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# Study of COVID-19 transmission in Belgian French-speaking primary schools of the Federation Wallonia – Brussels in Belgium

**Submission date**
06/04/2022

**Recruitment status**
No longer recruiting

**Registration date**
20/04/2022

**Overall study status**
Completed

**Last Edited**
27/01/2025

**Condition category**
Infections and Infestations

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

## Plain English summary of protocol

Background and study aims
In order to limit the transmission of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and the spread of coronavirus disease (COVID-19), many countries closed their schools as a preventive measure. However, there was a lack of evidence regarding the role of children in the transmission of the virus. It has been shown that the pandemic and school closures can have a significant impact on the well-being of children. In Belgium, this study invited 2488 children and 444 school attenders of 11 primary schools of the Federation Wallonia Brussels. Every participant performed a serological antibody test (finger prick) only at the inclusion date, saliva testing (PCR), and answered questionnaires for 6 weeks. This study aimed to describe the transmission dynamics of SARS-CoV-2 in the primary schools of Belgium. The results of the study should contribute to improved decision making regarding measures for schools and children in the context of current and future pandemics.

Who can participate?
Children from 6 to 12 years of age and school attenders from selected primary schools of the Federation Wallonia Brussels in Belgium

What does the study involve?
All participants (children and adults school attenders) were tested on the inclusion day with a saliva test and a rapid finger-prick blood test to measure SARS-CoV-2 antibodies. All participants were invited to fill out a questionnaire in a paperback format. Over six consecutive weeks, all participants were tested once a week with a saliva test and were invited to complete a follow-up questionnaire to assess any symptoms compatible with a SARS-CoV-2 infection or a contact with a confirmed SARS-CoV-2 case or a travelling return from a risk area.

What are the possible benefits and risks of participating?
There was no immediate direct benefit to participants. There will be benefits on future decision making regarding COVID-19 and future pandemics. The extremely rare risk was a mild finger bruise for testing.

Where is the study run from?
Université Catholique de Louvain (UCLouvain) (Belgium)

When is the study starting and how long is it expected to run for?
September 2020 to May 2025

Who is funding the study?
Federation Wallonia Brussels (Belgium)

Who is the main contact?
Prof. Annie Robert
annie.robert@uclouvain.be

### Study website
https://www.sesa.ucl.ac.be/Dynatracs/

## Contact information

### Type(s)
Principal Investigator

### Contact name
Mrs Annie Robert

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## Additional identifiers

### EudraCT/CTIS number
Nil known

### IRAS number

### ClinicalTrials.gov number
NCT05046470

### Secondary identifying numbers
2020/16NOV/552

## Study information

### Scientific Title
SARS-CoV-2 transmission in Belgian primary schools of the Federation Wallonia - Brussels: an epidemiological pilot study (DYNAtracs)

## Acronym
DYNAtracs

## Study objectives
The investigators hypothesize that children are less likely to become infected in the school environment, compared to the household or outside the school setting. Primary schools do not play a major role in SARS-CoV-2 spreading. They hypothesize that the incidence level in schools is mainly a consequence of community transmission ie. the incidence level in households and that the secondary attack rate in schools remains at least five times lower than the transmission level in households.

## Ethics approval required
Old ethics approval format

## Ethics approval(s)
Approved 20/11/2020, Hospital-Faculty Ethics Committee Saint-Luc - UCLouvain (Promenade de l' Alma 51 bte B1.43.03, 1200 Brussels, Belgium; +32(0) 2 764 55 14; commission.ethique-saintluc@uclouvain.be), ref: 2020/16NOV/552

## Study design
Prospective non-interventional observational longitudinal study

## Primary study design
Observational

## Secondary study design
Longitudinal study

## Study setting(s)
School

## Study type(s)
Screening

## Participant information sheet
See study outputs table

## Health condition(s) or problem(s) studied
COVID-19 (SARS-CoV-2 infection)

## Interventions
Sampling procedure
Each participating primary school will be considered as a cluster. Eight schools will be chosen by purposive sampling on three criteria: either high or low size of the school, a school within an area with either a high or a low incidence of SARS-CoV-2 on 06/05/2020, the first wave of COVID-19 in Belgium, and a school with either a high or a low socioeconomic level (Belgian 20-point-scale ISE index superior to thirteen or inferior to seven). As direct partners in the project, the ONE ("Office de la naissance et de l'enfance") and the PSE teams ("Promotion de la Santé à l'Ecole") will give a list of schools corresponding to these three criteria.

