



COVID-19 and Nursing Home Residents

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About this Series

This Spotlight is part of the AARP Public Policy Institute's LTSS Choices initiative. This initiative includes a series of reports, blogs, videos, podcasts, and virtual convenings seeks to spark ideas for immediate, intermediate, and long-term options for transforming LTSS. We will explore a growing list of innovative models and evidence-based solutions—at both the national and international levels—to achieve system-wide LTSS reform.

To truly transform and modernize the LTSS system, we recognize the importance of collaborating and partnering with others across the array of sectors, disciplines, and diverse populations. We invite new ideas and look forward to opportunities for collaboration.

For all questions and inquiries, please contact Susan at LTSSChoices@aarp.org.

The AARP Public Policy Institute (PPI) has launched LTSS Choices — a multifaceted project designed to advance the transformation and modernization of the nation's long-term services and supports (LTSS) system. In the U.S., we need to reinvent the LTSS infrastructure and orient the system around consumer choices and preferences, as well as quality services. One of our priorities must be to elevate policies that improve the quality of institutional care, while expanding the array of other LTSS choices for all consumers.

The COVID-19 pandemic has underscored the inadequate quality of care that residents of nursing homes face every day in the United States and the urgent need for reform. In that light, this Spotlight focuses on the impact of the pandemic on residents and how we can improve their situation—both during the pandemic and into the future.

Bearing the Bulk of Impact: Effect of the COVID-19 Pandemic on LTSS Institutions

In the U.S., the COVID-19 pandemic has hit older adults the hardest since older age and the presence of several chronic conditions are among the most important risk factors for dying of this disease. The situation in nursing homes is magnified, given that the oldest, most vulnerable adults and people with disabilities live there, residing in settings characterized by a high-density population where the potential for spread of the virus is greater.

Residents continue to face significantly increased risk, as the COVID-19 pandemic wears on unabated. Nursing home residents represented nearly 30 percent of all COVID-19 related deaths between June 1 and October 18, 2020, despite comprising less than 3 percent of all COVID-19 cases, and less than 1 percent of the U.S. population.¹ Looking back to the beginning of the pandemic, the percentage is even higher, about 40 percent.² There is substantial variation across the country in the percentage of total COVID-19 related deaths occurring among nursing home residents, ranging from about 5 percent of total deaths since June in Alaska to 70 percent in Indiana.³

In addition, LTSS facility cases escalate in different parts of the country as community infection rates increase in those states that have relaxed or never aggressively implemented COVID-19 public health precautions. Data from the Kaiser Family Foundation shows that cases among long-term care facility residents in 23 hotspot states increased 18 percent over two weeks, while cases in 12 non-hotspot states rose by 4 percent over a similar period.⁴ These differences could result from any number of factors, including type of resident and facility, quality of care and infection control measures, variation in state survey and inspection implementation, and rising rates of community transmission of COVID-19 leading to rising rates in the LTSS facilities.

Nursing Home COVID-19 Dashboard

The AARP Public Policy Institute is collaborating with the Scripps Gerontology Center at Miami University to create a monthly dashboard of state-level data on COVID-19:

