COVID-19 SURVEILLANCE IN RESIDENTIAL INSTITUTIONS

Version 4.2 – 11/01/2021

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WHO WE ARE

SCIENSANO can count on more than 700 staff members who commit themselves, day after day, to achieving our motto: Healthy all lifelong. As our name suggests, science and health are central to our mission. Sciensano's strength and uniqueness lie within the holistic and multidisciplinary approach to health. More particularly we focus on the close and indissoluble interconnection between human and animal health and their environment (the "One health" concept). By combining different research perspectives within this framework, Sciensano contributes in a unique way to everybody's health.
For this, Sciensano builds on the more than 100 years of scientific expertise of the former Veterinary and Agrochemical Research Centre (CODA-CERVA) and the ex-Scientific Institute of Public Health (WIV-ISP).

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Epidemiology and public health - Healthcare-associated infections and antimicrobial resistance

Long-term care facilities

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ABBREVIATIONS

AVIQ	Agence pour une Vie de Qualité
AZG	Agentschap Zorg en Gezondheid
COVID-19	Coronavirus disease 2019
CT	Computed tomography
ECDC	European Centre for Disease Prevention and Control
NIHDI (INAMI/RIZIV)	National Institute for Health and Disability Insurance (Institut national d'assurance maladie-invalidité/ Rijksinstituut voor ziekte- en invaliditeitsverzekering)
LTCF	Long-term care facility
WHO	World Health Organisation

INTRODUCTION

Coronavirus disease 2019 (COVID-19) erupted in Wuhan China in late December 2019 (1). On March 11, 2020, the WHO affirmed the rapid spreading of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) leading to a pandemic (2). The COVID-19 pandemic is posing an unprecedented threat to European countries, which have been experiencing widespread transmission of the virus in the community for several weeks (1).

Residential institutions are institutions were long-term care or shelter is provided to adults or children who stay in this facility rather than in their own home or family home and encompass a broad range of institution types. Long-term care facilities (LTCFs) are specific kind of residential institution and that take care of people who require support in their activities of daily living and cannot live independently in the community due to older age, physical or mental conditions and/or because of chronic medical conditions. LTCFs typically have residents who need medical or skilled nursing and supervision 24h a day, but are medically stable and do not need invasive medical procedures (3). Nursing homes are a type of LTCF that provides principally care to seniors with severe illnesses or injuries.

Residents of LTCFs are among the populations most vulnerable to infections, rapid spread, more severe illness and death, this because of the way people live together in these facilities and because of the fact that these residents often suffer from other health problems (4,5). Especially in nursing homes, elderly in general suffer from weakened immunity and underlying diseases (4,5). In addition, people in residential institutions are living closely together. As a result, there is a high risk of widespread transmission of bacteria and viruses within LTCFs and residential institutions with the potential of high case-fatality rates. Moreover, the virus can spread back into the community leading to overall disease spread (6).

An increasing number of COVID-19 outbreaks have been reported in LTCFs across Europe with high associated mortality, highlighting the extreme vulnerability of the elderly in this setting (1). It is therefore essential to follow-up the spread of COVID-19 in residential institutions, particularly nursing homes and LTCFs.

OBJECTIVES

Main objective of this protocol for COVID-19 surveillance in residential institutions

To ensure standardized definitions and data collection in the institutions participating in the COVID-19 surveillance in residential institutions

Specific objectives of this COVID-19 surveillance in Belgian residential institutions

- To measure the incidence and prevalence of possible and confirmed COVID-19 cases among residents and staff members in Belgian residential institutions during the COVID-19 pandemic.
- To measure absenteeism due to COVID-19 among staff in Belgian residential institutions.
- To follow-up outbreaks in these residential institutions and provide the responsible health authorities data to investigate these outbreaks.
- To provide and follow-up indicators to evaluate the exit-strategy of the measurements in place to contain the COVID-19 spread in residential institutions.

