

Discussion Paper



Recommendations for Infection Prevention and Control in School Sanitation and Hygiene during the COVID-19 Pandemic

School Sanitation and Hygiene in Times of the COVID-19 Pandemic

Version 06.05.2020 (translated from German)

"How can German schools ensure infection prevention and control in school toilets and washrooms?"

Svenja Ksoll, Thilo Panzerbieter, Johannes Rück (German Toilet Organization e.V.)

Prof. Dr. Martin Exner, Dr. Jürgen Gebel, Valentina Grossi, Carola Ilschner, Dr. Andrea Rechenburg (Institute for Hygiene and Public Health, IHPH)

Stephan Wassmuth (Federal Council of Parents)

Background

In order to ensure adequate protection against infection when the schools reopen, comprehensive sanitation and hygiene measures are urgently needed and must also be sustained in the long term. This discussion paper is intended to make a short-term contribution to ensuring hygiene after the reopening of schools, as well as a long-term impulse for prioritising sanitation and hygiene in schools in Germany. The COVID-19 crisis should be seen as a chance to improve the current status in the long term.

This statement is an initiative of the German Toilet Organization (GTO) and was developed in cooperation with the Institute for Hygiene and Public Health of the University of Bonn. It contains a draft for concrete recommendations for immediate measures to ensure good hygiene and sanitation in schools in the COVID-19 crisis. The Federal Parents' Council is a co-signatory of this statement and expressly supports this discussion. The Federal Parents' Council coordinates parental involvement at the federal level.

The GTO has been committed to sustainable improvement of sanitation and hygiene in German schools for over 10 years. From countless visits and co-operations with more than 60 schools, as well as our own surveys, we know the grievances and their causes in detail. Most recently in 2018-19, in partnership with the Federal Parents' Council and the Federal Pupils' Conference, GTO carried out the second nationwide competition "Toiletten machen Schule®". At the initiative of the GTO, members of the German Bundestag discussed the topic for the first time on February 14, 2019, and highlighted the fact that poor hygienic conditions in schools pose a public health risk.¹

GTO's relevant expertise does not only stem from its work in Germany, but also from its international commitment. GTO runs school sanitation and hygiene education projects in several low- or middle-income countries and builds the capacity of humanitarian aid workers in water, sanitation and hygiene, who are deployed in epidemiological crises such as Cholera or Ebola, among others. This discussion paper builds on relevant experience at home and abroad.

By acting sustainably at home, Germany can now also become a global pioneer in promoting this largely neglected topic. Political prioritization is urgently needed, since one in three schools worldwide does not have a safe school toilet and almost half do not have hand washing facilities with soap and running water.² For effective pandemic prevention, this are intolerable conditions in a

¹ German Toilet Organization (2019): Kurzbericht zum Parlamentarischen Frühstück zum Thema Schultoiletten im deutschen Bundestag. Berlin (German only). [Kurzreport](#)

² WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (2018): Drinking Water, Sanitation and Hygiene in Schools. Global baseline report 2018.

globalised world. The Sustainable Development Goals of the United Nations demand that safe basic sanitation and hygiene must be guaranteed in all schools by the year 2030.

Initial situation before the COVID-19 crisis

- > Sanitation is a taboo subject in schools and politics in Germany, so that effective initiatives to improve school toilets are rare. This applies to all levels: schools, local school administrations, ministries of education.
- > Poor, neglected infrastructure, inadequate cleaning services in all-day operation, as well as a lack of pedagogical concepts to increase the appreciation of the sanitary supply lead to the avoidance of school toilets³ and promote vandalism.⁴
- > Poor hygienic conditions represent a public health risk with high consequential costs. Although washing hands with soap has, according to scientists, a similarly high significance for public health as vaccinations, it is not specifically and systematically promoted or treated in class.