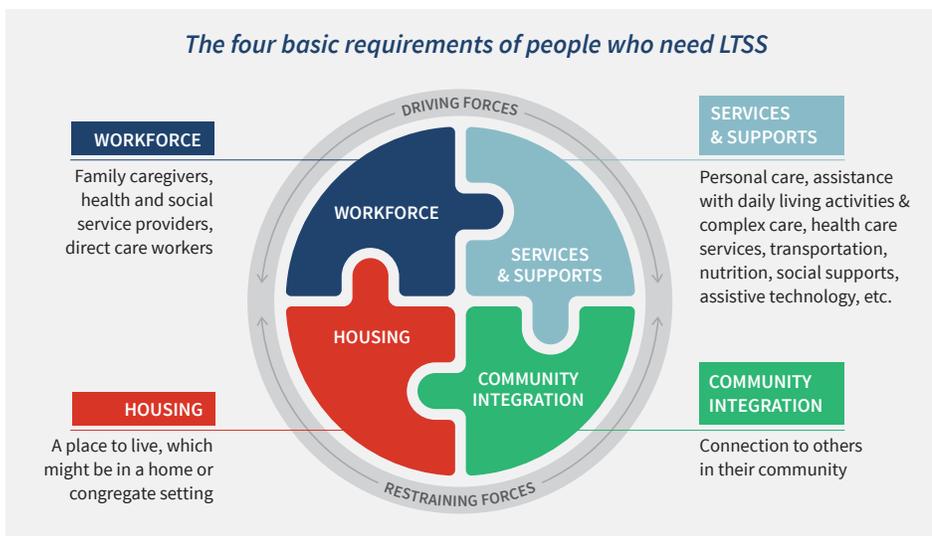
www.aarp.org/nursinghomedashboard

Prevention Proves Possible: COVID-19 Cases and Deaths among Residents

Nursing homes provide most basic requirements for people who need LTSS, albeit with some shortcomings in certain areas. The basic requirements for people needing LTSS include housing, services and supports, a trained workforce to provide care, and connections to their communities. The housing provided by nursing homes is usually institutional in nature, and a trained workforce provides a range of scheduled services and supports. However, generally nursing homes offer few connections to community for their residents.

Traditional nursing homes usually have two residents per room, high staff turnover, and multiple staff who rotate in and out of more than one facility. Such workers in many cases receive no health insurance or paid sick leave. With those dynamics, nursing homes often have chronic infection control deficiencies and staff shortages. This situation occurs across the country and works against preserving the lives of residents when infectious disease outbreaks such as the COVID-19 pandemic occur.

The four basic requirements of people who need LTSS



Yet it does not have to be this way.

The news outlet Politico documented the success of eight veterans' nursing and assisted living facilities managed by California's Department of Veterans Affairs (CalVet).⁵ As Politico reported, only two of 2,100 facility residents died of COVID-19 and only six others had the disease. As result of that success, the average nursing home resident at a non-veterans' facility in California is 31 times more likely to die than those in CalVet facilities.

Among the differences between the veterans' nursing homes and others in the state are the following:

- Before the virus, CalVet facilities had to maintain extensive emergency preparedness plans and have stockpiles of N95 masks.
- State leadership for this program began planning for the virus in February 2020.
- CalVet facilities had a detailed protocol for dealing with suspected COVID-19 cases.
- CalVet facilities required staff to wear masks, screened them when they came to work, and gave them sick leave if they were ill.
- CalVet facilities have full-time doctors and infection control specialists on staff.

The Research Speaks: Factors Affecting COVID-19 Resident Cases and Deaths

Available evidence about the factors affecting facility resident cases and deaths varies at the national and state levels, with an examination of two of the most comprehensive studies on the issue revealing a certain level of disagreement. As discussed below, one national study says Nursing Home Compare⁶ quality ratings are not associated with COVID-19 cases and the other says they are. In addition, two states, both of which are among those that COVID-19 hit earliest, have studied the broad array of factors that could have affected their situations —also with differing results. These differences likely are related to their reports' analytic methods and unique situations in those states. **Appendix A** offers more information from national and state studies and reports, providing highlights of each and delineating the varying elements of what they cover.

National Studies

Two major national studies provide relevant data. The Abrams et al (2020)⁷ study of 30 states found a statistically significant relationship between a higher percentage of Black residents and facilities having at least one COVID-19 case—a finding highlighting the systemic inequities that have emerged prominently in the public discourse. Large urban nursing homes and non-chain status of a nursing facility are related to increased probability of having a case, while ownership type is not. Other factors that were not related to whether a facility had at least one case include the percentage of Medicaid residents, Nursing Home Compare's five-star rating, and presence of prior infection control violations. When a facility had at least one case, the size of the COVID-19 outbreak had a statistically significant relationship to increased facility size, and for-profit status.

