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Other respiratory viruses

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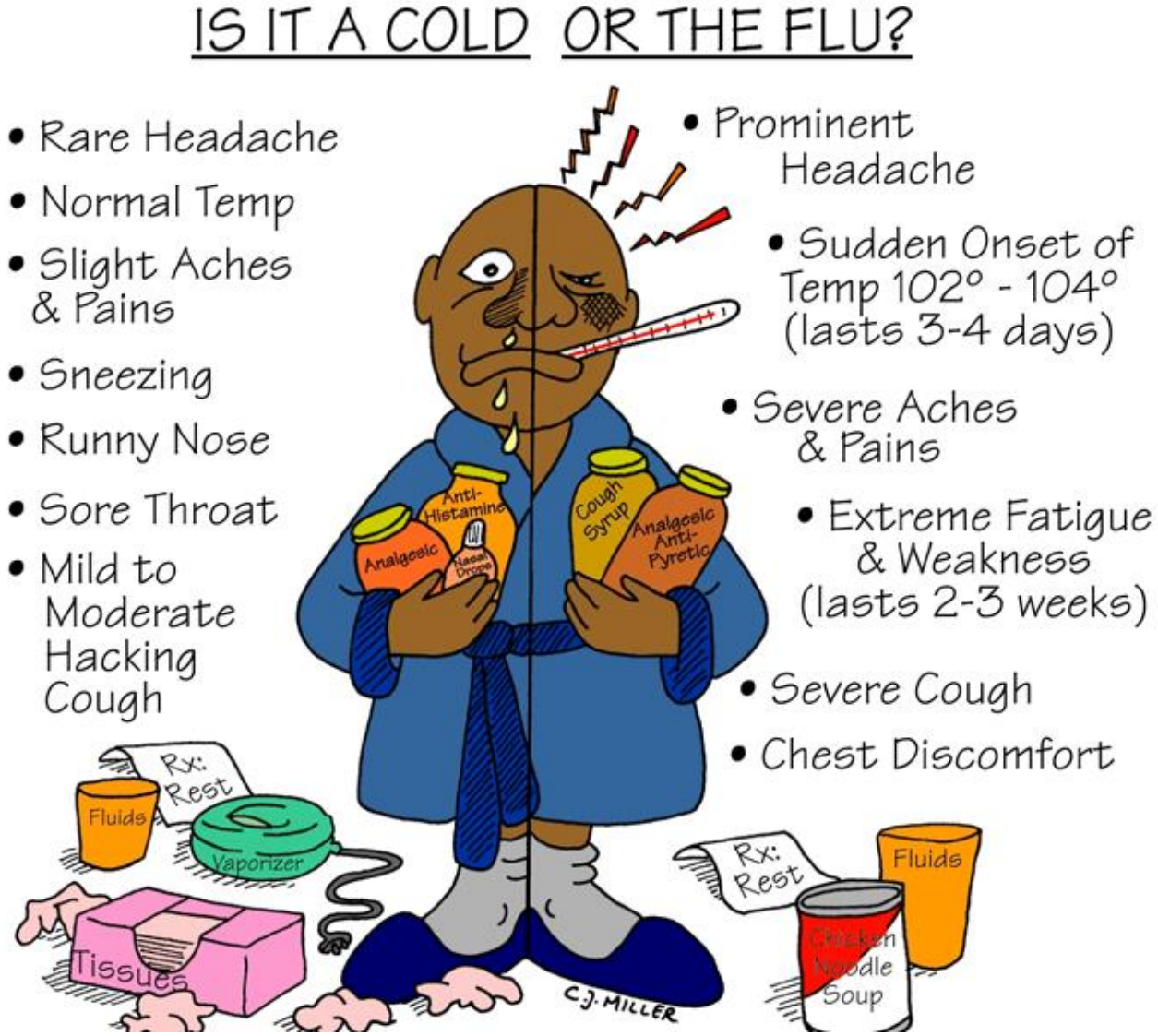
“Common colds”