Current situation in the COVID-19 crisis

- > Although children more often than adults have a mild or asymptomatic course of the disease, the evidence currently available, and in particular the study led by Christian Drosten at the Charité hospital in Berlin, suggests that they are just as susceptible, have the same viral load in the mouth-throat area and thus transmit the disease in the same way as adults do.⁵ Children also find it more difficult to keep a distance of at least 1.5 m and to wash their hands sufficiently, thoroughly and regularly.⁶
- > In order to ensure adequate protection against infection when the schools reopen, comprehensive measures in the area of sanitation and hygiene are urgently needed and must be ensured in the long term.
 - Even if the faecal-oral transmission path of the COVID-19 infection has so far been rather excluded, hygiene measures and adherence to distance rules are elementary, especially in school toilets and washrooms, to prevent droplet or smear infections via surfaces.⁷
 - In school toilets and washrooms, surfaces such as doors, handles, taps or basins are touched with high frequency. To prevent smear infection, surfaces in these rooms must be cleaned professionally according to a fixed plan.
 - In school toilets and washrooms, pupils find the most important place for their own hygiene practice. Here they not only wash their hands, but also blow their nose or cough off and can remove used hygiene products or sputum.
 - This is the only place where pupils find the privacy they want and remain unattended. For this reason, school toilets are also a social room where people meet and exchange ideas in direct contact.

³ Grossi V., Klimschak E., Rechenburg A., Shinee E., Schmoll O. (2016): The situation of water, sanitation and hygiene in schools in the pan-European region. Copenhagen: WHO Regional Office for Europe.

⁴ S. Burton (2013): Toilets unblocked: a literature review of school toilets. Edinburgh: Scotland's Commissioner for Children and Young People.

⁵ Drosten et al. (2020): An analysis of SARS-CoV-2 viral load by patient age. Charité - Universitätsmedizin Berlin; published 30 April, 2020: https://zoosen.charite.de/fileadmin/user_upload/microsites/m_cc05/virologie-ccm/dateien_upload/Weitere_Dateien/analysis-of-SARS-CoV-2-viral-load-by-patient-age.pdf;

⁶ Robert Koch Institut (2020): Wiedereröffnung von Bildungseinrichtungen – Überlegungen, Entscheidungsgrundlagen und Voraussetzungen, Epidemiologisches Bulletin 19|2020; online vorab: 23.04.2020 (German only): https://www.rki.de/DE/Content/Infekt/EpidBull/Archiv/2020/Ausgaben/19_20_02.pdf?__blob=publicationFilehttps://www.rki.de/DE/Content/Infekt/EpidBull/Archiv/2020/Ausgaben/19_20_02.pdf?__blob=publicationFile

⁷ So far, there is no reliable scientific evidence that faecal-oral transmission of COVID-19 is a relevant transmission route. According to the information of the RKI, first study results indicate that the faecal-oral transmission route cannot be excluded, but in reality it is probably very rare. https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Steckbrief.html#doc13776792bodyText1

- > Despite the announcement of the reopening of the schools with a concrete date, there are still no conclusive concepts to address sanitation and hygiene problems.
- > We do not know of any committee that consults the expertise of sanitation and hygiene experts, epidemiologists, virologists and teachers as well as student and parent representatives in order to develop sustainable recommendations.
- > The recommendations currently under discussion regarding sanitary hygiene relate to the equipment of toilets and washrooms with disinfectant dispensers and top-down communication of hygiene messages. Hardly discussed, however, are
 - the existing barriers to good hygiene practice (improper equipment, avoidance of rooms, insufficient cleaning, and operation and maintenance),
 - the motivations and behavioural psychological background of misconduct and vandalism
 - the reduction of misconduct through active taboo breaking and integrating the topic into the curriculum.

Short-term solutions for politics and administration

- > Development of effective and easy-to-implement guidelines to ensure short-term protection against infection in school toilets
 - When setting up working groups on hygiene behaviour at the level of the Standing Conference of the Ministers of Education and Cultural Affairs of the Federal States (KMK) or the Ministries of Education of the Federal States, the expertise of the above-mentioned stakeholders and experts is included, and existing hygiene plans and guidelines/recommendations are used as a basis.
 - Use and promotion of publishers of existing training concepts and materials for the promotion of good sanitary hygiene in schools, so that they adapt their offers to the specific requirements of the COVID-19 crisis and make them available to schools free of charge via the ministries of education and school authorities. Specific offers should be made for different target groups:
 1. teaching concepts, educational materials, teacher training, online training, methods for hygiene and behaviour training in class. Examples are the inspiration package of the "Toiletten machen Schule®" competition of the GTO as well as the concept of the "Junior Hygiene Inspector" of the Institute for Hygiene and Public Health of the University Hospital Bonn.⁸ In a constructively designed peer approach, the students, together with the school (teachers, school management, caretakers, etc.), take on tasks and responsibilities that train them in the perception of hygiene risks and in the maintenance of sanitary rooms as a "feel-good place", while at the same time awakening their interest in the subject.
 2. recommendations and advisory services for authorities and offices responsible for the operation and maintenance of school toilets.
 3. recommendations and advisory services for authorities responsible for infrastructure and buildings to improve the equipment and infrastructure.
- > Education and health policy and relevant institutions such as the KMK, the Ministries of Education and Cultural Affairs, the German Association of Towns and Municipalities in representation of the municipal school authorities, the Federal Ministry of Health and its authorities (esp. the Federal Centre for Health Education) and healthcare institutions (esp. the Robert Koch Institute) prioritise the topic and act as mediators. Together they use their high-

