Universal and repeated testing to identify cases of coronavirus disease 2019 (COVID-19) during an outbreak in a long-term care skilled nursing facility (SNF) for veterans, plus rapidly transferring patients with infections to areas away from patients without infections, successfully interrupted transmission, a team of California researchers has reported.

The report was published in the May 29 issue of the Morbidity and Mortality Weekly Report (MMWR) and posted the previous week on the MMWR website as an early release. “In congregate living settings that include persons with conditions that might place them at high risk for severe COVID-19, universal and serial laboratory-based testing for SARS-CoV-2 is an effective strategy that can be implemented for rapid identification of infection to minimize transmission,” the report noted.

Since the emergence of SARS-CoV-2, public health authorities have expressed concerns about the vulnerability of residents of long-term care facilities, who have high rates of underlying medical conditions. The toll of illness and death in such facilities has proven such worries justified. The report notes that limited testing and delayed recognition of symptomatic cases in congregate living settings can result in large and protracted outbreaks, as in a nursing home in Washington state where 23 people died early in the pandemic.

In a report published on June 5, researchers at Boston University School of Medicine found that long-term care facilities accounted for 50% or more of COVID-19 deaths in 26 states. Even higher numbers occurred in a handful of states, as were 71% in Connecticut and 70% in New Hampshire.

In early June, the Centers for Medicare & Medicaid Services released preliminary data from a survey of 13,600 nursing homes (approximately 88% of the 15,400 Medicare and Medicaid–affiliated nursing homes), which tallied 31,782 resident deaths associated with COVID-19 as of May 31, 2020. The survey, the first major federal effort to gauge the outcome of COVID-19 in such facilities, found 95,515 confirmed COVID-19 cases at nursing homes across 49 states, with about one-third of them among staff members.

In the MMWR report, the authors describe events that unfolded beginning on March 28, after 2 residents of a long-term care SNF at the Veterans Affairs Greater Los Angeles Healthcare System developed symptoms. Nasopharyngeal swabs collected the day before the onset of fever tested positive on reverse transcription–polymerase chain reaction (RT-PCR) for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). From March 29 to April 23, all of the nursing facility’s residents, regardless of symptoms, underwent regular testing for SARS-CoV-2 (approximately weekly), until all residents had a negative test result. All clinical and nonclinical staff also underwent screening for SARS-CoV-2 from March 29 to April 10.

During this time, 19 of 99 residents (19%) and 8 of 136 staff members (6%) had positive test results. Many of the residents with infections (14 of 19 [74%]) were asymptomatic at the time of testing; of these, 8 developed symptoms up to 5 days later, and 1 died. Half of the 8 staff members with a COVID-19 diagnosis were initially asymptomatic. These findings demonstrate “the high prevalence of asymptomatic SARS-CoV-2 infection that can occur in SNFs, highlighting the potential for widespread transmission among residents and staff members before illness is recognized and demonstrating the utility of universal RT-PCR testing for COVID-19 after case identification in this setting,” the authors noted.
Some residents with infections were quickly transferred to an affiliated hospital for isolation and care. The nursing facility subsequently converted 1 of its 3 wards to serve as a recovery unit only for patients with COVID-19 who were clinically stable and restricted the movement of staff within the facility to reduce the possibility for transmission between wards. With these measures, in addition to ongoing adherence to infection control procedures, the outbreak in 1 ward was suppressed within a week, the outbreak in the second ward was suppressed within 2 weeks, and no cases occurred in the third ward.

"Universal and serial RT-PCR testing in SNF can identify cases during an outbreak, and rapid isolation and cohorting can help interrupt transmission," the report said.