DEFINITIONS

These definitions have been developed for surveillance purposes and are intended for national use. It is perfectly possible that other more practical definitions will be developed for clinical purposes or as a guideline for testing, cohorting, isolation measurements etc.

1. COVID-19 infections

1.1. CONFIRMED CASE (=LAB-CONFIRMED)

A confirmed case of a COVID-19 infection is a person with laboratory confirmation of the virus causing COVID-19 infection via a molecular test*, irrespective of clinical signs and symptoms.

*Molecular tests: PCR or rapid antigen test. A positive test for antibodies (immunoglobulins M or G; IgM or IgG) is not sufficient to be classified as a confirmed case.

A symptomatic confirmed case stays a confirmed case until 14 days after the onset of symptoms AND with at least 3 days without fever AND with a significant improvement in respiratory symptoms. An asymptomatic confirmed case stays a confirmed case until 14 days after the test. If the resident has a negative laboratory test within this time span, he/she remains a confirmed case.

1.2. POSSIBLE CASE (=CT-CONFIRMED OR POSSIBLE)

A possible case of a COVID-19 infection is:

- at least one of the following main symptoms of acute viral infection: cough; dyspnea (shortness of breath); thoracic pain; acute anosmia (loss of the sense of smell) or dysgeusia (distortion of the sense of taste) without obvious cause;
  OR
- at least two[1] of the following symptoms: fever; muscle pain; fatigue; rhinitis; sore throat; headache; anorexie; watery diarrhea with no obvious cause[2]; acute confusion[2]; sudden fall with no obvious cause[2] ;
  OR
- worsening of chronic respiratory symptoms (COPD, asthma, chronic cough,…)
  OR
- A person who did not have a laboratory test or whose laboratory test is negative but who is diagnosed with COVID-19 based on a suggestive clinical presentation and a compatible CT thorax*

[1] In children, a single symptom with no obvious cause is sufficient to consider the diagnosis of COVID-19 during an epidemic
[2] These symptoms are more common in the elderly, where an acute infection can be expressed atypically
(*Definition is hospital data driven to allow analysis across sectors) (7)

2. COVID-19 deaths

2.1. CONFIRMED DEATH (=LAB-CONFIRMED)

A confirmed COVID-19 death is a resident with a COVID-19 infection confirmed by a molecular test* who died due to this infection (excluding residents with a confirmed COVID-19 infection who died as a result of another cause).

*Molecular tests: PCR or rapid antigen test. A positive test for antibodies (immunoglobulins M or G; IgM or IgG) is not sufficient to be classified as a confirmed case.

2.2. POSSIBLE DEATH (=CT-CONFIRMED OR POSSIBLE)

A possible COVID-19 death is a resident with a CT-confirmed or possible COVID-19 infection who died due to this infection (excluding residents with a possible COVID-19 infection who died as a result of another cause).

3. Denominators

3.1. STAFF

- Long term care facility (LTCF) staff: all personnel working in the facility, including nursing staff, paramedical staff, animation team, staff concerned with cleaning, maintenance or quality control and LTCF managers and their administrative staff.

PARTICIPATION AND DATACOLLECTION

1. Nursing homes and long-term care facilities

1.1. PARTICIPATION

Participation in the surveillance includes:

- Participation of all Belgian nursing homes and LTCFs during the COVID-19 pandemic
- Daily declaration of new cases and/or changes in the data
- At least once a week full registration (according to the instructions of the federated entities) (more information in annex 1)
- Registration of data at institution level (=aggregated data) (see chapter collected data)
- Registration of data for each deceased resident who lived in the institution (=individual level data) (see chapter collected data, question 20)
- Registration of corresponding denominators

1.2. DATACOLLECTION TOOLS

Nursing homes and LTCFs fall under the authority of the regions. This means that there are two possible ways of collecting the data:

1. Each region uses their own data collection tool, but adapts its protocol and delivers the data to Sciensano.
2. One data collection tool is used for the data collection in all Belgian nursing homes and LTCFs. In this case, Sciensano provides the data to the responsible region/organisation.

