



Sorveglianza COVID-19

COVID-19 Surveillance

**SORVEGLIANZA STRUTTURE RESIDENZIALI SOCIO-SANITARIE
NELL'EMERGENZA COVID-19**

Surveillance of COVID-19 at Long-Term Care Facilities

Report Nazionale

Andamento temporale dell'epidemia di COVID-19

21 Dicembre 2020 – 18 Settembre 2022

Italian National Report

Time course of the COVID-19 epidemic

December 21st 2020 – September 18th 2022

Authors:

Istituto Superiore di Sanità: Claudia Giacomozzi, Cecilia Damiano, Chiara Donfrancesco, Cinzia Lo Noce, Marta Barbalace, Ilaria Bacigalupo, Paolo Fortunato D'Ancona, Fabio Galati, Anna Di Lonardo, Annalisa Palmieri, Tiziana Grisetti, Luigi Palmieri, Maria Luisa Scattoni, Matteo Spuri, Graziano Onder, Silvio Brusaferro

Ministero della Salute: Anna Caraglia, Michela Sabbatucci, Andrea Siddu

Garante nazionale dei diritti delle persone private della libertà personale: Gilda Losito

ARS Toscana: Francesca Collini

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Relevant findings

Overall, 853 *long-term care facilities (LTCFs)* from 7 Regions participated in the surveillance from December 21st 2020 to September 18th 2022, accounting for a total of 31,341 beds. Overall, 334 out of the 853 facilities were *nursing homes for older adults* (facilities principally providing care to seniors with severe illnesses or high disability burden), for a total of 14,900 beds.

Main findings that emerged from the surveillance activity are synthesized here below.

Figure 1 shows the weekly incidence of SARS-CoV-2 positive cases among LTCFs residents and the absolute number of SARS-CoV-2 positive cases in the general population of the Regions participating to the surveillance. The weekly incidence of SARS-CoV-2 positive cases in LTCFs, still high at the beginning of the observation period (January 2021) due to the second epidemic wave, decreased after the beginning of the vaccination campaign, reaching values close to 0.01% of new cases per week during May and June 2021. At the end of 2021 and beginning of 2022, the effect of the new epidemic wave became evident and the peak raised very rapidly to exceed 7% in nursing homes for older adults and 5% in all LTCFs (January2022). Another peak, although lower, occurred in March 2022 with an incidence of 4.5% and 4%, respectively. Subsequently, there was a decrease in new cases, with values close to 0.3% at the beginning of June, followed by a new increase with a relative peak in July 2022. A new deflection in the number of new cases is observable by August 2022. The peaks occurred in 2022 reflect the trend of infections in the general population of the participating Regions.

Figure 1a. Weekly incidence of SARS-CoV-2 positive cases among LTCFs residents in the period December 21st 2020 – September 18th 2022. (*The date on the horizontal axis indicates the Friday of each monitoring week; for the sake of readability, the labels are shown every 14 days*).

