IMPLEMENTATION OF A NATIONWIDE SURVEILLANCE NETWORK OF RESPIRATORY SYNCYTIAL VIRUS IN CHILDREN < 2 YEARS OLD IN PORTUGAL

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Introduction

Human respiratory syncytial virus (RSV) is associated with substantial morbidity and mortality in infants, young children and the elderly. RSV surveillance is essential to estimate the burden of RSV infection, evaluate the impact of preventive measures and support public health decisions. Following European recommendations, a nationwide hospital-based RSV sentinel network denominated **(VigiRSV)** was set up in Portugal. This work aims to describe the implementation of VigiRSV and report preliminary results.

Methods

VigiRSV was implemented in 2021 with the initiative of the National Institute of Health Doutor Ricardo Jorge (INSA) and the Portuguese Paediatrics Society (PPS). In 2023, 20 hospitals, nationwide distributed, integrate the network.

The surveillance is based on the recruitment of children <2 year-old hospitalized for, at least, 24 hours, due to an Acute Respiratory Infection (ARI). At recruitment, the paediatrician fills out a clinical questionnaire, and respiratory samples are collected for laboratory diagnosis. Positive samples for RSV are forwarded to INSA for complementary virological analyses such as genetic characterization of the virus.
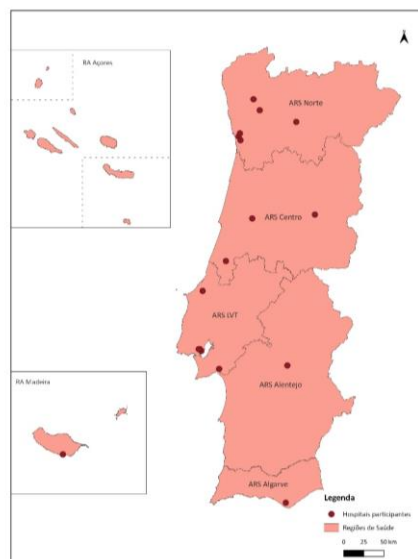

Fig. 1. Geographical distribution of VigiRSV´s hospitals

Results

Table 1. Characteristics of RSV cases	2021/2022	2022/2023*
RSV cases (n)	270	497
ARI admissions (n)	733	692
Admissions of ARI by RSV (%)	36.8	71.8
RSV positive preterm	15.7	12.7
RSV cases with co-morbidities (%)**	7.4	3.2
RSV cases with low weight at birth (%)	14.8	13.8
RSV severe cases (%)***	10.7	10.7
Genetic characterized samples (n)	225	211

* up to week 9/2023; ** children with trisomy 21, cardiac disease, pulmonary disease, neuromuscular disease, immunodeficiency; *** severe cases: children admitted in Intensive Care Units or needing ventilation.
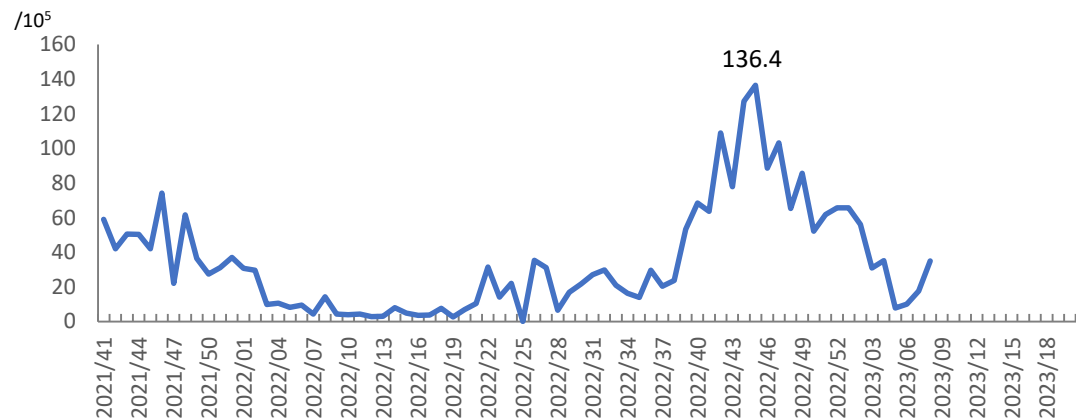

Fig. 2. RSV incidence rate (/10^5), Portugal since week 40/2021

Conclusion

The effort of distinct organizations and professionals made possible the implementation of such surveillance network, which improve the knowledge of RSV infection almost in real time.