

EXECUTIVE SUMMARY

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The Impact of COVID-19 on Seniors Housing

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Findings at a Glance

- Seniors housing properties encompass a wide range of care settings serving America’s older adults.
- Fifty-one percent of seniors housing properties studied experienced no COVID-19 deaths in 2020.
 - About two-thirds of independent living (67 percent); assisted living (64 percent); and memory care (61 percent) properties had no COVID-19-related deaths; and 39 percent of skilled nursing facilities experienced no deaths.
- COVID-19 mortality rates across seniors housing increased as the health and caregiving complexity of residents increased, with the highest percentages occurring in memory care settings and skilled nursing facilities.
 - Independent living properties’ COVID-19 mortality rate was comparable to that of their respective counties. This suggests that residents who live in independent living properties were not at higher risk by virtue of their congregate care setting.
 - The mortality rates in memory care and skilled nursing were higher than in other levels of care, and were statistically equivalent to each other.
- Seniors housing properties continued to operate and care for their residents, while facing a range of evolving circumstances—including shortages of personal protective equipment (PPE) and testing—as well as rapidly changing regulatory environments across all levels of government.
- There were many challenges in conducting this research due to data availability, timeliness, complexities, and limitations. Specifically, there are identified inconsistencies between local, state, and federal data reporting systems.
- Future research is needed to better understand the role of health, age, and demographic characteristics on mortality rates by care setting.

Executive Summary

The COVID-19 pandemic has ravaged older adults in the United States, killing hundreds of thousands of people ages 75 and older.¹ Skilled nursing facilities (SNF), also known as nursing homes and referred to in this report as skilled nursing facilities or skilled nursing, serve the frailest elderly and have been especially hard hit. However, seniors housing encompasses a wide range of care settings serving the different needs of older adults, and the impact of COVID-19 on seniors housing other than skilled nursing is less understood. This study seeks to estimate differences in the impact of COVID-19 on seniors housing, with a focus on estimating differences in COVID-19-related deaths across skilled nursing as compared to those

¹ Centers for Disease Control and Prevention. (2021, May 12). *COVID-19 provisional counts - Weekly updates by select demographic and geographic characteristics*. https://www.cdc.gov/nchs/nvss/vsrr/covid_weekly/index.htm.

experienced in the different levels of care in memory care properties (MC), assisted living properties (AL) and independent living properties (IL). In this study, properties are categorized by the level of care where the majority of residents reside.

Researchers from NORC at the University of Chicago (NORC) examined state and federal public health data in five states (Colorado, Connecticut, Florida, Georgia, and Pennsylvania) to estimate 2020 COVID-19 mortality rates in seniors housing by level of care and compared these mortality rates to those experienced by adults ages 75 and older who lived in non-congregate settings (e.g. adults living in private homes or non-seniors housing settings) in the same counties. Researchers adjusted raw mortality rates to control for prevailing COVID-19 case rates in the area. The analysis includes data from 3,817 market-rate² seniors housing properties across 113 counties throughout the five states. Researchers also conducted interviews with 12 seniors housing operators and eight state affiliates of LeadingAge and Argentum, organizations that serve non-profit and for-profit aging services and seniors housing operators, to understand the context of the COVID-19 death data and challenges they faced during the pandemic.

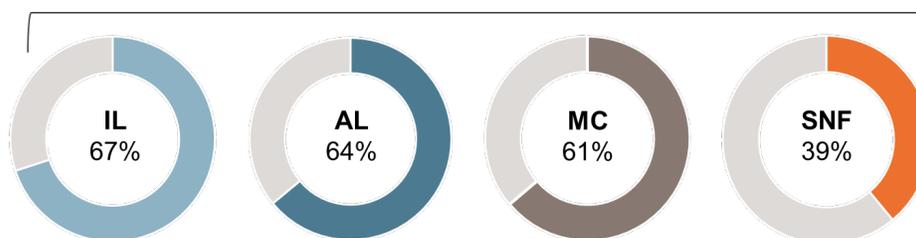
This analysis primarily focuses on COVID-19-related deaths, rather than case rates. While deaths from COVID-19 are reasonably well documented, actual infections are estimated to be 3 to 20 times higher than confirmed COVID-19 cases due to incomplete testing.³ As a result, higher rates of testing in specific geographies or levels of care (e.g., skilled nursing) will significantly impact confirmed case rates and may lead to inaccurate conclusions.

