

CORONAVIRUS (COVID19)



EDUCATION RESTART

UPDATE ON THE AVAILABLE
SCIENTIFIC EVIDENCE ON
COVID-19

Published 19 June 2020



Department of
Education
www.education-ni.gov.uk

Update on the available scientific evidence on COVID-19

Scientific advice and information on COVID-19 has been provided to the UK Government by the Scientific Advisory Group for Emergencies (SAGE). SAGE is responsible for ensuring that timely and coordinated scientific advice is made available to decision makers to support UK cross-government decisions in the Cabinet Office Briefing Room (COBR). The advice provided by SAGE does not represent official government policy. All papers that have been released by SAGE are available [here](#). SAGE relies on external science advice and on advice from expert groups. During COVID-19 this includes the:

- [New and Emerging Respiratory Virus Threats Advisory Group \(NERVTAG\)](#)
- [Scientific Pandemic Influenza Group on Modelling \(SPI-M\)](#) (Department for Health and Social Care)
- Independent Scientific Pandemic Influenza Group on Behaviours (SPI-B)

These groups consider the scientific evidence and feed in their consensus conclusions to SAGE. The most relevant evidence with respect to schools is:

- [Spi-m-o-consensus-view-school-closures-170320-sage17.pdf](#) considered at the SAGE meeting on 17/18 March
- [Easing-restrictions-on-activity-and-social-distancing-comments-suggestions-spi-b-01042020.pdf](#) considered on 22 April
- [Uncover-transmission-by-children-evidence-review-010420-sage23.pdf](#) considered on 7 April
- 3 papers considered at 30 April meeting:
 - [Viner-eggo-susceptibility-transmission-in-children-updates-250420-sage30.pdf](#)
 - [Sage-sub-group-modelling-behavioural-science-relaxing-school-closures-sage30.pdf](#)
 - [Spi-b-scenarios-input-sage30.pdf](#)
- 3 papers considered at 1 May meeting:
 - [Dutch-parliament-role-of-children-in-transmission-220420-sage31.pdf](#)
 - [Susceptibility-transmission-in-children-sage30.pdf](#)

- [Modelling-behavioural-science-relaxing-school-closures-sage31.pdf](#)

UK Government Position

The Department for Education (DfE) has led the work to support the UK government as it makes decisions relating to schools taking account of the advice from SAGE. It has provided an explanatory note of the scientific evidence and information on coronavirus which sets out current understanding based on the above SAGE papers [here](#).

The overall conclusion is that:

- there is high scientific confidence that children of all ages have less severe symptoms than adults if they contract coronavirus and there is moderately high scientific confidence that younger children are less likely to become unwell if infected with coronavirus;
- limiting the numbers of children going back to school and college initially then gradually increasing numbers, guided by scientific advice, reduces risk of increasing the rate of transmission; and
- schools and other settings can make changes to how they are organised and put measures in place to reduce risks.

As a result, DfE have taken the decision to begin reopening schools in England on a phased basis from 1 June 2020 and issued a range of guidance to support schools as they implement this decision.

Scientific evidence base in Ireland

The Irish government are working on a similar timeline to Northern Ireland with a view to a reopening of educational settings from September. Irish advice on responding to COVID19 has been prepared by the Health Information Quality Authority and is available [here](#). Of particular relevance is advice on transmission in children which is available [here](#).

Other Countries noted as successfully opening schools

The link below is to translated Danish guidance for 3-5 yr olds (as yet we can't find a translated version of the school guidance but it we understand it follows same principles)

<https://family.co/blog/covid-19/denmark-reopening-child-care-corona/>

The Belgian Department of Education guidance is available (you will need to let Chrome or Edge translate it for you)

<https://onderwijs.vlaanderen.be/nl/heropstart-van-de-lessen-op-school>

Science and Controlling the Virus

Transmission of coronavirus mainly occurs via respiratory droplets generated during breathing, talking, coughing and sneezing. These droplets can directly infect the respiratory tracts of other people if there is close contact. They also infect others indirectly. This happens when the droplets get onto and contaminate surfaces which are then touched and introduced into the mouth or eyes of an uninfected person.

Another route of transmission is via aerosols (extremely small droplets), but this is in relation to medical procedures and only relevant for a very small number of children in education settings.

As a consequence, the key public health interventions to contain the spread of the virus are:

- Minimizing contact with individuals who are unwell – heralding the guidance on self-isolation.
- Hand hygiene – thus the guidance on regular handwashing
- Respiratory Hygiene – thus the key message of Catch It, Kill It, Bin it.
- Cleaning surfaces that may be affected – thus the guidance on appropriate cleaning within a range of settings: Hospitals, Transport, educational settings.

Underlying this, is longstanding scientific understanding on how hand hygiene and cleaning impact on viruses. It seems counter intuitive, but simple soap is highly affective with Sars-CoV-2, the coronavirus and indeed most viruses. This is because the virus is a self-assembled nanoparticle in which the weakest link is the lipid (fatty) bilayer. Soap dissolves the fat membrane and the virus falls apart like a house of cards and dies or rather, it becomes inactive.

Alcohol based products, which pretty much includes all “disinfectant” products, contain a high-percentage alcohol solution (typically 60-80% ethanol) and kill viruses in a similar fashion. But soap is better because you only need a fairly small amount of soapy water, which, with rubbing, covers your entire hand easily. Whereas you need to literally soak the virus in ethanol for a brief moment, and wipes or rubbing a gel on the hands does not guarantee that you soak every corner of the skin on your hands effectively enough. Soap is therefore best but alcohol-based sanitiser can be useful when soap is not handy or practical.

A QUB commentary paper outlining this is available [here](#).