The highest rates occurred at Bogotá during 2009 and 2011 (3.94 and 3.07 cases/1000 births), followed by Nariño during 2012 and 2013 (2.62 and 1.67 cases/1000 births). During 2009 in Santander we estimated 2.71 cases/1000 births and in Risaralda 2.20 cases/1000 births. For 2013, highest rate was reported in Risaralda with 1.37 cases/1000 birth (mean for 2013 was 0.48 cases/1000 births). Cases were reported from 32 of 34 country territories (including DC). Between September 22-November 14, 2015, highest number of Zika confirmed cases have occurred in Bolívar (143). In Bolívar the rates of microcephaly during 2009-2013 ranged between 0.34-0.65 cases/1000 births. Antioquia have reported 75 cases of Zika, for 2009-2013 the microcephaly rates were 0.8-1.99 cases/1000 births.

**Conclusions:** Given the ongoing epidemics of Zika, these data would be useful as baseline for surveillance of potential significant increase in the microcephaly incidence in the country. Nevertheless, ideally, there should be close communication and collaboration between the public health authorities in Brazil and Colombia to employ standardized approaches to obtain comparable results. According WHO, microcephaly is head circumference that is  $> 2$  standard deviations (SD) below the mean compared to age- and gender-matched population-based samples, which are available from WHO reference charts.