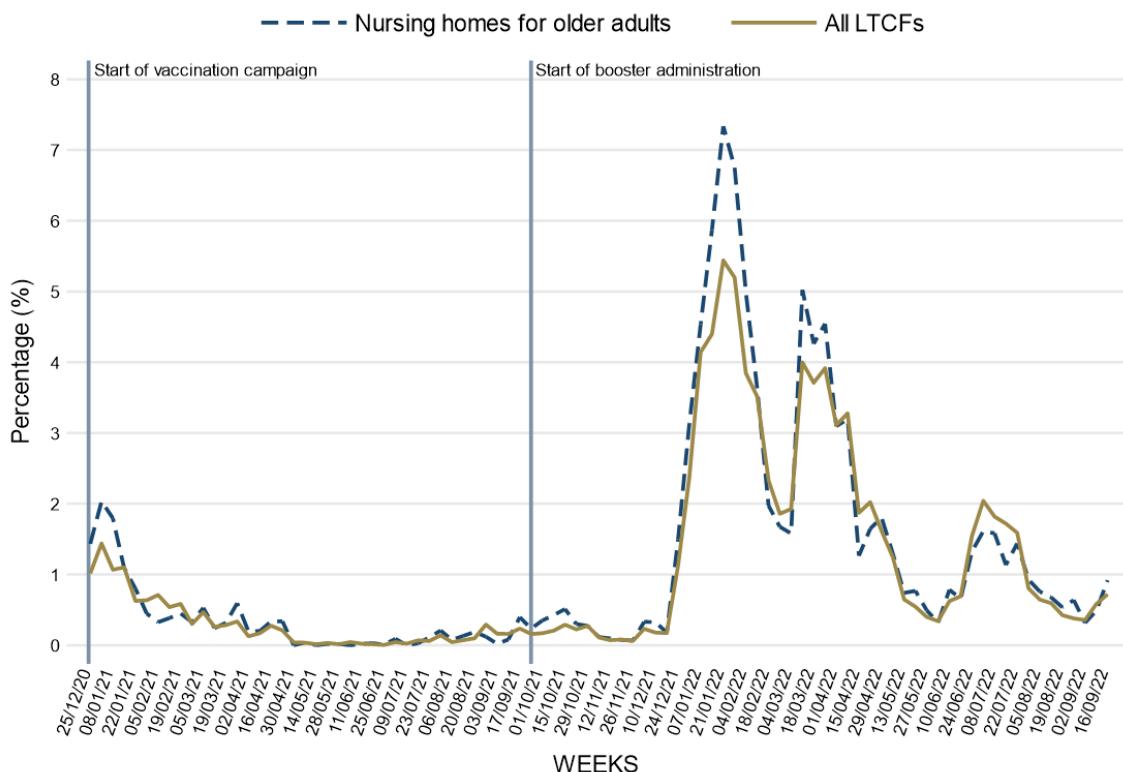
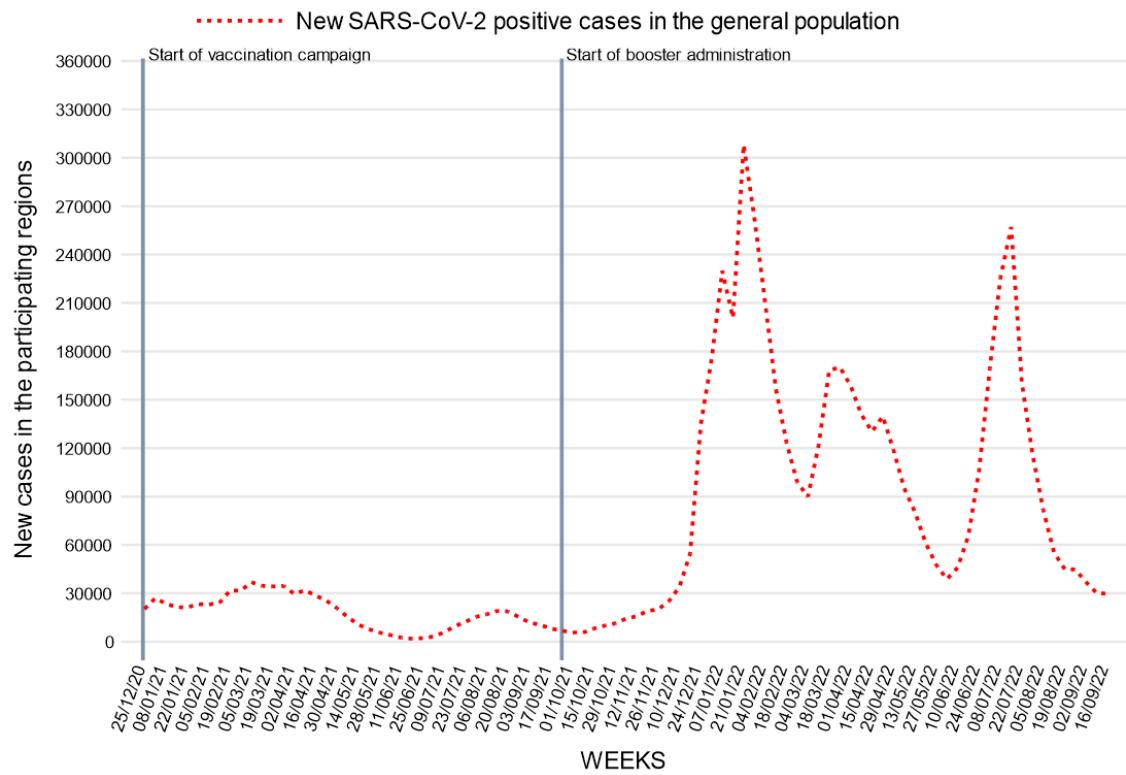


