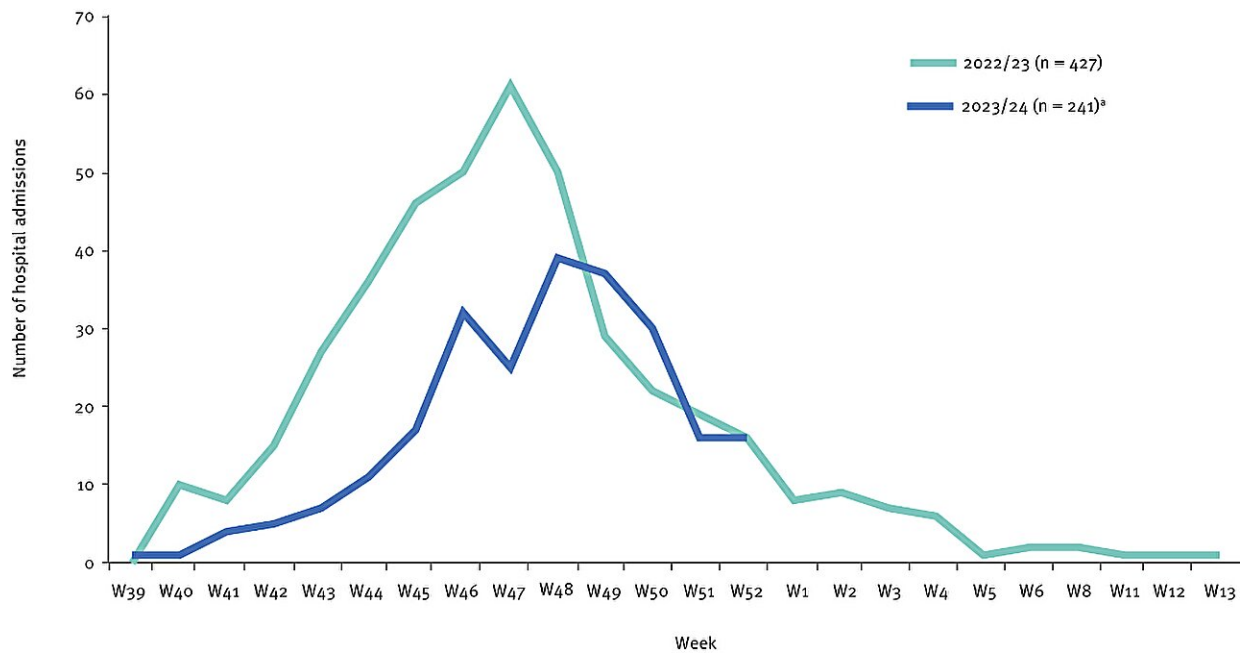


Controlling respiratory syncytial virus: Real-life data from Luxembourg

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In 2023, 241 children under 5 years of age were hospitalized with a laboratory-confirmed RSV infection (i.e. cases), compared with 389 cases in 2022, representing decreases of 38% (389 vs. 241) in cases under 5 years of age and 69% (232 vs. 72) in cases of infants under 6 months old. The peaks of the respective RSV epidemics occurred in week 47 in 2022 and in week 48 in 2023.

Credit: *Eurosurveillance* (2024). DOI:

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Respiratory syncytial virus (RSV) is one of the main reasons leading to

hospitalization among young children worldwide and each year, an estimated 101,000 children below the age of 5 years die due to RSV infections. Since the end of 2022, the use of a long-acting monoclonal antibody (nirsevimab) in infants as means of passive immunization against RSV has been allowed in the European Union and European Economic Area (EU/EEA). However, only a few countries in the EU/EEA started using nirsevimab prior to the RSV season 2023/24.

In their rapid communication [published](#) in *Eurosurveillance*, researchers describe first experiences from Luxembourg where a one-dose nirsevimab prophylaxis has been recommended for all babies born in 2023 accompanied by a suggested catch-up immunization for children under the age of two years at high risk of serious illness. A national immunization campaign began in autumn 2023, and reached an estimated 84% of newborns (1,277 doses/1,524 births) in 2023.

Besides estimating coverage of nirsevimab immunization in Luxembourg among newborns up to mid-December 2023, the researchers looked at potential effects of this immunization in children under 5 years of age. To do this, they compared RSV-related pediatric hospitalization data from Luxembourg's national pediatric [hospital](#) in 2022 and 2023, i.e. before and after the national nirsevimab immunization recommendation.

Promising first signs: Fewer hospitalizations, change in age structure and less severe illness

The results showed a drop in hospitalizations related to RSV infections with a distinct decrease (69%) among infants younger than six months of age (232 confirmed cases in 2022 and 72 cases in 2023). In the wider age group of children under the age of 5 years, in total 241 children were hospitalized with a laboratory-confirmed RSV infection in 2023, compared with 389 cases in 2022 (38% decrease).

According to the available data in Luxembourg, the authors also noted a shift in the age structure among the children who were hospitalized due to RSV infection: the mean age of hospitalized children increased from slightly below 8 months in 2022 to more than 14 months in 2023, i.e. children were generally older when they were hospitalized. The team attributed this to the "effect of the administration strategy shortly after birth. Most hospitalized children had not yet received a nirsevimab immunization [...]."

In addition, data showed a reduced severity among the children who had to be hospitalized in 2023. Instead of around 5 days in 2022, children were hospitalized for around 3 days in 2023 and admissions of infants to the intensive care unit fell from 28 in 2022 to 9 in 2023 in the age group of the most vulnerable (younger than six months).

The authors conclude that this "suggests that nirsevimab prophylaxis reduced severe RSV infections, particularly in infants

More information: Corinna Ernst et al, Impact of nirsevimab prophylaxis on paediatric respiratory syncytial virus (RSV)-related hospitalisations during the initial 2023/24 season in Luxembourg, *Eurosurveillance* (2024). [DOI: 10.2807/1560-7917.ES.2024.29.4.2400033](https://doi.org/10.2807/1560-7917.ES.2024.29.4.2400033)

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