Note: The Flemish region (Agentschap Zorg en Gezondheid =AZG) is currently using their e-locket for collecting data in nursing homes. The Walloon region (AViQ) is currently using their own tool for collecting data. Both regions send their data to Sciensano, but do not provide all data requested in this protocol. Brussels and Ostbelgien are using the tool implemented by Sciensano (=LimeSurvey) for this surveillance.
At present, Sciensano is looking into the possibilities of implementing this surveillance in Healthdata and convincing all regions to use Healthdata for the datacollection. Until the transition to Healthdata is made, LimeSurvey can be used. Data collected through LimeSurvey will be migrated into the Healthdata database if and when this will become used.

2. Residential institutions

2.1. PARTICIPATION

Participation in the surveillance includes:

- participation of all Belgian residential institutions (other than nursing homes and LTCFs) during the COVID-19 pandemic
- Daily declaration of new cases and/or changes
- At least once a week full registration (according to the instructions of the federated entities) (more information in annex 1)
- Registration of data at institution level (=aggregated data) (see chapter collected data)
- Registration of data for each deceased resident who lived in the institution (=individual data) (see chapter collected data, question 20)
- Registration of corresponding denominators

2.2. DATACOLLECTION TOOLS

Depending on the type of the residential institution, the institution can fall under the federal authority or under the authority of the regions. Some of these institutions belong to the same (coordinating) association. There are two possible ways of collecting the data:

1. Each region/association uses their own data collection tool, but adapts its protocol and delivers the data to Sciensano.
2. One data collection tool is used for the data collection in all Belgian residential institutions. In this case, Sciensano will provide the data to the responsible region/association.

COLLECTED DATA

1. Institution

1. Accreditation number or other unique number to identify the institution (preferably an identification number already used by a recognized federal/regional authority, e.g. NIHDI)
2. Date of registration
3. Name of the institution *(only first time)*
4. Postal code of the institution *(only first time)*
5. Type of facility (Nursing home, Revalidation center, Chronic psychiatric facility, Shelter (Fedasil, etc.), Other) *(only first time)*
6. Number of authorized beds *(only first time)*
7. Current occupancy (= the number of residents including hospitalized residents and short-stay residents)
8. Total number of staff members on the 1st March 2020 (expressed in number of persons, excluding those absent for more than one month).

Notes:
Accreditation number: The NIHDI number of the institution is the preferred number to enter. This number can easily be matched with other databases. In case the NIHDI number is not known or not available, another accreditation number or unique number can be used to identify the institution.

Type of facility: the type of institution for which accreditation was obtained. If the correct type is not mentioned in the list, 'other' can be selected and should be specified.

Current occupancy: this is the current occupancy on the registration day. Deceased residents are excluded.

Total number of staff members: all personnel working in the facility, including nursing staff, paramedical staff, animation team, staff concerned with cleaning, maintenance or quality control and LTCF managers and their administrative staff. Including interns and volunteers.

2. Residents with confirmed/possible COVID-19 infections

Definition COVID-19 infection
Confirmed case (=lab-confirmed)
A person with laboratory confirmation of the virus causing COVID-19 infection via a molecular test*, irrespective of clinical signs and symptoms (7) *Molecular tests: PCR or rapid antigen test. A positive test for antibodies (immunoglobulins M or G; IgM or IgG) is not sufficient to be classified as a confirmed case.

9. Number of newly **confirmed** COVID-19 cases since the last reporting (not previously registered as possible COVID-19 cases).
10. Number of previously registered possible COVID-19 cases for whom confirmation is available since the last reporting
11. Total number of **confirmed** COVID-19 cases at the moment of registration.
12. Number of newly **confirmed** COVID-19 cases admitted to a hospital since the last reporting.

Notes:

Number of newly confirmed COVID-19 cases: this includes the number of newly confirmed COVID-19 cases who have been admitted to a hospital since the last reporting

Confirmed case: a symptomatic confirmed case stays a confirmed case until 14 days after the onset of symptoms AND with at least 3 days without fever AND with a significant improvement in respiratory symptoms. An asymptomatic confirmed case stays a confirmed case until 14 days after the test. If the resident has a negative laboratory test within this time span, he/she remains a confirmed case.