Figure 1b. Absolute number of weekly new SARS-CoV-2 positive cases in the general population of the Regions participating to the surveillance in the period December 21st 2020 – September 18th 2022. (*The date on the horizontal axis indicates the Friday of each monitoring week; for the sake of readability, the labels are shown every 14 days*).



* Data on the general population are obtained from the Italian Ministry of Health - <http://www.salute.gov.it/portale/nuovocoronavirus/homeNuovoCoronavirus.jsp>

Figure 2 shows the percentage of monitored LTCFs with SARS-CoV-2 outbreaks – namely, 2 or more positive cases per facility - in the period December 21st 2020 – September 18th 2022. The trend in the occurrence of the outbreaks followed the profile of the incidence of infections, with a progressive reduction for all LTCFs with a minimum less than 0.01% (June 21st) both in nursing homes for older adults and in all LTCFs. For this indicator, the peak which was reached in January 2022 was respectively around 24% (nursing homes for older adults) and 16% (all LTCFs).

Figure 2. Percentage of LTCFs with SARS-CoV-2 outbreaks among residents in the period December 21st 2020 – September 18th 2022. (*The date on the horizontal axis indicates the Friday of each monitoring week; for the sake of readability, the labels are shown every 14 days*).

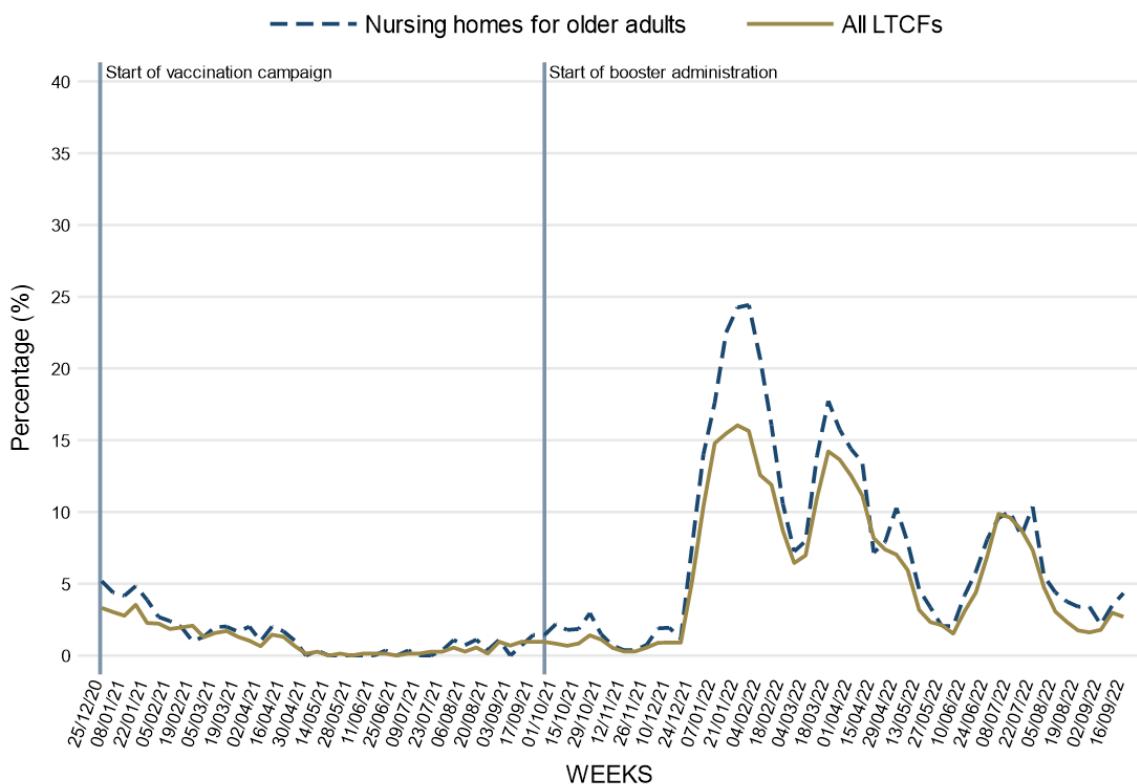


Figure 3 and **figure 4** show, for all monitored LTCFs and nursing homes for older adults respectively, the weekly percentage of: deaths for all causes among residents, occurring in LTCFs or after hospitalization; deaths among SARS-CoV-2 positive residents, occurred in LTCFs; hospitalized SARS-CoV-2 positive residents; deaths among SARS-CoV-2 positive residents, occurred at the hospital; residents vaccinated for SARS-CoV-2. As vaccination coverage increased, a reduction was observed both in deaths from SARS-CoV-2 positive residents occurred in LTCFs and in those occurred at the hospital; this trend, started at the beginning of 2021, continued consistently along the year. When an increase in new cases and outbreaks in the monitored facilities became evident (Dec 2021), the number of deaths from COVID-19 occurring both in the facilities and in the hospital remained very low (less than 0.1%), probably due to the protective effect of the anti-SARS-CoV-2 vaccination against the most serious forms of COVID-19. It still remained below 0.15% also along 2022.

Figure 3. With reference to all monitored LTCFs in the period December 21st 2020 – September 18th 2022, percentage of: weekly deaths for all causes among residents, occurring in LTCFs or after hospitalization; weekly deaths among SARS-CoV-2 positive residents, occurred in LTCFs; weekly hospitalized SARS-CoV-2 positive residents; weekly deaths among SARS-CoV-2 positive residents, occurred at the hospital (data available from April 26th 2021); residents vaccinated for SARS-CoV-2 (data available from April 26th 2021). (*The date on the horizontal axis indicates the Friday of each monitoring week; for the sake of readability, the labels are shown every 14 days*).

