



Medizinische Fakultät  
der Martin-Luther-Universität  
Halle-Wittenberg



Universitätsklinikum  
Halle (Saale)

## Press information

### **Good ventilation technology, food consumption in the seating areas, multiple entrances: University Medicine Halle (Saale) releases results of the RESTART-19 research project**

The events industry and the cultural and sports sectors have been waiting in anticipation for the announcement of the results of the RESTART-19 research project of *University Medicine Halle (Saale)*. One portion of the project was a concert in the Quarterback Immobilien Arena Leipzig with singer Tim Bendzko on August 22, 2020. During the concert, each participant received a contact tracer, a small device which collected the scientific data. The data was evaluated, modeled, calculated and verified over a period of several weeks. Air flow simulations were also carried out. Almost exactly two months later, on October 29, 2020, the findings and corresponding science-based recommendations are ready to be presented. The results will also be published in the coming days.

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#### An overview of the key results:

- The total number of contacts lasting several minutes is relatively low during the event and can be considerably reduced through hygiene concepts.
- A higher number of contacts occur during admission to the venue and in the breaks. Thus, planning should focus on these aspects.
- Poor ventilation can significantly increase the number of people exposed to a risk of infection.
- Around 90 percent of the study participants are not put off by the idea of wearing a mask and are willing to continue to do so in order to be able to experience such events again. (Survey conducted following the concert experiment.)
- If hygiene concepts are adhered to, additional impacts on the pandemic as a whole are low to very low.

“The results are consistent with our hypothesis that the contacts that do occur at an event do not involve all participants. Therefore, events could also take place under specific conditions during a pandemic. The most important finding for us was understanding how crucial it is to have good ventilation technology. This is key to lowering the risk of infection,” says Dr. Stefan Moritz of University Medicine Halle (Saale), who led the study. These findings resulted from flow

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simulations conducted in conjunction with an engineering company. “Together with this engineering company, we recreated the entire Quarterback Immobilien Arena as a computer model and divided it into small cubes. We then simulated how different ventilation scenarios affected the distribution of the aerosol particles,” Moritz explains.

“We developed a detailed epidemiological simulation model in order to investigate the effects of transmission on the spread of the epidemic throughout the population as a whole,” explains Professor Rafael Mikolajczyk from the Institute of Medical Epidemiology, Biometrics and Informatics in the University of Halle’s Faculty of Medicine. “We drew on existing models of pandemic planning and adapted them accordingly.”

Based on their findings, the researchers have derived the following recommendations:

- Event venues require ventilation technology that provides adequate ventilation and a regular exchange of air. It makes sense to create an evaluation system for suitable ventilation technology.
- Hygiene concepts must continue to be in place for as long as the pandemic persists: compulsory use of face masks in the arena, hygiene stewards to ensure compliance with the hygiene standards.
- The seating plan and thus the number of guests should be adjusted based on incidence.
- The venue should be accessed through several entrances to direct visitor flows. Waiting areas should be moved outdoors.
- During the event, food should be eaten in the seating areas to prevent crowding and long periods of contact at snack bars.

“The concept of the project was compelling, and we would like to thank all of the participants who took part. They generated the data which we can use to make science-based political decisions. They generated the data that will also benefit others all over Germany and even around the world who would like to resume going to indoor concerts or sporting matches. We are glad that the State of Saxony-Anhalt and the State of Saxony, made this project possible with their financial support,” says Prof. Dr. Michael Gekle, dean of the Faculty of Medicine in Halle.

According to the Minister of Science, Professor Armin Willingmann: “The corona pandemic is currently intensifying throughout Germany. This reality makes what we learn from ‘RESTART-19’ all the more valuable. The events industry, in particular, must be equipped with the knowledge and strategies it needs to be able to responsibly organize concerts, festivals and trade fairs despite Corona. The researchers at University Medicine Halle have done real pioneering work here on behalf of the states of Saxony-Anhalt and Saxony - even though the road to a new normal is very long.”

“From our point of view, the experiment was an absolute success, even though we did not reach the number of participants we had originally planned for. It was

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fun and was not only a scientific, but, indeed, a cultural experience as well. We thank singer Tim Bendsko who, together with his band, made this simulation a live-concert experience,” says Dr. Stefan Moritz in conclusion.

Further information about the project and photo material can be found at:  
[www.restart19.de](http://www.restart19.de)

The press conference is available (in German) on our YouTube-channel:  
[www.youtube.com/unimedhal](http://www.youtube.com/unimedhal)

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