All participants (children and adults school attenders) will be tested on the inclusion day with a salivary SARS-CoV2 test and a rapid serological test by finger prick (AVIOQ®) to determine the seroprevalence of SARS-CoV-2. All participants will be invited to fill out a questionnaire in a paperback format. During six consecutive weeks, all participants will be tested once a week with a salivary test and will be invited to complete a follow-up questionnaire to assess any symptom compatible with a SARS-CoV-2 infection or a contact with a confirmed SARS-CoV-2 case or a travelling from a risk area.

### Intervention Type
Other

### Primary outcome measure
SARS-CoV-2 transmission measured by polymerase chain reaction (PCR) 6 times over 6 weeks

### Secondary outcome measures
1. Seroprevalence measured using a lateral flow test (AVIOQ) by finger prick on the day of inclusion
2. Potential exposition of SARS-CoV-2 measured using questionnaires over 6 weeks

### Overall study start date
01/09/2020

### Completion date
31/05/2025

## Eligibility

### Key inclusion criteria
All children between the ages of 6 and 12 years and all school attenders from selected primary schools were invited to participate

### Participant type(s)
Other

### Age group
Mixed

### Lower age limit
6 Years

### Upper age limit
12 Years

### Sex
Both

### Target number of participants
The expected number of children was 2400, the expected number of adult school attenders was 200, and the expected number of classes was 72.

### Total final enrolment
1233

### Key exclusion criteria
Refusal to provide written informed consent before enrolment

### Date of first enrolment
14/01/2021

### Date of final enrolment
18/05/2021

## Locations

### Countries of recruitment
Belgium

### Study participating centre
**UCLouvain**
Clos Chapelle-aux-champs, 30 bte B1.30.13
Brussels
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## Sponsor information

### Organisation
Université Catholique de Louvain

### Sponsor details
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mathilde.dekeukeleire@uclouvain.be

### Sponsor type
University/education

### Website
https://uclouvain.be

### ROR
https://ror.org/02495e989

# Funder(s)

**Funder type**
Government

**Funder Name**
Fédération Wallonie-Bruxelles

**Alternative Name(s)**
French Community of Belgium, Federation Wallonia-Brussels, Communauté Française de Belgique

**Funding Body Type**
Government organisation

**Funding Body Subtype**
Local government

**Location**
Belgium

# Results and Publications

**Publication and dissemination plan**
The results of the PCR, AVIOQ and questionnaires will be published in three publications. Planned publication in a high-impact peer-reviewed journal.

**Intention to publish date**
01/10/2022

**Individual participant data (IPD) sharing plan**
Consent was obtained from each participant. The data is kept for 20 years. All data was coded with a unique number containing no personally identifiable information. A sequential identification number was automatically allocated to each participant enrolled in the study. This number identified the participant and is composed of 12 digits: a two-digit number allocated to the school he/she is attending; a two-digit number allocated to the class, with a first digit for the grade, or 9 for adults and a second digit numbering classes within each grade; a two-digit serial number within the class he/she is in; a two-digit control number (such as modulo 89 of the 8 first digits); a two-digit number corresponding to the calendar week of data collection. Data will be shared after approval by the ethics committee. They are available upon request to Annie Robert (annie.robert@uclouvain.be).

**IPD sharing plan summary**
Available on request

## Study outputs

| Output type | Details | Date created | Date added | Peer reviewed? | Patient-facing? |
|---|---|---|---|---|---|
| Participant information sheet | Children | | 12/04/2022 | No | Yes |
| Participant information sheet | Parents | | 12/04/2022 | No | Yes |
| Participant information sheet | School attenders | | 12/04/2022 | No | Yes |
| Results article | | 06/10/2022 | 17/10/2022 | Yes | No |
| Results article | | 30/06/2023 | 03/11/2023 | Yes | No |
| Results article | | 04/09/2023 | 03/11/2023 | Yes | No |