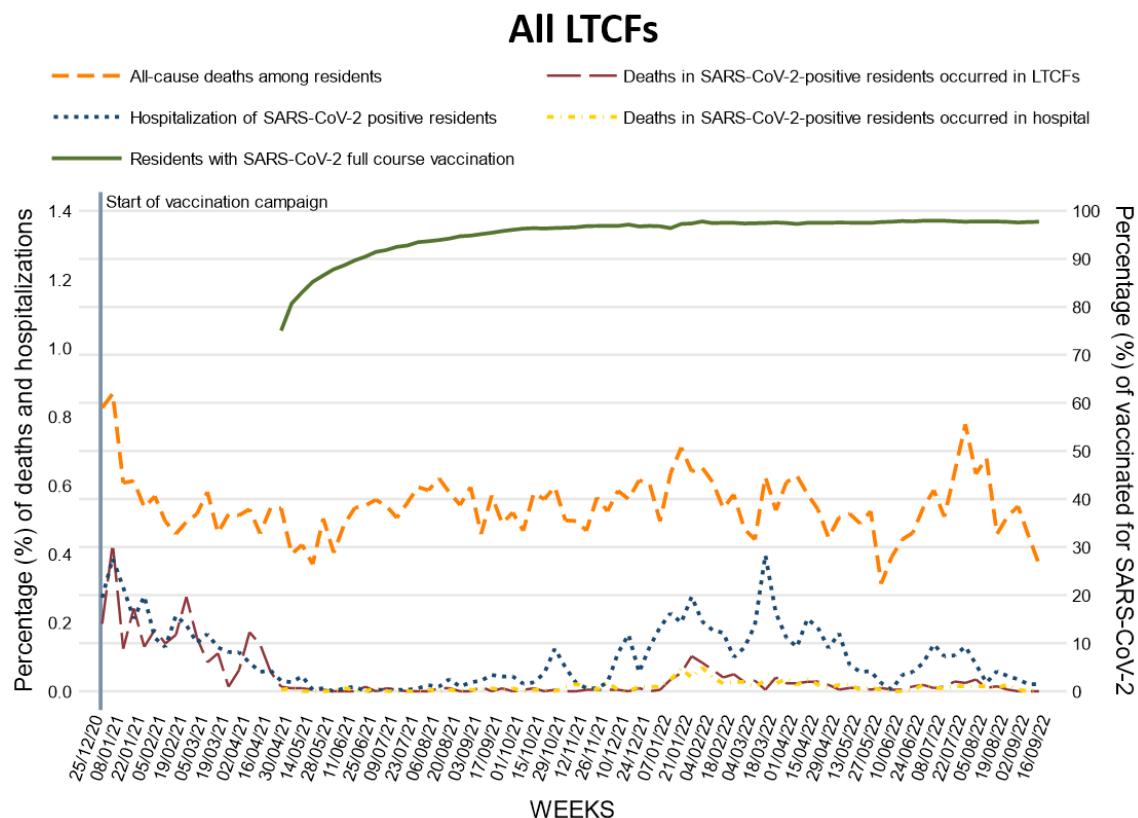


Figure 4. With reference to monitored nursing homes for older adults in the period December 21st 2020 – September 18th 2022, percentage of: weekly deaths for all causes among residents, occurring in nursing homes or after hospitalization; weekly deaths among SARS-CoV-2 positive residents, occurred in nursing homes; weekly hospitalized SARS-CoV-2 positive residents; weekly deaths among SARS-CoV-2 positive residents, occurred at the hospital (data available from April 26th 2021); residents vaccinated for SARS-CoV-2 (data available from April 26th 2021). (*The date on the horizontal axis indicates the Friday of each monitoring week; for the sake of readability, the labels are shown every 14 days*).