Abrams et al (2020) did not address nurse staffing levels. Fortunately, another national study did. McGarry et al (2020)⁸ studied staff and personal protective equipment (PPE) in nursing homes from May through July 2020 using a new database from the Centers for Medicare & Medicaid Services (CMS). This database relies on facilities' self-reported data on shortages. McGarry et al (2020) showed that about 20 percent of nursing homes reported shortages of staff or severe shortages of PPE.⁹ Nursing staff were most often in short supply. Nursing homes most likely to report shortages were those with COVID-19 cases, lower quality scores, and a higher proportion of residents on Medicaid.

Taking both studies together, we gain some understanding of the situation across the country. It appears that large nursing homes, with a high proportion of Black residents were most likely to have at least one case. Outbreak size in these nursing homes was related to facility size and being for-profit. Nursing homes with shortages of staff and PPE were more likely to experience COVID-19 cases. Nursing homes with these shortages were also more likely to have low quality scores and more residents on Medicaid.



State Studies

By November 2020, two states, Connecticut and New Jersey, had completed comprehensive studies of the COVID-19 pandemic's effects on nursing home residents. They came to differing conclusions about the causes of their high cases and death rates among facility residents.

Other states, such as Michigan and New York, have conducted studies that focus on individual aspects of the COVID-19 pandemic's effects on residents. Michigan's report does not contain a quantitative analysis and focuses on recommendations. New York's report focuses on those COVID-19 resident deaths that occur in nursing homes and the impact of community spread of COVID-19. Other states' reports, such as those for Arizona, Colorado, and Virginia, have focused on specific aspects of how to deal with the pandemic, but have not approached the issue comprehensively. We plan to update this Spotlight as more comprehensive state reports become available.

Connecticut Study¹⁰

Connecticut nursing home and assisted living facility residents represented 72 percent of 4,432 COVID-19 pandemic deaths in the state by July 30, 2020. To address the disproportionate deaths in these facilities, the state commissioned a comprehensive analysis of the problem from Mathematica and the University of Connecticut Center on Aging. The final report contains a multi-variate analysis of the factors affecting the spread of COVID-19 and recommendations for improved responses to infectious disease outbreaks.

The report relies on analysis of data collected from mid-July through mid-September. Data include statistics, state documentation, and interviews with 130 key stakeholders representing providers and consumers, among others. The report's key findings include the following:

- COVID-19 cases were concentrated in certain nursing homes. For example, 16 percent of facilities had no cases and 26 percent of facilities had no deaths.
- Nursing homes with high nursing staff ratios had significantly fewer cases and deaths per licensed bed.
- Nursing homes in communities with more COVID-19 cases had more cases and deaths.
- Nursing homes with residents receiving more dialysis and cancer treatments had more cases per licensed bed, likely because residents generally receive these treatments outside the nursing home.
- Higher numbers of residents in facilities and higher occupancy rates of licensed beds were significant predictors of cases and deaths.

The report's recommendations cluster around major themes, including (1) more person-centered care, (2) improved infection control systems and procedures, (3) higher requirements for staffing levels than Connecticut currently has,¹¹ (4) improved state agency response and coordination with LTSS providers, (5) improved facility procedures, and (6) increased payment rates to nursing homes to cover the cost of certain quality improvements.

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New Jersey Study¹²

In May 2020, the State of New Jersey commissioned Mannatt to conduct a rapid three-week assessment of the COVID-19 situation in the state's LTSS system, with the primary focus on nursing homes. The assessment included a review of available data, evaluation of steps taken at the national level and in other states, and interviews with 50 key stakeholders.

New Jersey's study reviewed available data available in May 2020, but did not perform bivariate or multivariate analyses to determine whether their results were significant. The consulting firm did "not observe any strong or reliable patterns" between nursing home COVID-19 cases/deaths and a range of the potential facility-related factors: size and ownership status, quality star ratings, deficiencies during quality surveys, or staff levels. The report found that the intensity of COVID-19 cases in New Jersey is related to rates in nursing homes' surrounding communities.

