Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

totally or severely dependent, whereas at discharge and follow-up 21 (26%) and 10 (12%) remained totally or severely dependent ($P < .001$), respectively (Figure 1).

Overall, in this cohort of relatively young and previously fit patients admitted to PACF after severe COVID-19, functional status was severely impaired at PACF admission, improved at discharge, and was sustained during follow-up, but there was a high burden of symptoms and perceived lower quality of life among survivors.

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SARS-CoV-2 B 1.1.7 Variant Outbreak in a Fully Vaccinated Nursing Home—Madrid, June 2021

To the Editor:

After mass vaccination against SARS-CoV-2, starting in December 2020, of residents in nursing homes (NHs), a sharp decrease in the number of outbreaks and mortality was observed.[1,2] Current evidence seems to support that the clinical benefits found for COVID-19 vaccines in clinical trials[3] may extend to long-term care residents.[4] However, some SARS-CoV-2 outbreaks after vaccination have been reported in nursing homes in the United States and in Canada.[5–7]

A recent SARS-CoV-2 outbreak caused by the B.1.1.7 variant occurred in an assisted nursing home in Madrid, Spain, in May-June 2021 some months after almost full vaccination of residents and staff (2 doses of Pfizer-BioNTech mRNA vaccine administered on January 15 and February 5, 2021) that was followed by regular vaccination of new residents and new staff. This facility had 170 residents distributed in 4 floors, with 24 hours' medical and nursing care. Two pre-vaccination COVID-19 outbreaks in August 2020 (17 cases, 10 hospitalizations, and 5 deaths) and in September 2020 (26 cases and 8 hospitalizations) were documented in this NH. SARS-CoV-2 serologic tests had been obtained from residents in August[8] and in December 2020.

The first 2 cases of this postvaccination outbreak [cases were defined either by a positive SARS-CoV-2 rapid antigen test or a reverse transcriptase polymerase chain reaction (RT-PCR) test] were identified at the emergency department (ED) of the reference hospital on May 30, 2021. These 2 patients had been transferred to the hospital ED owing to suspected hip fracture and aspiration pneumonia. A positive COVID-19 RT-PCR test was found in both during routine preadmission screening. The common rooms of the second floor of the NH where both residents lived was shared daily by 45 other residents, who had no contact with other residents outside this floor owing to functional disability.

Following local protocols, these 45 older adults and the 16 health care providers who cared for them were tested on May 31 with rapid antigen tests. These were positive in 12 residents and negative in 33 residents and all health care providers, in contrast with similar reported COVID-19 outbreaks.[6,7,9] All 45 exposed residents were immediately isolated and, on June 1, RT-PCR tests were performed by the hospital Microbiology Department, detecting 8 new cases, summing up to 22 infected residents (46.8% of those living in the same area of the NH). This outbreak infection rate was higher than that reported in other recent outbreaks.[5–7] Complete vaccination status was confirmed in all but 1 of the 47 residents (97.8%) with different vaccine batches.

Since the beginning of the outbreak, there was daily communication and coordination regarding infection prevention strategies among the NH staff, the regional public health office, the public primary care center the NH was affiliated to, and the microbiology and geriatric departments of the reference hospital. This was deemed crucial to quickly detect all infected residents and to avoid extension of the outbreak to the 123 residents allocated in other areas of the NH or to other NH staff.

The 25 exposed residents remained asymptomatic and with negative antigen tests during follow-up; 6 of them had a history of prior COVID-19 in 2020. Among the 22 cases, 12 were referred to the ED because of clinical deterioration and admitted for acute care in the COVID-19 area (median length of stay of 7 days). Of those admitted, 10 had respiratory failure and 9 pneumonia or other clinical complications. Three patients with advanced dementia and other complications (aspiration pneumonia or diarrhea by *Clostridioides difficile*) died in hospital. The outbreak mortality rate (14% among cases, 25% among hospitalized cases) was lower than the mortality found during the August 2020 outbreak (29% and 50%).