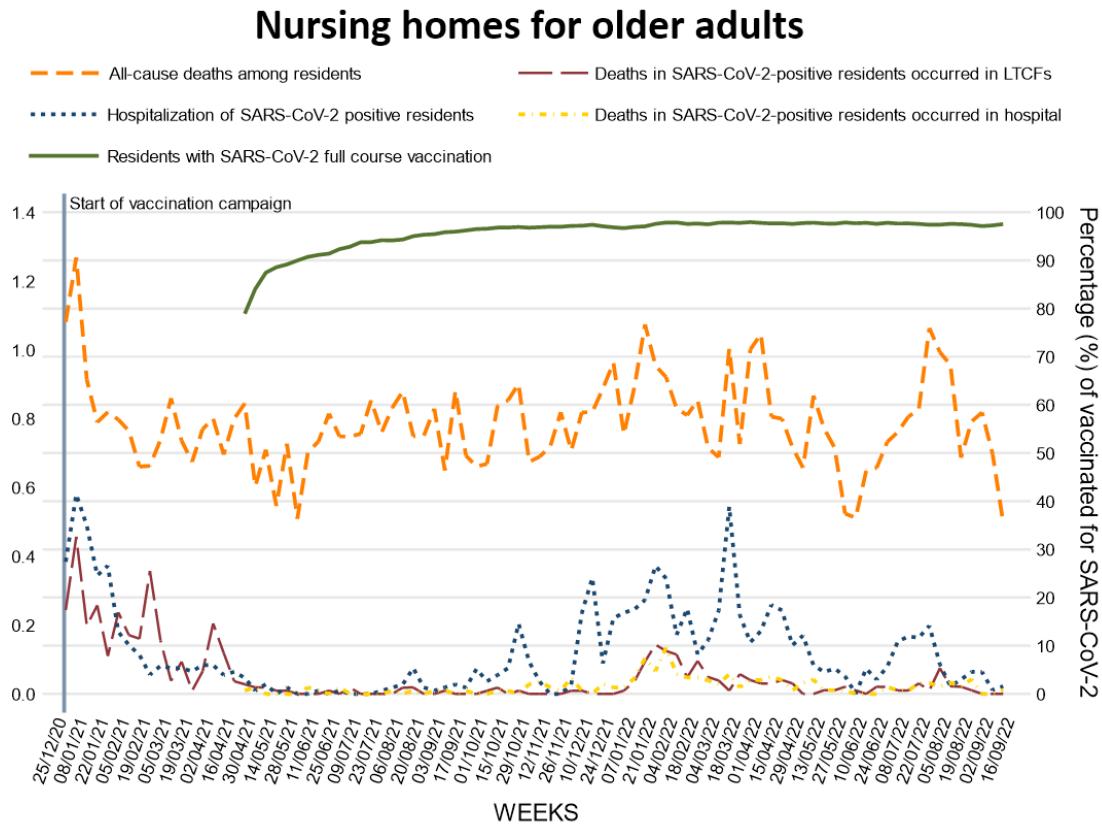
