

Infection Prevention in Kindergartens and Schools

Michael Wagner

University of Vienna
michael.wagner@univie.ac.at
twitter: @MichiWagner4

Frequent testing (gargle –pool – PCR) of a representative group of pupils and teachers

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Research paper

Prevalence of RT-qPCR-detected SARS-CoV-2 infection at schools: First results from the Austrian School-SARS-CoV-2 prospective cohort study

Peter Willeit^{a,b,*}, Robert Krause^c, Bernd Lamprecht^d, Andrea Berghold^e, Buck Hanson^{f,g}, Evelyn Stelzl^h, Heribert Stoiberⁱ, Johannes Zuber^{g,j}, Robert Heinen^{g,k}, Alwin Köhler^{g,l}, David Bernhard^{m,n}, Wegene Borenaⁱ, Christian Doppler^{m,n}, Dorothee von Laerⁱ, Hannes Schmidt^{f,g}, Johannes Pröll^m, Ivo Steinmetz^h, Michael Wagner^{f,g,o,**}

- Already before Delta and Omicron surges, pupils were as frequently infected as teachers
- Children 5-10 y were as frequently infected as older pupils
- Pupils in schools with high social deprivation index have higher infection risk

Frequent testing of a representative group of pupils and teachers



RAPID COMMUNICATIONS

Sensitivity and specificity of the antigen-based anterior nasal self-testing programme for detecting SARS-CoV-2 infection in schools, Austria, March 2021

Peter Willeit^{1,2,*}, Benoît Bernar^{3,*}, Christoph Zurl^{4,5,6,*}, Mariam Al-Rawi^{7,8}, Andrea Berghold⁹, David Bernhard^{10,11}, Wegene Borena¹², Christian Doppler^{10,11}, Reinhold Kerbl¹³, Alwin Köhler^{7,8}, Robert Krause^{4,5}, Bernd Lamprecht¹⁴, Johannes Pröll¹⁰, Hannes Schmidt^{7,15}, Ivo Steinmetz¹⁶, Evelyn Stelzl¹⁶, Heribert Stoiber¹², Dorothee von Laer¹², Johannes Zuber^{7,17}, Thomas Müller³, Volker Strenger^{18,**}, Michael Wagner^{7,15,19,**}

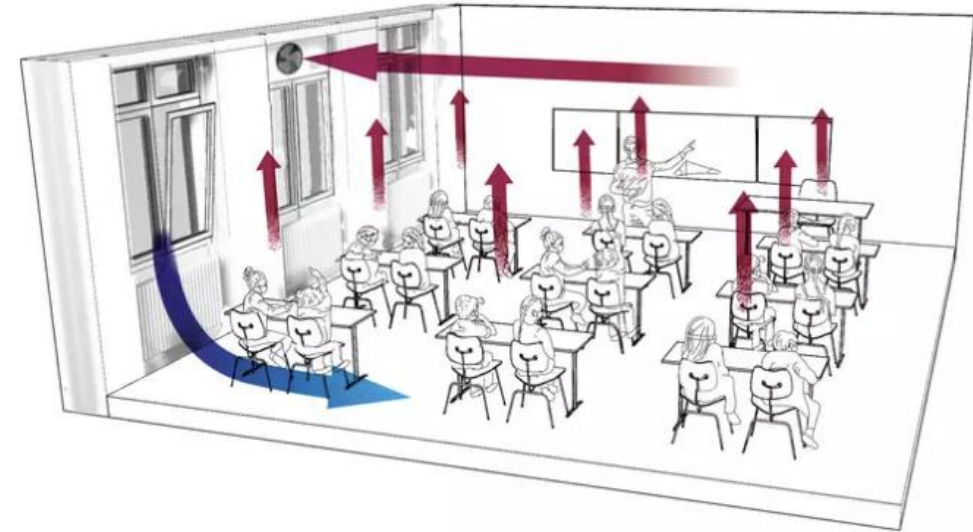
Anterior-nasal antigen tests detect only about 20% of infected pupils

