Advancing the Science of RSV

PUBLISHED
18 May 2022

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The Prevalence and Impact of Respiratory Syncytial Virus (RSV)

In a post COVID-19 world, there remains a heightened focus on respiratory diseases and what an RSV season will look like moving forward. We have learned, in particular, the importance of protecting those who are most vulnerable.

Among infants and young children, respiratory syncytial virus, usually referred to as RSV, is one of the most common respiratory viruses.[1,2] While RSV typically causes mild, cold-like symptoms, it can progress to lower respiratory tract infections (LRTI), such as bronchiolitis and pneumonia in infants, making it a leading cause of hospitalisation in infants under 12 months.[1-3]

RSV causes seasonal epidemics worldwide each year.[4-6] While this virus is widespread, there remains no preventative option available for all infants.[4-7] Common hygiene practices such as frequent handwashing, disinfecting surfaces and toys, as well as avoiding close contact with people who are ill help prevent the spread of RSV.[2]

RSV can be unpredictable.[8] Any infant, whether they're born healthy and at term, prematurely or with health conditions, can be hospitalised in their first RSV season.[9,10] In fact, many hospitalisations occur in infants considered healthy and half of hospitalisations occur in older infants – those born before the start of the RSV season.[9-12]

Decades of Research in RSV

Despite more than 60 years of research, the scientific community has struggled to develop new preventative options in the RSV field.[7] RSV prevention is limited to infants with preexisting conditions – leaving most infants unprotected from this virus.[7,13]

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At AstraZeneca, together with our partners at Sanofi, we have dedicated years of research and collaboration on ways to change how the medical community approaches RSV.[2,7,13]

Impact on Infants and Families

This virus is all too real for parents like Sanne van Barneveld, a mother who experienced RSV firsthand when her infant son Thijs, who was born at term, contracted the virus at just five weeks old.

What started out as cold symptoms in Thijs eventually progressed, leading Sanne to take him to the paediatrician who then recommended he go to the hospital. As an obstetrician, Sanne was already familiar with RSV, but to watch her young son fight the virus and eventually end up in the paediatric ICU was a painful experience.

After spending several days in the hospital, Thijs was discharged and eventually made a full recovery; he is now a happy and healthy three-year-old. For Sanne, her advice to other parents is to know what the symptoms of RSV are so they know what to watch for – and to seek medical attention when those symptoms become concerning.

A Partnership Dedicated to RSV Prevention

No parent should have to witness their child struggle against this virus, and it's up to us as a scientific community to strive to develop new solutions. Our partnership with Sanofi exemplifies the progress that can be made when collaboration is valued and fostered. All infants need protection against RSV, and we are jointly committed to continuing our research and development to help HCPs improve care and management for this common and contagious respiratory illness.

References

1. Respiratory Syncytial Virus (RSV). Centers for Disease Control and Prevention. https://www.cdc.gov/rsv/index.html. Accessed May 2022.

2. Respiratory Syncytial Virus Infection (RSV): Infants and Young Children. Centers for Disease Control and Prevention. https://www.cdc.gov/rsv/high-risk/infants-young-children.html. Accessed May 2022.

3. Leader S, Kohlhase K. Respiratory syncytial virus-coded pediatric hospitalizations, 1997 to 1999. The pediatric infectious disease journal. 2002;21(7):629-32.

4. Piedimonte G, Perez MK. Respiratory syncytial virus infection and bronchiolitis. Pediatr Rev. 2014;35:519-53.

5. Oymar K, et al. Acute bronchiolitis in infants, a review. Scand J Trauma Resusc Emerg Med. 2014;22:23.

6. Shi T, et al. Global, regional, and national disease burden estimates of acute lower respiratory infections due to respiratory syncytial virus in young children in 2015: a systematic review and modelling study. Lancet 2017; 390: 946–58.

7. Villafana T, et al. Passive and active immunization against respiratory syncytial virus for the young and old. Expert Rev Vaccines. 2017;16:1-39.

8. Bianchini S, Silvestri E, Argentiero A, Fainardi V, Pisi G, Esposito S. Role of Respiratory Syncytial Virus in pediatric Pneumonia. Microorganisms. 2020; 8(12):2048. https://doi.org/10.3390/microorganisms8122048

9. Rha B et al. Respiratory Syncytial Virus–Associated Hospitalizations among Young Children: 2015–2016. pediatric. 2020;146(1):e20193611.

10. Arriola CS, Kim L, Langley G, Anderson EJ, Openo K, Martin AM, et al. Estimated Burden of Community-Onset Respiratory Syncytial Virus-Associated Hospitalizations Among Children Aged <2 Years in the United States, 2014-15. Journal of the pediatric Infectious Diseases Society. 2020;9(5):587-95.

11. Reeves RM, Hardelid P, Panagiotopoulos N, Minaji M, Warburton F, Pebody R. Burden of hospital admissions caused by respiratory syncytial virus (RSV) in infants in England: A data linkage modelling study. The Journal of infection. 2019;78(6):468-75.

12. Demont, C., Petrica, N., Bardoulat, I. et al. Economic and disease burden of RSVassociated hospitalizations in young children in France, from 2010 through 2018. BMC nfect Dis 21, 730 (2021). https://doi.org/10.1186/s12879-021-06399-8

13. Synagis - Summary of Product Characteristics (SmPC) - (eMC) [Internet]. Available from: https://www.ema.europa.eu/en/documents/product-information/synagis-epar-product-information_en.pdf Accessed May 2022.

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Veeva ID: Z4-44993
Date of preparation: May 2022