Since last reporting: as daily reporting is expected, the period since last reporting corresponds with the last 24 hours. If reporting is not done daily, the period since last reporting corresponds with the period since the last reporting. In case of first reporting, this period corresponds with the last 24 hours. When COVID-19 slows down, the reporting interval can be changed from daily to weekly or monthly.

Possible case (=CT-confirmed or possible)

A possible case of a COVID-19 infection is:

- at least one of the following main symptoms of acute viral infection: cough; dyspnea (shortness of breath); thoracic pain; acute anosmia (loss of the sense of smell) or dysgeusia (distortion of the sense of taste) without obvious cause;
  OR
- at least two[1] of the following symptoms: fever; muscle pain; fatigue; rhinitis; sore throat; headache; anorexia; watery diarrhea with no obvious cause[2]; acute confusion[2]; sudden fall with no obvious cause[2] ;
  OR
- worsening of chronic respiratory symptoms (COPD, asthma, chronic cough,…)
  OR
- A person who did not have a laboratory test or whose laboratory test is negative but who is diagnosed with COVID-19 based on a suggestive clinical presentation and a compatible CT thorax*

[1] In children, a single symptom with no obvious cause is sufficient to consider the diagnosis of COVID-19 during an epidemic
[2] These symptoms are more common in the elderly, where an acute infection can be expressed atypically
(*Definition is hospital data driven to allow analysis across sectors) (7)

13. Number of new **possible** COVID-19 cases since the last reporting.
14. Total number of **possible** COVID-19 cases at the moment of registration.
15. Number of new **possible** COVID-19 cases admitted to a hospital since the last reporting.

Notes:
Number of new possible COVID-19 cases: this includes the number of new possible COVID-19 cases who have been admitted to a hospital since the last reporting

Since last reporting: as daily reporting is expected, the period since last reporting corresponds with the last 24 hours. If reporting is not done daily, the period since last reporting corresponds with the period since the last reporting. In case of first reporting, this period corresponds with the last 24 hours. When COVID-19 slows down, the reporting interval can be changed from daily to weekly or monthly.

3. Deceased residents since last reporting

Death due to COVID-19

Confirmed COVID-19 death

A confirmed COVID-19 death is a resident with a COVID-19 infection confirmed by a molecular test who died due to this infection (excluding residents with a confirmed COVID-19 infection who died as a result of another cause).

*Molecular tests: PCR or rapid antigen test. A positive test for antibodies (immunoglobulins M or G; IgM or IgG) is not sufficient to be classified as a confirmed case.

16. Number of newly **confirmed** COVID-19 deaths since the last reporting

Possible COVID-19 death
A resident with a CT-confirmed or possible COVID-19 infection who died due to this infection (excluding residents with a possible COVID-19 infection who died as a result of another cause)

(*Definition is hospital data driven to allow analysis across sectors)

17. Number of new **possible** COVID-19 deaths since the last reporting
18. Number of **other deaths** (non COVID-19 related) since the last reporting
19. Since 12 March 2020,
    a) Total number of deaths
    b) Total number of COVID-19 related deaths

Notes:
Confirmed COVID-19 death, Possible COVID-19 death: COVID-19 contributed to the death of the person, the person did not die as a result of another cause.

Since last reporting: as daily reporting is expected, the period since last reporting corresponds with the last 24 hours. If reporting is not done daily, the period since last reporting corresponds with the period since the last reporting. In case of first reporting, this period corresponds with the last 24 hours. When COVID-19 slows down, the reporting interval can be changed from daily to weekly or monthly.