- Most acute respiratory infections are associated with mild and self-limiting disease, a small fraction of infections result in a more severe disease which can require hospitalization
- Even “milder” acute respiratory infections can exacerbate underlying medical conditions such as cardiovascular disease
- The figure on right illustrates a common misconception – in fact, all respiratory virus infections can cause more substantial symptoms

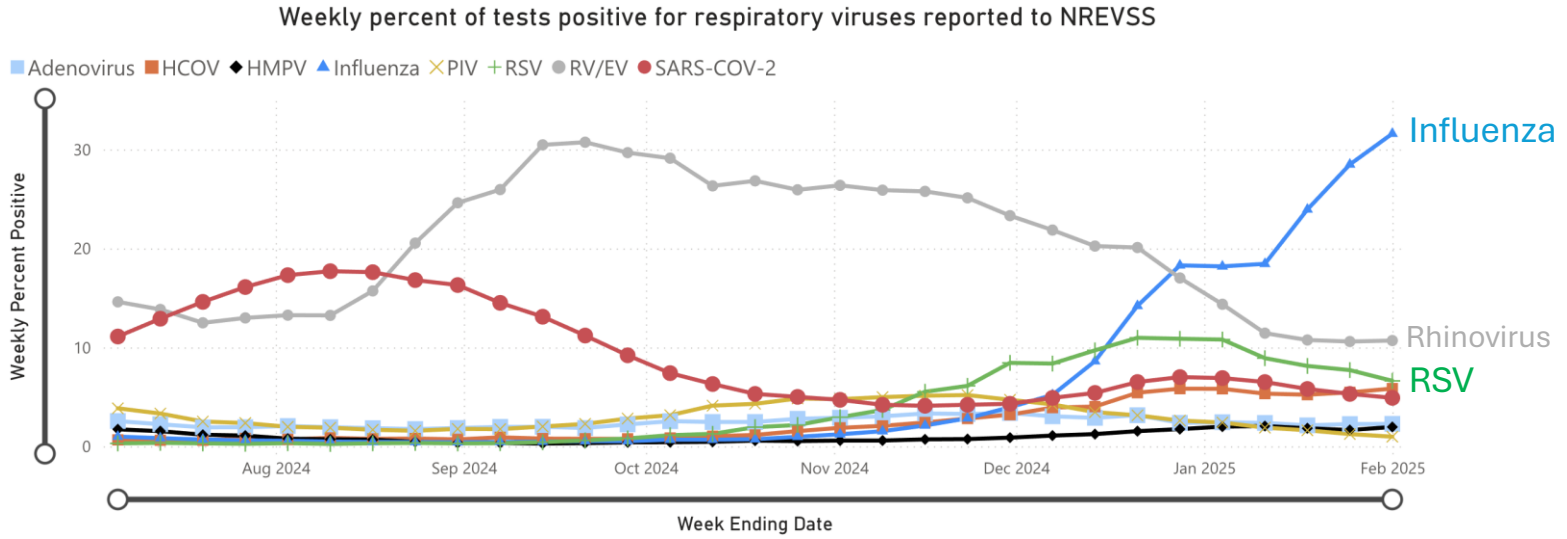


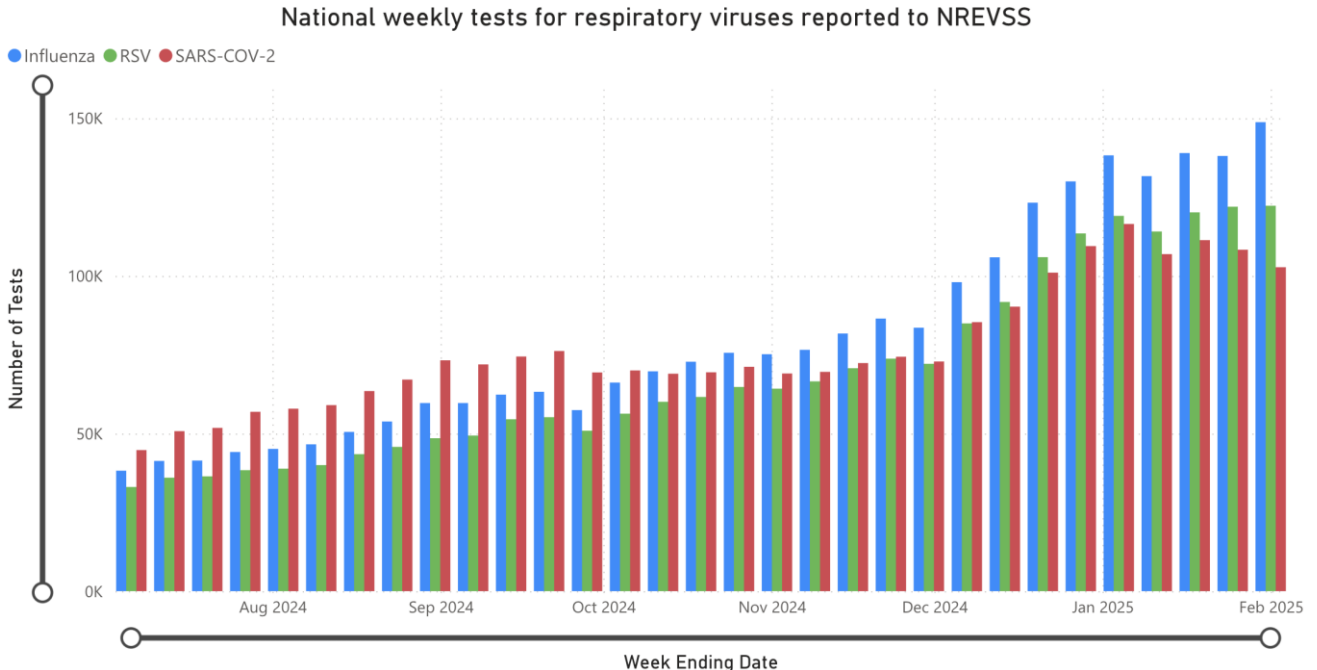
Source: http://www.twindoctorstv.com/medical-conditions/cold-and-flu/

Respiratory viruses circulating in the US

- US CDC surveillance data (NREVSS) reveals that rhinovirus and respiratory syncytial virus (RSV) were the most frequently detected respiratory viruses prior to the influenza season

- Caveat – the "percentage positive" shown on y-axis of upper panel is affected by other co-circulating viruses and by testing intensity (lower panel)





RSV vaccines for adults

- Several countries have approved the use of RSV vaccines for older adults
- Recent data from Scotland [1] show a clear impact of RSV vaccination in the target age group of those 75-79 years – see figure on right (those turning 75y by July 2025 were included in target group)
- Vaccine uptake was almost 70% and the observed reduction in disease burden is consistent with 80%-90% vaccine effectiveness