⁸ The concept "Junior Hygiene Inspector" is implemented in sponsorship by the Bundesverband der Hygieneinspektoren e.V. (BVH) and in cooperation with the Bundesverband der Ärztinnen und Ärzte im Öffentlichen Gesundheitsdienstes e.V. (BVÖGD).

reach communication channels to contribute to education and generate positive public attention, which helps to break the taboo on the subject.

Draft: Recommendations for immediate measures in schools to ensure sanitary hygiene

Important note: The general regulations and rules of the health authorities and school authorities and the hygiene plans of the schools apply. The following recommendations for school sanitation and hygiene are based on these and can be a useful supplement to them. For general hygiene in schools after reopening, we refer in particular to the recommendations for action of the [German Society of Hospital Hygiene et al.](#)⁹

1. Distance rules and mouth and nose protection

Especially in school toilets and washrooms, where pupils retreat, also to blow their nose and cough, the distance rules of at least 1.5 m to the next person should be observed.

- Under no circumstances should more pupils be admitted at the same time than the number of toilets and hand basins available.
- Pupils should use the sanitary rooms only as briefly as possible and leave them again quickly.
- Every second urinal should be blocked.
- During breaks, it is recommended that a break supervisor be placed in front of the very frequently used school toilets to avoid student crowding.
- In order to equalize the use, visits to the toilets should also be permitted during lessons.
- Precautions should be taken to ensure that distances can be maintained even if queues form. This includes indicating the queue position as well as distance markings (note routing).
- Wear a mouth and nose protection in all situations in which a safe distance cannot be controlled.
- In case of an obligation to wear a mouth and nose protection: Pupils should be instructed in the correct use of the mouth and nose protection.¹⁰ The IHPH has published a target group-oriented leaflet in the portal "Hygiene tips for kids".

2. Washing hands with soap

Correct hand washing with soap and water and drying hands with disposable towels at all critical times¹¹ should be practiced, encouraged and practiced with the pupils.¹² Barriers that prevent pupils from doing so must be removed.

- Demonstrations or playful exercises should be carried out in class to practise proper hand washing.¹³ A basic knowledge transfer on the function of soap is recommended.
- To promote the correct hygiene behaviour, educational materials should be placed in clearly visible places (e.g. at the mirror, at the door), which remind of corresponding

⁹ Martin Exner, Peter Walger, Ute Teichert, Caroline Herr (2020): Bekämpfung der COVID-19-Epidemie in Deutschland – Handlungsempfehlungen für Gesundheitsämter für die infektiös-hygienische Überwachung der Durchführung von schriftlichen Schulprüfungen (Abitur, ZP 10), sonstiger Abschlussprüfungen in Ausbildungsberufen und in der Universität und zum Wiederbeginn des Schulbetriebes. Stellungnahme von DGKH, BVÖD und GHUP, Berlin, 16 April, 2020 (German only):

https://www.krankenhaushygiene.de/ccUpload/upload/files/2020_04_16_Stellungnahme-DGKH-BVOEGD-GHUP-Praeventivkonzept.pdf

¹⁰ Direct download of the leaflet for handling everyday masks (German only): https://hygiene-tipps-fuer-kids.de/files/download/pdf/Medienpaket/Phase3_Elternschulung/3.13Alltagsmasken_COVID_2020_27April.pdf

¹¹ Recommended critical times: 1) after using the toilets, 2) after blowing one's nose or coughing, 3) before preparing food and before and after eating, 4) after touching public surfaces, 5) when coming home, 6) after handling animals, 7) before and after handling sick people, 8) after contamination of hands.