Fifty-one percent of seniors housing properties experienced no COVID-19 deaths in 2020.

In the first half of 2020, as understanding grew about the scope of COVID-19's impact on seniors housing, many properties instituted infection control policies to protect residents and reduce the spread of the virus. Such policies included restricting visitors, halting communal dining and group activities, cohorting residents and staff, and reinventing physical spaces and workflow processes to include safely donning and doffing PPE. In total, throughout 2020, 51 percent of properties included in the analysis experienced no resident deaths from COVID-19. While 39 percent of skilled nursing facilities experienced no COVID-19-related deaths, about two-thirds of independent living (67 percent); assisted living (64 percent); and memory care (61 percent) properties had no COVID-19-related deaths.

Portion of Seniors Housing Properties with No Reported COVID-19 Deaths in 2020

51% of All Properties



² Market rate seniors housing does not include affordable housing options that may be subsidized or rate capped.

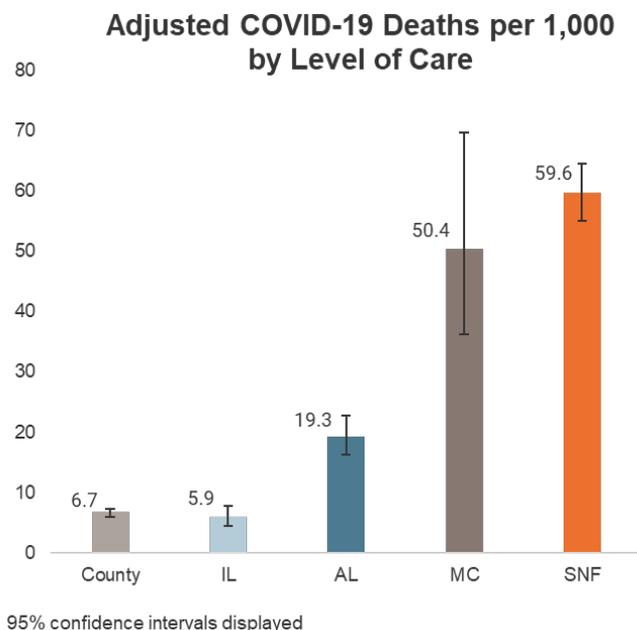
³ Wu, S. L., Mertens, A. N., Crider, Y. S., Nguyen, A., Pokpongkiat, N. N., Djajadi, S., ... & Benjamin-Chung, J. (2020). Substantial underestimation of SARS-CoV-2 infection in the United States. *Nature communications*, 11(1), 1-10.

COVID-19 deaths increased by level of care. The mortality rate in studied independent living properties was comparable to the county. The mortality rate in assisted living properties was one-third that of skilled nursing facilities.

Deaths from COVID-19 follow a clear pattern based on the health status of residents, with skilled nursing facilities experiencing much higher mortality rates than assisted and independent living properties. Prior to COVID-19, almost one-third of all skilled nursing care residents died annually, with that particular setting of care often being the final long-term residence for seniors prior to their death.⁴ While COVID-19 likely increased overall mortality rates across all seniors housing segments, its total impact on all-cause mortality in these settings is not yet known. In 2020, COVID-19 may have accelerated or replaced other common causes of death during this period.

Throughout 2020, average adjusted mortality rates from COVID-19 in skilled nursing facilities were 59.6 per 1,000, likely driven by the advanced age, frailty, and comorbidities of the residents. In contrast, assisted living mortality rates were two-thirds lower at 19.3 deaths per 1,000 residents. Resident deaths in independent living settings were statistically comparable to the rates of death for older adults living in non-congregate settings in the same geographic area. Independent living had average adjusted mortality rates of 5.9 per 1,000 compared to 6.7 per 1,000 found for adults 75 and older living in the same counties. Based on properties

included in this analysis, COVID-19 mortality rate in independent living properties was comparable to that of older adults living in their counties. This suggests that healthier seniors who lived in independent living properties were not at higher risk by virtue of their congregate care setting.



