Study Shows Care Setting Impact on COVID-19 Mortality

The National Investment Center for Seniors Housing & Care (NIC) provided a grant to NORC at the University of Chicago (NORC) to study the disparate effects of the pandemic on different seniors housing and care settings. The analysis examines mortality rates by property level of care – independent living, assisted living, memory care, and skilled nursing – and provides a comparison to seniors aged 75-and-older living in non-congregate settings (single family homes and apartments). Results of the study have just been released.

Among the study's key findings is that 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 properties. Memory care units faced particular challenges with infection control, since seniors who have cognitive impairments are more likely to require additional care and support for basic needs.

In contrast, the average mortality rate for adults in independent living facilities was statistically the same as the mortality rate of the 75-and-older population in corresponding counties. By including a comparison to seniors living in non-congregate settings in the broader geographical areas, study findings suggest that residents who live in independent living properties were not at higher risk by virtue of their congregate care setting.
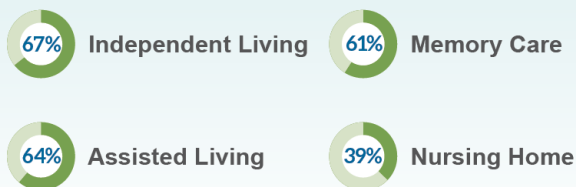
Researchers at NORC at the University of Chicago assessed the impact of COVID-19 on different types of senior housing properties in five states: Colorado, Connecticut, Florida, Georgia, and Pennsylvania.

Within these states, data on 3,817 senior housing properties in 113 counties were included. The properties in the analysis served an estimated 503,000 residents in 2020.
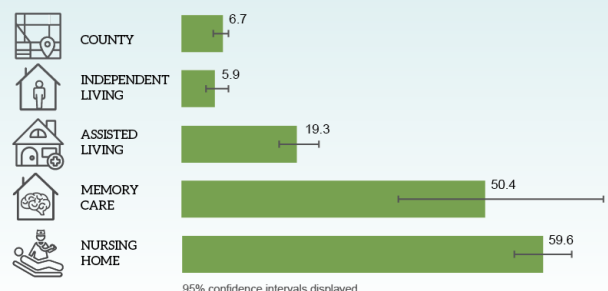
51% of U.S. senior housing properties had no COVID-19 deaths in 2020.

The average mortality rate for adults in independent living was comparable to its corresponding county's mortality rate.

Percent of Senior Housing Properties That Reported No COVID-19 Deaths

- **67%** Independent Living
- **61%** Memory Care
- **64%** Assisted Living
- **39%** Nursing Home

Adjusted COVID -19 Deaths per 1,000 by Level of Care

Level of Care	Deaths per 1,000
COUNTY	6.7
INDEPENDENT LIVING	5.9
ASSISTED LIVING	19.3
MEMORY CARE	50.4
NURSING HOME	59.6

95% confidence intervals displayed

About two-thirds of independent living properties (67%), assisted living properties (64%), and memory care properties (61%) experienced no COVID-19-related deaths in 2020. Thirty-nine percent (39%) of skilled nursing facilities experienced no COVID-19-related deaths during the same period.

In a secondary analysis that looked specifically at continuing care retirement communities (CCRCs) residents, CCRCs were associated with a significantly lower expected mortality rate when compared to non-CCRCs. The mean expected mortality rates for CCRCs across all care segments was 10.0 per 1,000 as compared to 19.9 per 1,000 in non-CCRCs.

The study also included a dozen interviews with seniors housing operators and eight state affiliates of LeadingAge and Argentum, organizations that serve non-profit and for-profit aging services, to understand the context of the COVID-19 case and death data, and the challenges they faced during the pandemic. These qualitative interviews helped place the study's quantitative results in context and help readers understand some of the challenges faced in managing COVID-19 in these settings, including PPE shortages, delayed testing results, and a rapidly changing regulatory environment across all levels of government.

NORC was selected in a competitive bid to lead the project's initial phase. Caroline Pearson, NORC's senior vice president, directed the project, with Mairin Mancino as the project manager. Beth Burnham Mace, NIC's chief economist, and Ryan Brooks, NIC's healthcare principal, oversaw the project for NIC.

The John A. Hartford Foundation, a national philanthropy dedicated to improving the care of older adults, co-sponsored the study and its president Terry Fulmer, Ph.D., RN, FAAN is a member of NIC's COVID-19 research advisory committee. Other members of the research advisory committee include: Dr. Ardeshir Hashmi, chair for geriatric innovation and director of the Center for Geriatric Medicine at Cleveland Clinic; Bob Kramer, co-founder and strategic advisor to NIC, founder and fellow of Nexus Insights; Dr. David Nash, founding dean emeritus at Jefferson College of Population Health; Dr. Arif Nazir, chief medical officer of Signature Healthcare and immediate past president of AMDA, the Society for Post-Acute and Long-Term Care Medicine; Dr. Kevin O'Neil, chief medical officer of ALG Senior; and Anne Tumlinson, chief executive officer of ATI Advisory and founder of Daughterhood.

A second phase of the study is being planned to build upon these findings by comparing death rates across levels of care while risk-adjusting for age and health status, as well as understanding the impact of COVID-19 on all-cause mortality by care setting. These data findings will be critical to improving the public's understanding of the safety levels within the various seniors housing care segments. Phase 2 of the COVID-19 research study is expected to be completed by November 2021. NIC is seeking partners to help fund this additional research.

To view the study's complete findings and conclusions, please see the *Final Report* and detailed *Technical Report* by visiting NIC's COVID-19 study landing page.