20. For each deceased resident:
    (!Remark: If a previously registered possible COVID-19 death received a positive test result since the last registration, please re-register as newly confirmed COVID-19 death, incl. the detailed information).
    a) Date of birth
    b) Date of death
    c) Gender (male/female)
    d) Method of diagnosis (confirmed COVID-19 death, confirmed by lab test; possible COVID-19 death, defined by CT-scan; possible COVID-19 death, defined by clinic; not COVID-19 related death)
    e) Place of death (institution, hospital, other)

Notes:
Details of deceased residents: If the institution reports COVID-19 deaths through the surveillance, the need to report to the regional authorities is no longer existing. Therefore, for each reported death, the mentioned variables are collected. The details of non COVID-19 deaths are also collected, in order to be able to calculate the excess mortality in nursing homes, compared to other years (based on the data of the intermutualistic agency).

Date of birth: The date of birth facilitates retrospective corrections (tracing of doubles, more convenient for institutions to retrospectively check data when they have a date of birth, etc.), but also to avoid doubles with other surveillances (e.g. surveillance in hospitals).

4. Staff infections

LTCF staff: all personnel working in the facility, including nursing staff, paramedical staff, animation team, staff concerned with cleaning, maintenance or quality control and LTCF managers and their administrative staff.

Definitions COVID-19 infection
Confirmed case (=lab-confirmed)
A person with laboratory confirmation of the virus causing COVID-19 infection via a molecular test, irrespective of clinical signs and symptoms (7) *Molecular tests: PCR or rapid antigen test. A positive test for antibodies (immunoglobulins M or G; IgM or IgG) is not sufficient to be classified as a confirmed case.

21. Number of staff members with a newly **confirmed** COVID-19 infection since the last reporting.
22. Total number of staff members with a **confirmed** COVID-19 infection at the moment of registration.
    a) Of these, the number of staff members presenting signs/symptoms and still working in the facility
    b) Of these, the number of staff members presenting signs/symptoms and absent from work
    c) Of these, the number of staff members without signs/symptoms and still working in the facility
    d) Of these, the number of staff members without signs/symptoms and absent from work

Notes:
Confirmed case: a symptomatic confirmed case stays a confirmed case until 14 days after the onset of symptoms AND with at least 3 days without fever AND with a significant improvement in respiratory symptoms. An asymptomatic confirmed case stays a confirmed case until 14 days after the test. If the resident has a negative laboratory test within this time span, he/she remains a confirmed case.

Possible case (=CT-confirmed or possible)
A possible case of a COVID-19 infection is: • at least one of the following main symptoms of acute viral infection: cough; dyspnea (shortness of breath); thoracic pain; acute anosmia (loss of the sense of smell) or dysgeusia (distortion of the sense of taste) without obvious cause; OR • at least two[1] of the following symptoms: fever; muscle pain; fatigue; rhinitis; sore throat; headache; anorexia; watery diarrhea with no obvious cause[2]; acute confusion[2]; sudden fall with no obvious cause[2] ; OR • worsening of chronic respiratory symptoms (COPD, asthma, chronic cough,…) OR • A person who did not have a laboratory test or whose laboratory test is negative but who is diagnosed with COVID-19 based on a suggestive clinical presentation and a compatible CT thorax* [1] In children, a single symptom with no obvious cause is sufficient to consider the diagnosis of COVID-19 during an epidemic [2] These symptoms are more common in the elderly, where an acute infection can be expressed atypically (*Definition is hospital data driven to allow analysis across sectors) (7)

23. Number of staff members with a **possible** COVID-19 infection (new cases) since the last reporting.
24. Total number of staff members with a **possible** COVID-19 infection at the moment of registration.
    a) Of these, the number of staff members still working in the facility
    b) Of these, the number of staff members absent from work

Note:
LCTF staff: This definition may needs to be adapted if other residential institutions than LTCFs and nursing homes participate to the surveillance.

Staff: the number of staff is always expressed in number of persons (and not in fulltime equivalents). This makes it possible to know how many persons of the staff are affected and to have an corresponding denominator.