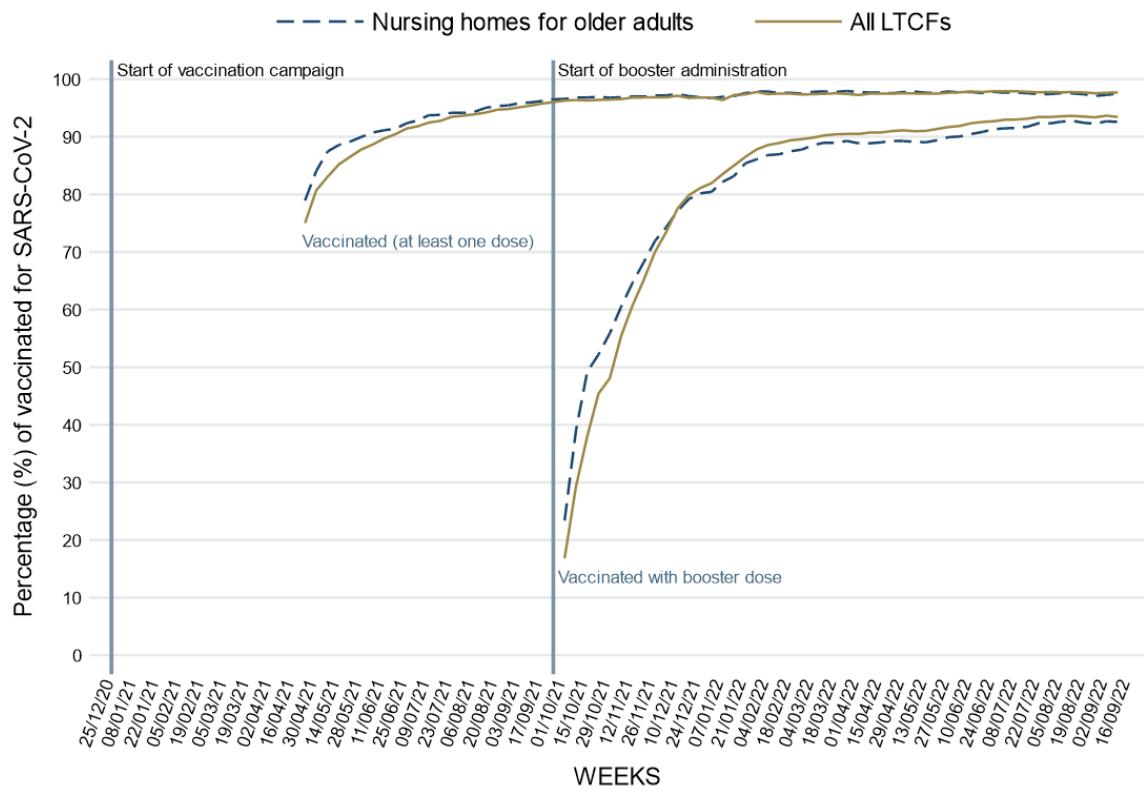