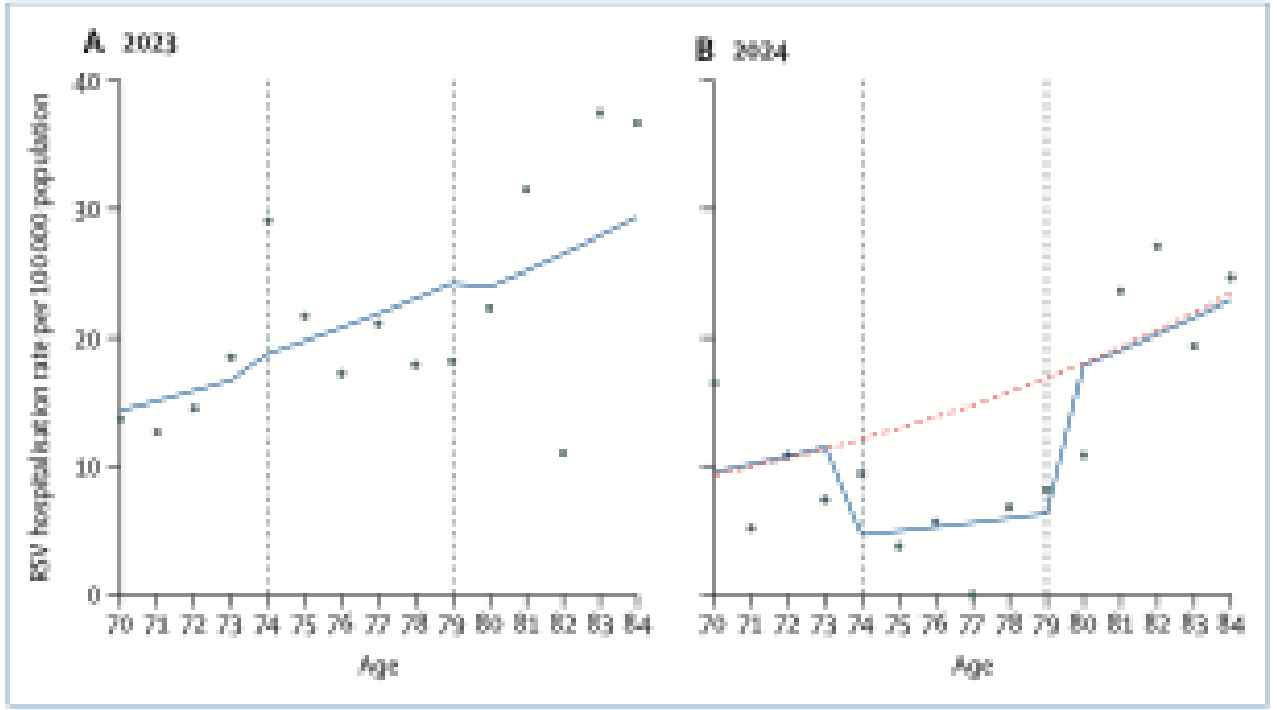


Figure: Observed, modelled, and predicted rates of admission to hospital due to respiratory syncytial virus in Scotland

(A) Hospitalisation rates before vaccination discontinuity for people aged 74–79 years from Oct 1 to Dec 8, 2023 and (B) hospitalisation rates after vaccination discontinuity for people aged 74–79 years from Oct 1 to Dec 8, 2024. Grey dot=admitted rate. Blue line=predicted rate. Dashed grey lines=vaccine eligible age groups. Red dashed line=modelled rate in the absence of vaccination. RSV=respiratory syncytial virus.

1. Hameed SS, et al. Early evidence of RSV vaccination impact on hospitalisation rates of older people in Scotland. Lancet Infect Dis, 2025 (online first 13 Feb 2025)