Masks



Schools with mandatory masking during Delta surge: Less in-school transmission than schools with optional or partial masking policies

Ventilation



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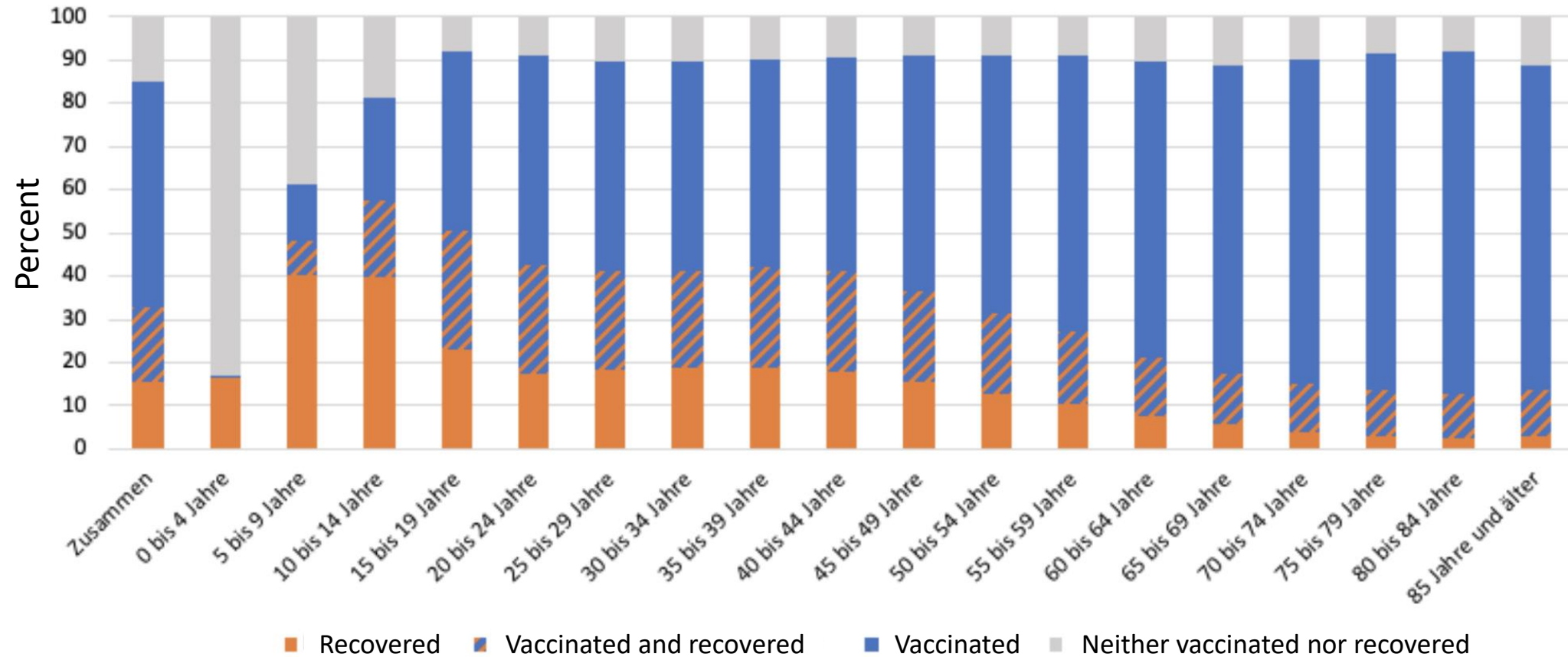
Europe

Italian study shows ventilation can cut school COVID cases by 82%

Reuters

Vaccination rate in children is too low

Vaccinated/Recovered – different age groups in Austria



Four pillars for safe kindergartens and schools

- Vaccination (3x): Pupils, kindergarten teachers, teachers
- Clean air: CO₂-sensors and exhaust fans
- Frequent testing: PCR (and antigen tests)
- Masks: schools, at high incidences in the respective age group