Of the memory care properties with COVID-19 resident deaths, the mortality rate was high and is consistent with other research documenting the risks of COVID-19 for dementia patients.

Adjusted mortality rates in memory care units were 50.4 per 1,000 residents, which is statistically comparable (within the margin of error) to skilled nursing facilities. Memory care settings faced particular challenges with infection control, since seniors who have cognitive impairments are more likely to require additional care and support with activities of daily living. Seniors housing operators have described the challenges of enforcing infection control protocols in memory care units. Because most memory care residents require close physical caregiving, it was difficult to implement social distancing. Operators also found that many residents with dementia were unable to comply with mask mandates and were afraid of and disoriented by staff wearing masks. The loss of access to trusted caregivers due to visitor restrictions and staffing changes was described as particularly problematic for the memory care population. While

⁴ Vossius, C., Selbæk, G., Šaltytė Benth, J., & Bergh, S. (2018). Mortality in nursing home residents: A longitudinal study over three years. *PLoS ONE*, 13(9), e0203480. <https://doi.org/10.1371/journal.pone.0203480>.

virtual programming was implemented for residents in other levels of care, virtual programming did not effectively replace activities for residents with cognitive impairment.

Seniors housing operators faced a rapidly changing regulatory environment, while contending with shortages of PPE and testing.

As the pandemic unfolded in early 2020, seniors housing continued to operate and care for its residents, while facing a range of challenges. Early in the pandemic, operators prioritized protecting residents and controlling infections, despite having limited information about transmission risks. Physical building layouts, described by many operators as communal and social environments, required swift adaptation to implement infection control protocols as the pandemic unfolded.

Local, state, and federal governments issued many new regulations, guidance, and requirements for skilled nursing and other seniors housing operators. Operators quickly began to track and implement new rules, which often varied across property types, levels of care, and different geographies. Many reported data to local public health agencies, states, and the Centers for Disease Control and Prevention (CDC).

Operators at all levels of care reported shortages in both staffing and supplies. Operators worked to secure scarce PPE and testing supplies and to contract with labs to process those tests. Other operators increased pay and introduced other incentives to motivate and retain staff. These market dynamics placed a strain on the industry both financially and operationally.

Conclusions

This research demonstrates large differences of the mortality impact of COVID-19 across seniors housing levels of care. Mortality rates in assisted living were much lower than those in skilled nursing. Mortality in independent living was statistically indistinguishable from mortality rates experienced by adults living in non-congregate settings in the same geographic area. In these data, mortality rates followed a pattern of increasing mortality outcomes corresponding to increasing levels of resident social support, health, and caregiving needs. Although additional research into understanding the causes of these differences is required, this pattern suggests that differences in health status and frailty levels of residents living in seniors housing may have been a primary driver of seniors housing mortality during the COVID-19 pandemic. These findings demonstrate the important distinctions between the levels of care within seniors housing and may inform future public health and public policy responses to ensure a more effective future pandemic response that protects vulnerable populations.

We encountered many data challenges in conducting this analysis, including data availability, quality, timeliness, variation in reporting across states, and inconsistencies between state and federal government sources. These limitations make it more difficult for health officials, policymakers, industry operators, researchers, and the public to understand how the COVID-19 pandemic is impacting various locations and settings of care. Ongoing improvements in our data infrastructure would enable better understanding of this pandemic and preparation for future health crises.

Future research will attempt to compare mortality rates across levels of care while risk-adjusting for age and health status, and to understand the impact of COVID-19 on all-cause mortality by setting of care. Such research could leverage Medicare fee-for-service (FFS) claims data to produce risk-adjusted mortality rates for individuals living in seniors housing properties, and compare them to individuals living in non-congregate settings. This risk-adjustment will account for baseline demographics such as age, race, and gender, as well as health status at the individual level. Doing so would allow for a rigorous assessment of differences in COVID-19-related and all-cause mortality across seniors with comparable health statuses living within the same geographic areas.

This study could not reliably assess the relationship between testing, confirmed case rates, and mortality among those with confirmed infections. Finally, additional analysis that further explores residents' experiences in memory care is warranted to identify opportunities to improve their protection from infectious disease while continuing to preserve their mental and emotional well-being.