



Horizontale Massnahmen im Virenwinter

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Lauro Damonti

Infektiologie & Spitalhygiene Inselspital

Horizontal measures & respiratory viruses

TABLE 1. Preventing Healthcare-Associated Infections: Examples of Vertical and Horizontal Approaches

Vertical approaches reduce risk of infections due to specific pathogens:

- Active surveillance testing to identify asymptomatic carriers
- Contact precautions for patients colonized or infected with specific organisms
- Decolonization of patients colonized or infected with specific organisms

Horizontal approaches reduce risk of a broad range of infections and are not pathogen specific:

- Standard precautions (eg, hand hygiene)
- Universal use of gloves or gloves and gowns
- Universal decolonization (eg, chlorhexidine gluconate bathing)
- Antimicrobial stewardship
- Environmental cleaning and disinfection

Universal masking
Hand hygiene
Enhanced ventilation

SOURCE. Modified from Wenzel and Edmond.³

Do we need horizontal measures?

The New York Times

***A 'Tripledemic'? Flu, R.S.V. and Covid
May Collide This Winter, Experts Say***

RSV, Influenza: hardly / no exposure in the last > 2 years

→ High susceptibility in the population

→ Morbidity and mortality among vulnerable patients?

Do horizontal measures make sense?

New insights..

#1 COVID-19 intra-hospital case fatality rate is today 3-4%

- RSV: 6-8% (>50y)
- Influenza: 5.8% (N> 45000)

#2 Transmission risk of RV: it's more complicated...

- Particle size, ventilation, UV, humidity...
- Activity (talking ≠ coughing), distance & duration of exposure
- ...

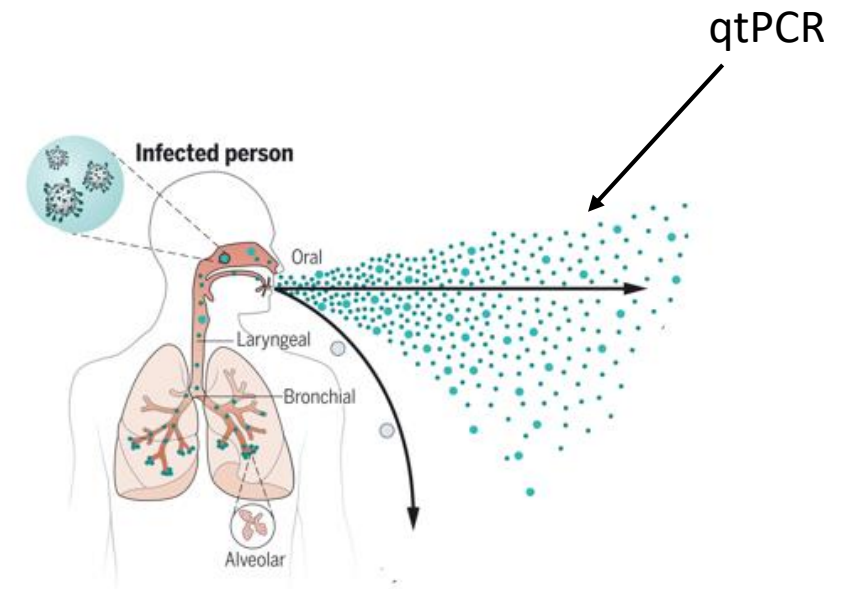
Horizontal measures for RV

Hand hygiene¹

- Is highly effective on enveloped viruses
- Prevents RVI in the community
- No data on HC setting
- *Don't expect big news...*

Enhanced ventilation²

- 8 ACH (Vs. 4) decreases airborne SARS-CoV-2
- *Hot Topic right now!*



¹Emerg Infect Dis. 2020 Jul;26(7):1592-1595
Clin Infect Dis. 2009 Feb 1;48(3):285-91
ERJ Open Res. 2022 May 30;8(2):00650-2021
Wellcome Open Res. 2021 Jun 22;5:98

²Clin Infect Dis. 2022 Aug 24;75(1):e89-e96

Universal (surgical) masking

As a targeted measure¹:

- Reduced nosocomial IV (OR: 0.4) and associated mortality (HCW)
- Reduced COVID-19 among HCW (HCW + patients)

As a horizontal measure: pre-pandemic period²

- Significantly reduced rates of RVIs (incl. IV and PIV but not RSV) in HSCT patients

As a horizontal measure: pandemic period³ (CAVE, epidemiology!)

- Resulted in no nosocomial influenza & RSV cases in a large hospital network
- Reduced the incidence of IV, PIV, RSV, hMPV in hematological and cancer centers

¹ J Hosp Infect. 2022 Mar;121:82-90
JAMA. 2020 Aug 18;324(7):703-704

² Clin Infect Dis. 2016 Oct 15;63(8):999-1006
J Hosp Infect. 2022 Jan;119:182-186

³ Infection Control & Hospital Epidemiology, 42: 218–221
J Hosp Infect. 2022 Jan;119:192-193
Am J Infect Control. 2022 Jul 25:S0196-6553(22)00575-2

A final thought

Simple, clear, acceptable and sustainable measures such as:

- Symptom-based isolation (for the first 2h)
- Adequate ventilation
- Universal masking
- Hand hygiene

can prevent most - though not all - cases of a broad spectrum of nosocomial respiratory infections, now and in the long term

...as long as the mortality rate remains acceptable...

...

Danke für die Aufmerksamkeit!