SARS-CoV-2 variants were assessed in all cases based on the detection of 2 single-nucleotide polymorphisms; whole genome sequencing (WGS) was done in 5 cases, all confirming the presence of the B.1.1.7 lineage, dominant in Spain at the time of the outbreak (results uploaded to the public GISAID database, access numbers 2558024, 2558025, 2558026, 2558033, and 2558034). The immune status of 46 residents was assessed on June 2, 2021: anti-spike IgG was present in 43 and nonreactive IgG in 3. This supports an adequate humoral immune response after vaccination, not described in previous reports, but also confirms the vulnerability of vaccinated seropositive NH residents.

No new COVID-19 cases were detected since June 2, so restrictive measures were gradually lifted based on regular PCR tests (Figure 1), so the outbreak was declared closed after 2 weeks (a shorter duration than COVID-19 outbreaks in the United States[9]), amid infection control measures implemented by the different stakeholders.

This report highlights the importance of early detection of COVID-19 outbreaks in NH, even in fully vaccinated settings, and the relevance of infection control measures and coordination

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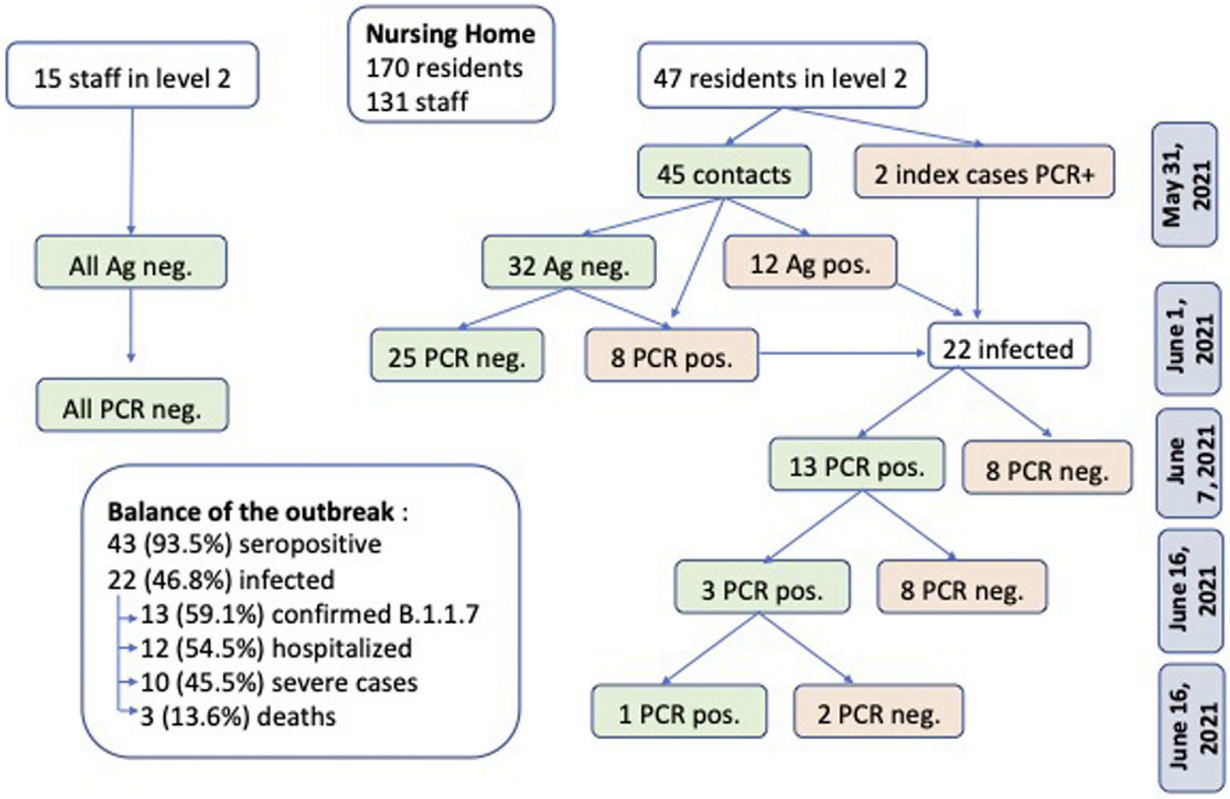

Fig. 1. Outbreak evolution and diagnostic tests. (Ag, rapid antigen test; neg., negative; PCR, reverse transcriptase polymerase chain reaction; pos., positive.)

between all interested parties, as recommended by European Geriatric Medicine Society during the first wave,[10] because of the high vulnerability of this population.

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