Since last reporting: as daily reporting is expected, the period since last reporting corresponds with the last 24 hours. If reporting is not done daily, the period since last reporting corresponds with the

period since the last reporting. In case of first reporting, this period corresponds with the last 24 hours. When COVID-19 slows down, the reporting interval can be changed from daily to weekly or monthly.

5. COVID-19 Vaccination

The COVID-19 vaccination questions section start with one major question (in order to avoid unnecessary workload): "Did your institute already start with the vaccination campaign for COVID-19? If yes, are there changes in the data for your institution since the last registration?" *With changes in the data we do not only mean the number of residents/staff partially (one dose) vaccinated, the number of residents/staff completely (full scheme) vaccinated, but also the number of residents/staff that refused the vaccination.*

A. No, we didn't start with the vaccination campaign yet
B. Yes, I will fill in the questions about vaccination today
C. Yes, but there are no changes since the last registration, the data from the previous registration can be copied.

25. Total number of residents who had a first (partial) dose of a COVID-19 vaccine (½) at the moment of the registration (only for 2-doses vaccination regimen).
26. Total number of residents who had the complete vaccination regimen (1/1 or 2/2 doses) of a COVID-19 vaccine at the moment of the registration.
27. Total number of residents who haven't got a COVID-19 vaccination at the moment of the registration:
    a) Due to history of anaphylaxis or a known allergic reaction to one of the compounds of the vaccine or another vaccine.
    b) Due to another medical reason
    c) Due to refusal of the resident or his legal guardian, without medical grounds for this refusal.
    d) End of life – palliative care
    e) Other reason
28. Total number of staff members who had a first (partial) dose of a COVID-19 vaccine (½) at the moment of the registration (only for 2-doses vaccination regimen).
29. Total number of staff members who had the complete vaccination scheme (1/1 or 2/2 doses) of a COVID-19 vaccine at the moment of the registration.
30. Total number of staff members who haven't got a COVID-19 vaccination at the moment of the registration:
    a) Due to history of anaphylaxis or a known allergic reaction to one of the compounds of the vaccine or another vaccine.
    b) Due to pregnancy, breast feeding of having a child wish
    c) Due to another medical reason
    d) Due to refusal of the staff member, without medical grounds for this refusal.
    e) Other reason

Note:
First (partial) dose: only one of the two doses of a COVID-19 vaccine has been given to the resident/staff member. The number of residents/staff members who received the full vaccination regimen (1/1 or 2/2 doses) should not be included in this variable.
Complete vaccination scheme: the resident/staff member received all required (either single shot; 1/1, or both from a bivalent scheme; 2/2) doses of a COVID-19 vaccine.
Refusal: The resident (or his legal guardian)/staff member actively refused the vaccine. This refusal is not based on any medical ground.
No vaccination: When more reasons for non-vaccination are possible, please choose the most decisive reason for the non-vaccination.

ANALYSES AND REPORTING

1. Statistical analyses

Mostly descriptive analyses will be done to give an incidence and prevalence of cases among residents and staff in residential institutions.

2. Data sharing

This data is collected in order to follow-up the situation in nursing homes, other LTCFs and other residential institutions. The data (regional level) are weekly evaluated by the Outbreak Management Group Committee.

Data are shared with modelers in the context of the Exit strategy Model.

Data at national/regional/provincial level (never at institution or municipality level!) are used by Sciensano to follow-up trends in time and are published in the daily/weekly reports.

If the tool set up by Sciensano is used, data of the institutions under their authority is sent to the federated entities.

No variables obtained from this surveillance are publicly shared via the COVID19BE Open Data Platform on Epistat (https://epistat.wiv-isp.be/covid/)

3. Reporting

3.1. DAILY REPORTING

There are two daily reports (one for the authorities and one for the public) in which interesting results are included, depending on questions asked. The number of deaths can for example be included in these reports.

3.2. WEEKLY REPORTING

There are two weekly reports (one for authorities and one for public) in which more in-depth results will be included, depending on the questions asked. The number of nursing homes with at least one COVID-19 case e.g. can be included in these reports.