¹² German Toilet Organization (2020): Corona Prevention; <https://germantoilet.org/en/capacity-development/corona-praevention-haendewaschen-mit-seife/>

¹³ Examples (German only): Hygienetipps für Kids, „Experiment leuchtende Hand“ - [Händewaschen – bringt das was? Praktische Empfehlungen zur Vermittlung der Händehygiene](#); „Gut zu Wissen- Portal“ der GTO: [Übung – „Da siehst du was, was du nicht siehst“ \(Download\)](#)

actions and rules. Ideally, these - with verification of correctness - should be designed by pupils, for example in class.

- Especially in elementary schools, repeated practice and, if necessary, a check on hand washing by the break supervisors is recommended. The supervision can be done, for example, by opening the entrance door to the washroom. However, the disturbance of the pupils' privacy must be kept as low as possible.
- Hand drying is also important, as wet hands are more susceptible to contamination with pathogens. Single use paper or cloth towels should be provided for this purpose. Hot air blowers do not meet the current requirements of infection protection.

3. Availability of hygiene products

One barrier that can prevent effective hand washing is the lack of soap, disinfectant and disposable paper towels. These must always be available in sufficient quantities.

- An appropriate refill service can be organised by caretakers or by other representatives. Students should be encouraged to report missing consumables.
- It should be noted that the consumption of these products will rise sharply due to increased hygiene behaviour. We therefore recommend documenting the consumption at the beginning and planning the purchase, stocking and refilling cycles on the basis of average values (consumption per pupil). The return of further pupils to school must be included in the calculation.
- Carrying your own towels and soap is not recommended, or it can only be approved under strict conditions for hanging the towels on separate hooks and storing the soap.

4. Hand disinfection

Effective hand washing with soap is sufficient to prevent infection. Nevertheless, the introduction of hand disinfection is recommended for risk groups and everywhere where no hand washing facilities are available.

- Also, for hand disinfection, rules such as the consistent wetting of all hand areas and the use of the correct products must be observed (if possible VAH-certified, spectrum of activity bactericidal, levurocidal and at least limited virucidal, otherwise observe the general decree for hand disinfection products by the Federal Institute for Occupational Safety and Health, BAuA).¹⁴
- The installation of robust dispensers on the wall is strongly recommended, especially to prevent theft of the dispensers and disinfectants and misuse.¹⁵ Otherwise, dispensers should only be kept in the entrance areas or classrooms under the supervision of teaching staff.
- Hand disinfectants should not be used for surface disinfection.

5. Cleaning, disinfection and ventilation of school toilets and washrooms

A continuous ventilation during school operation and at least once-daily cleaning of the school toilets and disinfection of the surfaces. An extension to at least two cleaning cycles per day is recommended for all-day operation, especially after toilet breaks, with a focus on frequently touched surfaces such as doors, handles, taps or basins.

- For disinfection, surface disinfectants with proven bactericidal, levurocidal and at least limited virucidal effectiveness should be used, preferably VAH-certified surface disinfectants or disinfectants in accordance with the BAuA's exemption decree of April 2,

¹⁴ VAH Communication on quality criteria for hand disinfectants in times of COVID-19 (German only): www.vah-online.de und VAH-Liste: <https://vah-liste.mhp-verlag.de>

¹⁵ Tatzel J, Heeg P: Verwendung von Desinfektionsmitteln für Kinder. HygMed 2019;9. Further (German only): <https://hygiene-tipps-fuer-kids.de/fragen-und-antworten>

2020.^{16 17 18} If these are not available, the surfaces can be wiped with 0.1% chlorine bleach (NaClO) after cleaning with a neutral cleaner, taking all occupational safety measures into account.¹⁹²⁰

- Cleaning personnel should be trained how to carry out disinfection correctly.
- Cleaning personnel should wear disposable gloves and face masks during cleaning and be trained how to put them on and use them correctly.
- After confirmed or suspected COVID-19 infections, disinfection and cleaning should only be carried out with personal protective equipment consisting of disposable gloves, disposable gown, FFP2 mask and protective goggles.²¹

6. Drinking water quality

To ensure drinking water quality of the cold and hot water system, a targeted flushing programme should be carried out in consultation with the health authorities before schools are reopened. Due to the long closure of the schools, the risk of a deterioration of the water quality resulting from stagnation in the pipes is greatly increased.

