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## Incidence and Fluctuation of Rotavirus (RV) Genotypes Before and After Launch of Rotavirus Vaccines in Portugal

## **Biography:**

Undergraduate education 1987-93 University of Coimbra, Portugal. Postgraduate training Hospital Pediátrico de Coimbra, Portugal and King's College Hospital, London, UK. Specialist in Paediatrics, Hospital Pediátrico de Coimbra 2001-present.

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## Abstract:

Background: Since 2006 we have conducted surveillance for RV infection in children seen at our Emergency Service (ES), in the Central Region of Portugal. RV vaccine became available in Portugal in May 2006 but, to date, is not included in standard recommendations for the Immunisation Program. The estimated vaccine coverage ranged from 15% at the beginning of 2007 to 33% in 2009. Methods: During the epidemic season (January to June), between 2006 to 2009, all children <3 years of age, attending the ES with the diagnosis of acute gastroenteritis (AGE) and available stool samples (approx 75%) had them tested for RV and positive samples were genotyped (2009 pending). Results: A total of 1521 children were included and RV was positive in 35.6%: 261/475 (45%) in 2006, 170/467 (36%) in 2007, 60/267 (22%) in 2008 and 98/312 (31%) in 2009 (January to May). Genotyping results could be obtained in >95% RV-positive samples.

Overall G9P[8] went from being the most frequent type in 2006 (90%), falling significantly in 2007 (32.6%) and became undetectable in 2008, while a significant increase in the proportion of G3P[8] occurred, becoming the predominant genotype in 2008 (from 3.8 to 40%). The proportion of G1P[8] increased in 2007 (from 4.3 to 18%) and remained at similar levels in 2008. G2P[4], undetected in 2006, was found in a significant proportion in 2007 (21.3%) and 2008 (31%).

Conclusion: RV is a major cause of AGE, although its incidence decreased in 2008 and 2009. Different RVs co-circulate in the same geographic region and important seasonal variation in the strain distribution is found with relatively low vaccine coverage. Overall, G1-G3 and G9 were associated with the majority of infections, but interestingly, G1P[8] has never been the most common strain and G2

RV did not increase to predominance at this coverage level.

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