A weekly report for the outbreak management group (with federal and regional representatives) is made. This is an in-depth report, with detailed results of this surveillance, and when possible combined with results from the testing in nursing homes and other residential institutions.

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ANNEX 1

Current approach (22/06/2020) and recent changes

- **Daily registration:** the complete questionnaire has to be filled in every day, also in case of no changes.
- Flanders: since 6/6/20 registration during the weekend no longer needed, all cases during the weekend are reported once on Monday (three days together)
- Wallonia: same data can be copied for maximum 4 days in a row, >4 days: complete questionnaire has to be filled out again
- In all regions the data is used to detect clusters. The surveillance replaces the mandatory notification of COVID-19.
- It is a voluntary registration, but most regions insist on participating.

Why is there a need to rethink this approach?

- Nursing homes and other residential institutions are complaining about the burden that comes with daily registration.
- Flanders and Wallonia already changed their approach.
- Harmonization of the surveillance and also the frequency of registration remains important in order to be able to continue to merge the different datasets and to not confuse the institutions with different strategies between regions. Changing the frequency has implications on the follow-up of the crisis (e.g. early warning,…).

Proposal future approach, as discussed with the federated entities in the meeting of 22/06/20:

- **Continuation of a daily registration**, but no longer insist on registering during the weekend and on public holidays.

- In **Brussels and German speaking region**: The surveillance starts with one major question (which has to be answered every weekday): "Are there changes in the data for your institution since the last registration?" *With changes in the data we do not only mean new cases among residents or staff members, but also changes in the total number of cases, changes in the number of hospitalizations,…*
    D. Yes, so I will fill in the complete questionnaire today.
    E. No, the data from the previous registration can be copied.
    F. No, but I will fill in the complete questionnaire today (1x/week on Tuesday)
    We ask you to fill in the complete questionnaire once a week on Tuesday, even if you completed it on Monday. This is necessary to have new up to date data of the other variables and to not copy wrong numbers, entered by mistake for weeks.
    If the Tuesday is a public holiday, please fill in the complete questionnaire the day after on Wednesday.
    Concrete:
    - **No new cases among residents or staff members/ no new deaths/ no hospitalizations / no changes in the total numbers**: the questionnaire has to be filled in completely once a week (one fixed day: Tuesday). *With changes in the data we do not only mean new cases among residents or staff members, but also changes in the total number of cases, changes in the number of hospitalizations,…*
    - **In case of a new case among residents or staff members / a new death / other changes**: the questionnaire has to be filled in completely for that specific day, the day itself.
    - **Weekends:** the institutions can still register in the weekends, but if this is too difficult to organize, we understand that they do not register in the weekends (although with new cases it is still advised to report also during the weekend). If new cases occur, and are not reported during the weekend or on a public holiday, they need to be reported the next working day!

- **In Flanders:** the institutions still need to fill in the complete questionnaire, with the exception of the weekend, but also on public holidays. The new cases that occurred during the weekend, are reported on Monday or the next working day.
- **In Wallonia:** the questionnaire needs to be filled in once a week (one fixed day: Tuesday). When new cases occur they need to report this immediately.

Rationale for this approach:

- Most regions still want to have a daily registration of the new cases (replacement mandatory notification).
- We opted to let the institutions daily confirm if there were changes or not. Without this daily question we cannot be sure if it means that they did not have any cases or if they forgot to register.
  In this phase of the crisis, the regions agreed that they still want to have a daily registration, to make sure that there are no missing cases.
- This makes rapid follow-up of new cases possible, which is important for the implementation of an early warning system for residential institutions.
- Incidence data (new cases among residents and staff, new hospitalizations, new deaths) remain available on a daily basis. Prevalence data (total number of cases and deaths) will be updated once a week on Tuesday (for the other days the value of the last registration will be copied unless there were changes registered on other days). Having one fixed day for all institutions, makes it more easy to interpret the data and to do analyses with it.
- Mortality data can still be updated daily.
- This approach is also in line with the recommendations of ECDC (European Centre for Disease Prevention and Control): registration 1x/week and more frequent if there are new cases (see https://www.ecdc.europa.eu/en/publications-data/surveillance-COVID-19-long-term-care-facilities-EU-EEA). This makes comparisons with other EU-countries feasible, if needed.