Long-term solutions for politics and administration

- > An active breaking of taboos as well as positive communication promotes a change in awareness on all levels.
- > Conducting statistical surveys of the actual quality of supply and use of school toilets in Germany.
- > Coupling renovation with educational approaches in order to put investments to long-term use.
- > Anchoring hygiene and sanitation - analogous to the water cycle - in curricula and in school education.
- > Providing the necessary financial resources and quality standards for regular and hygienic cleaning (in heavily frequented toilets, two cleaning cycles per day may be necessary).
- > Increasing municipal investments in school infrastructure.
- > Organising municipal services of general interest in a participatory manner: All actors must be involved in planning and design processes (establishment of a culture of caring).
- > Scientifically investigating the effects of poor hygiene in schools on public health and the costs to the health system.
- > Global learning about sanitation enables a change of perspective and increases the appreciation of the own school toilet.

Next steps

- > The GTO offers its expertise, materials and methods to the institutions of the education and health system, both for short-term dialogue and in the context of long-term cooperation.

¹⁶ Robert Koch Institut (2020): Hinweise zu Reinigung und Desinfektion von Oberflächen außerhalb von Gesundheitseinrichtungen im Zusammenhang mit der COVID-19-Pandemie; last updated: 4 April 2020 (German only):

https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Reinigung_Desinfektion.html

¹⁷ VAH List of Disinfectants: <https://vah-liste.mhp-verlag.de/en/>

¹⁸ BAuA Decree on surface disinfection of 2 April, 2020 (German only):

<https://www.baua.de/DE/Angebote/Aktuelles/Meldungen/2020/2020-04-09-Flaechendesinfektion.html>

¹⁹ Note: Surface disinfection with chlorine bleach can lead to chlorine gas formation, especially in combination with acidic cleaners (for the toilet). Under no circumstances should students or untrained teachers do this.

²⁰ ECDC Technical Report: Disinfection of environments in healthcare and non-healthcare settings potentially contaminated with SARS-CoV-2, März 2020.

²¹ Ibid.

Links

GTO information and resources

- ❖ [Tips for washing your hands properly](#)
- ❖ ["Toilets make school - Good to know": practical tips, tricks and methods for schools on the subject of school toilets and hygiene](#) (German only)
- ❖ [Website "Toiletten machen Schule®" competition](#)
- ❖ [Teaching materials for schools on the global issues of sanitation and hygiene](#)

Information on the Parliamentary Breakfast on the subject of school toilets in the German Bundestag

- ❖ [Short report](#) (German only)

Information and contents of the Institute for Hygiene and Public Health of the University of Bonn (German only)

- ❖ [Hygiene-Tipps für Kids - Toilettenhygiene](#)
- ❖ [Hygiene-Tipps für Kids – FAQ Handwaschbecken](#)
- ❖ [Hygiene-Tipps für Kids – Der Hygieneinspektor – Gute Beispiele aus der Praxis](#)
- ❖ [Hygiene-Tipps für Kids – Toiletten-Tipps - Klobüchlein](#)
- ❖ [Hygiene-Tipps für Kids – Toiletten-Tipps – Merkblatt](#)
- ❖ [Hygiene-Tipps für Kids – Merkblatt für den Umgang mit Alltagsmasken](#)

Robert Koch Institute: Considerations, bases for decisions and prerequisites for the reopening of educational institutions

- ❖ [Epidemiologisches Bulletin vom 23.04.2020](#) (German only)

Statement of the German Society for Hospital Hygiene (DGKH), Federal Association of Physicians of the Public Health Service (BVÖGD), Society for Hygiene, Environmental Medicine and Preventive Medicine (GHUP)

- ❖ [Recommendations for action for health authorities for the infection-hygienic monitoring of the implementation of written school examinations and the restart of school operations](#) (German only)

Global presentation of approaches and corona materials for schools of the WASH in Schools Network

- ❖ [Knowledge Map: WASH in Schools and Coronavirus](#)

Global UNICEF handouts on COVID 19 monitoring in schools

- ❖ [Interim Guidance for COVID-19 Prevention and Control in Schools](#)

Information from the Robert Koch Institute on cleaning and disinfection of surfaces outside health care facilities in connection with the COVID-19 pandemic

- ❖ [Website of the RKI](#) (German only)

Technical report on disinfection of public facilities of the European Centre for Disease Prevention and Control (ECDC)

- ❖ [Technical Report: Disinfection of environments in healthcare and non-healthcare settings potentially contaminated with SARS-CoV-2](#)