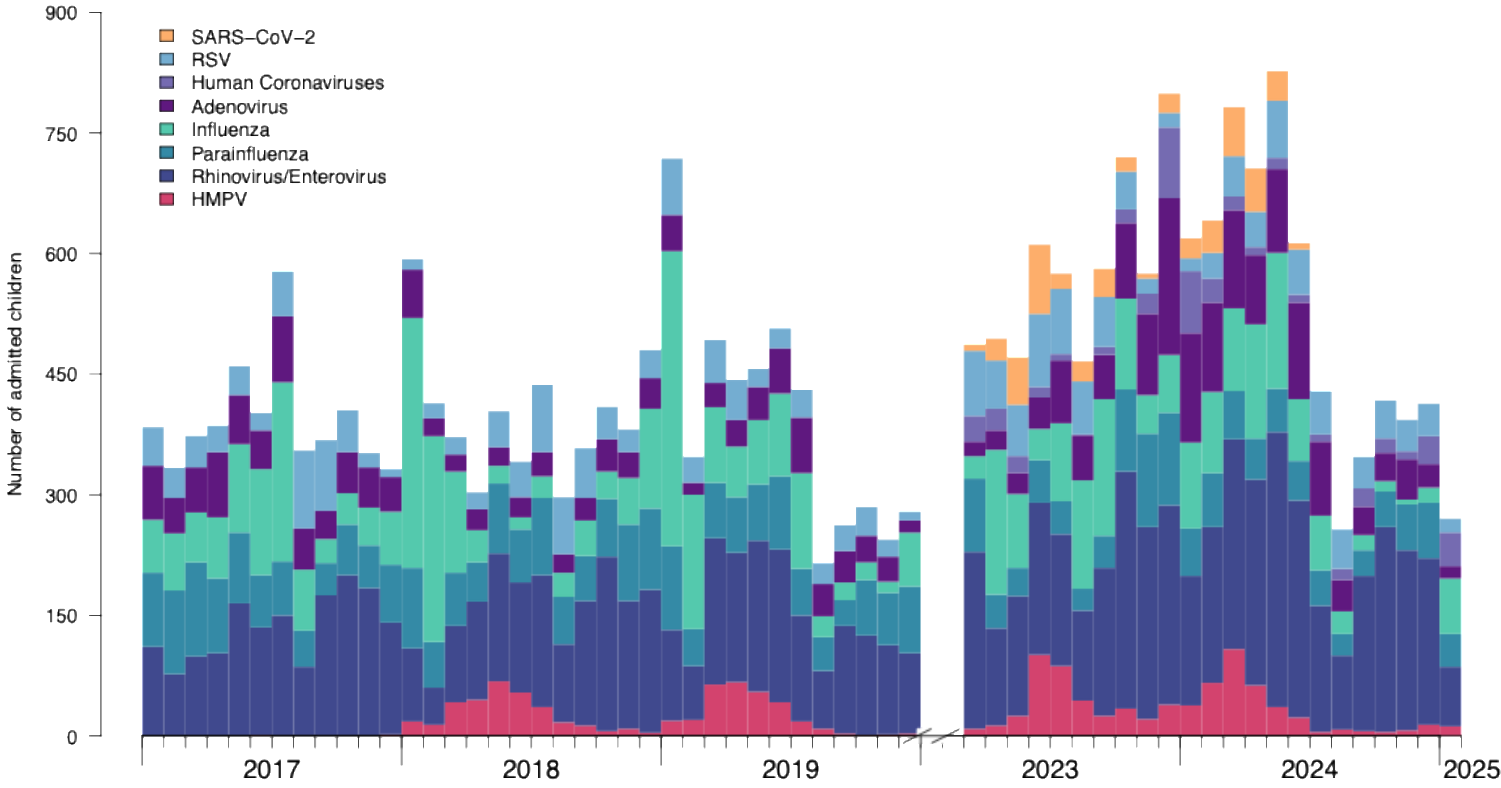
Human metapneumovirus (hMPV)

- Human metapneumovirus (hMPV) is one of the viruses that causes the “common cold” (upper respiratory infection). It usually makes people only mildly sick, but it can make some people very sick.
- The virus belongs to the Pneumoviridae family of viruses, along with respiratory syncytial virus (RSV). It was first identified in 2001 and has been spreading among people for many decades. It is found around the world.
- It spreads like other common cold viruses do, through infectious respiratory particles that spread through the air from a sick person to others. This means a person can catch the virus when they are close to a sick person or sharing a closed space with them. It can also enter the body by touching contaminated surfaces like doorknobs or handles and then touching the eyes, nose or mouth.

Source: https://www.who.int/news-room/questions-and-answers/item/human-metapneumovirus-(hmpv)-infection

Human metapneumovirus (hMPV) this winter

- Following media reports of high levels of HMPV hospitalizations in China earlier this winter, “Chinese officials and a WHO spokesperson said the rise in hMPV and other infectious respiratory disease cases is expected through winter and spring” [1,2]
- Winter surges expected in all respiratory viruses, increasing pressure on hospitals



Respiratory virus detections in children admitted to hospital in Hong Kong with acute respiratory illness (Cowling, unpublished). hMPV shown in red

1. Murphy F. Fact check: Human metapneumovirus in China. BMJ 2025;388:r68 (Published 14 January 2025)
2. https://www.reuters.com/fact-check/human-metapneumovirus-china-is-not-new-no-state-emergency-declared-2025-01-09/

Reducing respiratory virus transmission

- Vaccines are available for influenza, SARS-CoV-2, and for RSV, in some locations and in some age groups
- Experiences during the COVID-19 pandemic demonstrated that other respiratory viruses (*except perhaps rhinovirus*) can be controlled very effectively by non-pharmaceutical measures[1]
- Self-isolation continues to be recommended – "keep your cold to yourself". Choosing to wear a mask when ill should also reduce the risk of onwards transmission in the community[2]