Regular reevaluation of this new approach:

We suggest to reevaluate the need to reinstall the (mandatory) daily registration with all regions if:

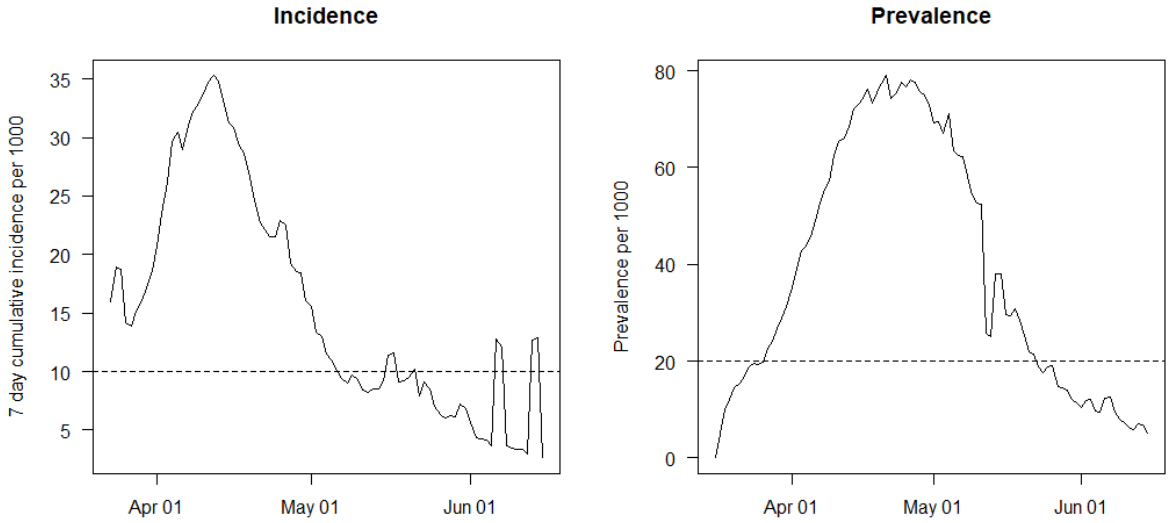
- the prevalence of possible or confirmed COVID-19 cases among nursing home residents increases again (for several days) above the threshold of 20 cases/1000 residents on a national or regional level (on a national level half April: ±80 cases/1000 nursing home residents, since the end of May <20 cases/1000 nursing home residents, 15/6: 5 cases/1000 nursing home residents, see Figure 1).

OR

- the 7-day cumulative incidence of possible or confirmed COVID-19 cases among nursing home residents increases again (for several days) above the threshold of 10 new cases/1000 residents on a national or regional level (on a national level half April: ±35 new cases/1000 nursing home residents, since half May <10 cases/1000 nursing home residents, 15/6: 2.5 cases/1000 nursing home residents, see Figure 1).

OR

- in case there is a rapid increase in the number of cases or in the number of residential institutions reporting at least one case.
- in case the daily registration is requested by any of the organs (RAG, RMG, …) for the need to follow-up the crisis.
- in case the crisis level is increased (e.g. level 3)



* The peaks in the 7-day cumulative incidence in June are related to the low participation rate during the weekend.

Figure 1: 7-days cumulative incidence (left) and prevalence (right) of (possible or confirmed) COVID-19 cases among residents in nursing homes in Belgium since the beginning of the registration

We suggest to reevaluate the need to lower the frequency of registration or stop with the surveillance with all regions if:

- If another trustful source of information can give us the needed information to further follow-up the COVID-19 crisis in residential institutions (e.g. e-forms)

OR

- If the crisis level is decreased (e.g. level 1)

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