Figure 5 shows the percentage of vaccinated residents for SARS-CoV-2 in the monitored period. Vaccination campaign in Italy started on Dec 27th 2020, with priority access given to healthcare workers as well as residents of healthcare facilities. Vaccination coverage in the monitored LTCFs was very high: in September 2021, 94% of residents in nursing homes for older adults and 93% of residents in all LTCFs had received the full course of the anti-SARS-CoV-2 vaccine; in addition, by mid-December 2021, 80% of residents had also received the booster or additional vaccine dose – booster vaccination campaign started Sept 20th 2021.

Figure 5. Percentage of vaccinated residents for SARS-CoV-2, in the period December 21st 2020 – September 18th 2022. Data on vaccinated residents with at least the full course cycle collected from April 26th 2021; data on vaccinated residents with booster dose collected from Oct 4th 2021. (*The date on the horizontal axis indicates the Friday of each monitoring week; for the sake of readability, the labels are shown every 14 days*).



Conclusions

Although peaks in COVID-19 cases reported both at the beginning of the observation period (December 2020 - January 2021) and during 2022 (in January, March, and July) were found to be in line with what was observed in the general population of the participating Regions, the analysed indicators show the positive impact of the vaccination campaign in containing isolations, hospitalizations and deaths throughout the observation period.

In more detail:

- a progressive reduction in COVID-19 cases, isolations, hospitalizations of SARS-CoV-2 positive residents and deaths was observed in LTCFs in correspondence with the start of the vaccination campaign, which was primarily addressed to older adults in nursing homes and severely vulnerable people, together with LTCFs staff. The reduction in COVID-19 cases and deaths continued consistently throughout 2021, also supported by the start of vaccinations with booster doses.
- Throughout 2022, despite an increase in new cases and outbreaks in the monitored structures simultaneously with the waves of infections in the general population, the number of deaths from COVID-19 remained contained (always below 0.15%).
- Vaccination coverage in LTCFs was very high: in September 2021, it reached 94% of older adults in nursing homes and 93% of residents in all structures; in addition, in mid-December 2021, 80% of residents had also received the booster or additional vaccine dose; at the end of the observation period (September 2022) the percentage of fully vaccinated residents was about 98% and the percentage of residents vaccinated even with one or more booster doses was 93%.
- Finally, the monitoring of the isolation procedures in the structures showed trends that are very well correlated with the trends of the infections. These procedures are therefore a good indicator of the structures' ability to react / manage events, together with swabs, vaccinations and the very limited number of hospital transfers.

To conclude, data from this Report can be explained by the immune protection associated with repeated vaccinations and by the wide vaccination coverage, by the prevalence of more transmissible SARS-CoV-2 variants but responsible for mild infections and with a low risk of hospitalization, as well as by the progressive improvement in both knowledge regarding available therapies and general case management.

Monitoring activities in the facilities continue to assess the impact of possible new epidemic waves and the long-term effect of the vaccination campaign, as well as the adaptation of vaccines to the new variants.