Respiratory virus infections and cardiovascular disease (CVD)

Burden of disease in EU

FLU **1/5** Europeans infected with seasonal influenza each year.[1]

RSV **160.000** adult hospitalisations due to RSV infection each year.[2]

COVID-19 **1.1 mln** number of deaths in the EU due to COVID-19 as of 2022.[3]

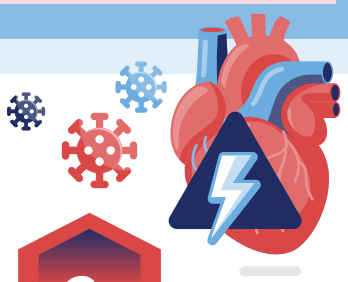
CVD

60 million people living with CVD.[4]

13 mln new cases diagnosed each year.[5]

1.8 mln deaths per year attributed to CVD.[6]

Respiratory virus infections can increase the risk of CVDs among all people



6x Risk of experiencing a **heart attack** for CVD patients diagnosed with flu.[7]

36% Increased risk among patients with heart failure of **being hospitalised** with RSV.[8]

31% Patients hospitalised with RSV that experience **CVD** complications.[9]

3x Risk of experiencing a **stroke** after systemic respiratory infections.[10]

Vaccination against respiratory viruses can reduce the risk of complications associated with CVDs

Data on the benefits of RSV vaccination in relation to CVD, while in early stages, is expected to follow the positive outcomes seen with flu vaccination.

Reduced risk of major cardiovascular events [11]

33% **Reduction in CVD related deaths** when vaccinated against flu[12]

25% **Reduced risk of mortality** in people vaccinated against flu with **CVD**[13]

>60% **Reduced risk of mortality** in people with **CVD** & COVID-19 when vaccinated against COVID-19[14]

51% **Reduction in worsening** of **CVD** following flu vaccination[15]

26% **Reduction in stroke** when flu vaccination given in the same season[16]

Call to action

- Include mention **of the value of vaccination in reducing CVD complications** in the Hungarian Presidency Council Conclusions.
- **Harmonise recommendations** for vaccination against respiratory viruses among patients with CVDs.
- **Support the education of health workers** on the value of vaccination for patients with CVDs to boost vaccination uptake.

1. ECDC
2. Osei-Yeboah et al. 2023
3. OECD, 2022
4. European Heart Network
5. European Heart Network
6. European Heart Network
7. Kwong et al. 2018
8. Branche et al. 2022, Prasad et al. 2021, Kujawski et al. 2022
9. Falsey AR et al. 2021, Chuaychoo et al. 2019, Volling et al. 2014, DeMartino et al. 2023
10. Smeeth et al. 2004
12. Omidi et al. 2023
11, 13. Yedlapati et al. 2021
14. Dashtban et al. 2023
15 & 16. Rademacher et al. 2024

Vaccines Europe