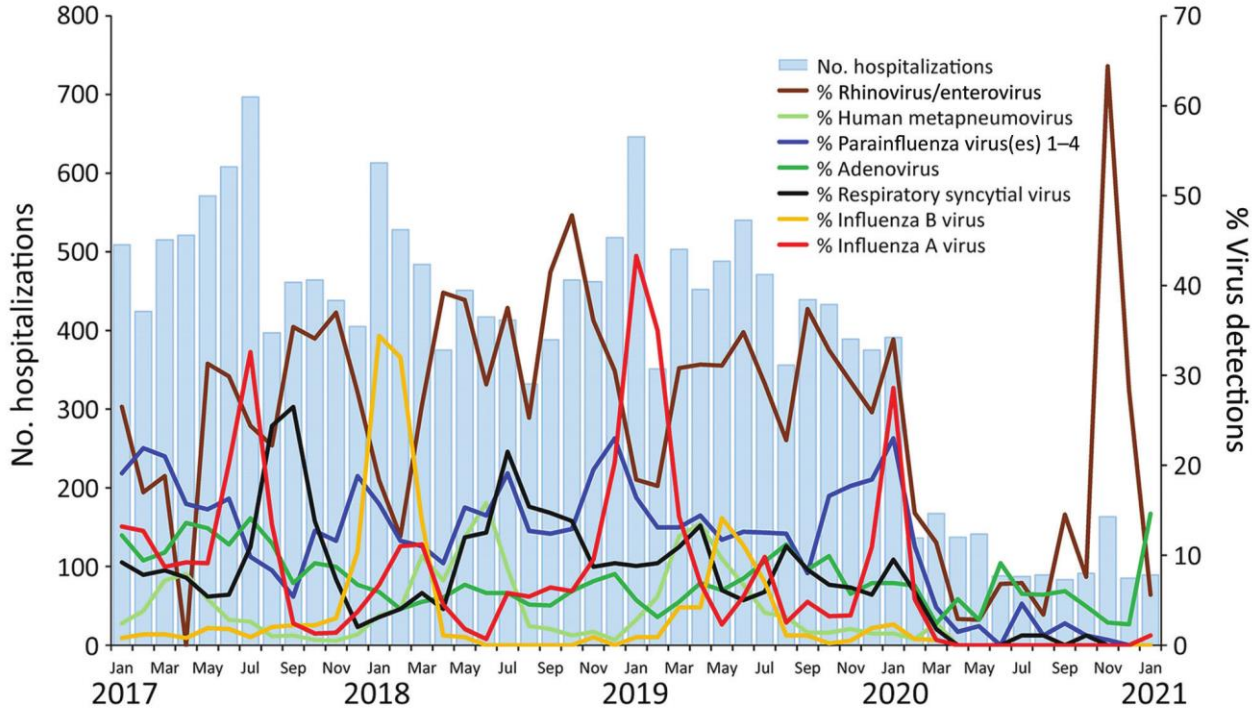


Figure 2. Pediatric hospitalizations for acute fever/respiratory symptoms and detection rates for respiratory viruses at Pamela Youde Nethersole Eastern Hospital and Queen Mary Hospital, Hong Kong Island, China, 2017–2021.

Sudden drop in 2020 in respiratory virus detections in children admitted to hospital in Hong Kong with acute respiratory illness[1]

1. Chiu SS, Cowling BJ, Peiris JSM, et al. Effects of nonpharmaceutical COVID-19 interventions on pediatric hospitalizations for other respiratory virus infections, Hong Kong. Emerg Infect Dis. 2022; 28(1):62-68. doi: 10.3201/eid2801.211099
2. Leung NHL, Chu DKW, Shiu EYC, et al. Respiratory virus shedding in exhaled breath and efficacy of face masks. Nat Med. 2020; 26(5):676-680. doi: 10.1038/s41591-020-0843-2.