The report's recommendations to the state focused on (1) strengthening emergency responses, (2) stabilizing facilities, (3) requiring minimum nursing staff ratios that align with the needs of nursing home residents,¹³ (4) prohibiting professional administrative staff from counting toward these ratios, (5) increasing reporting and accountability, and (6) building a better LTSS system.



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¹ AARP Nursing Home Dashboard at: <https://www.aarp.org/ppi/issues/caregiving/info-2020/nursing-home-covid-dashboard.html>

² The Atlantic Covid Tracking Project: <https://covidtracking.com/data/longtermcare> Updated November 12, 2020. Includes nursing homes and assisted living.

³ AARP Nursing Home Dashboard at: <https://www.aarp.org/ppi/issues/caregiving/info-2020/nursing-home-covid-dashboard.html> Data updated through October 18, 2020

⁴ Kaiser Family Foundation at: <https://www.kff.org/coronavirus-covid-19/issue-brief/rising-cases-in-long-term-care-facilities-are-cause-for-concern/> Accessed September 15, 2020

⁵ Severns, M. (August 10, 2020). Could Massive Numbers of Nursing Home Deaths Have Been Prevented? Politico.

⁶ Nursing Home Compare has a quality rating system that gives each nursing home a rating between one and five stars. Nursing facilities with five stars are considered to have above average quality and nursing facilities with one star are considered to have quality below average. There is one Overall 5-star rating for each nursing home, and a separate rating for each facility's staffing, health inspection results, and certain quality measures. Please note that CMS launched Care Compare in September 2020 and the original compare tools, including Nursing Home Compare, will be retired on December 1, 2020.

⁷ Abrams, H. R., Loomer, L., Gandhi, A., & Grabowski, D. C. (2020). Characteristics of US Nursing Homes with COVID-19 Cases. Journal of the American Geriatrics Society.

⁸ McGarry, B. E., Grabowski, D. C., & Barnett, M. L. (2020). Severe Staffing And Personal Protective Equipment Shortages Faced By Nursing Homes During The COVID-19 Pandemic: Study examines staffing and personal protective equipment shortages faced by nursing homes during the COVID-19 pandemic. Health Affairs, 10-1377.

⁹ Severe shortage means having a one-week supply or less of PPE.

¹⁰ Rowan, P., Lester, R., Levere, M., Libersky, J., Lipson, D., & Robison, J. (2020). A Study of the COVID-19 Outbreak and Response in Connecticut Long-Term Care Facilities (No. 6374a316a4c4caa91fa97a2990c2a7f). Mathematica Policy Research. <https://portal.ct.gov/-/media/Coronavirus/20201001-Mathematica-final-report.pdf>

¹¹ Connecticut current regulations (§19-13-D8t.M.4), which the Rowen et al (2020) report recommends changing, require a registered nurse in the building 24 hours a day/7 days a week at minimum. Staffing ratios are: one licensed nurse per 30 residents between 7:00 AM and 9:00 PM and; one licensed nurse per 60 residents at other times. For nurse aides the ratios are one aide per 10 residents between 7:00 AM and 9:00 PM and one per 20 residents at other times. Facilities must also have a dedicated infection preventionist, who does not have to be full-time at the facility.

¹² Mannatt. (June 2, 2020) Recommendations to Strengthen the Resilience of New Jersey's Nursing Homes in the Wake of COVID-19. State of New Jersey. <https://nj.gov/governor/news/news/562020/docs/6-2-2020-NJ%20LTCSResilience.pdf>

¹³ In 2020, New Jersey passed S2712 requiring one nurse aide for every eight residents for the day shift, one direct care staff member (licensed nurse or nurse aide) for every 10 residents for the evening shift, and one direct care staff member for every 14 residents for the night shift.

Recommendations for Quality Improvement

We face a COVID-19 pandemic now and undoubtedly will face other infectious disease outbreaks in the future, including annual bouts with influenza. This makes lasting reform urgent. Note that many of the following recommendations are useful and long overdue in controlling other infections in nursing homes, highlighting their importance with or without a pandemic. Some of these ideas come from the Connecticut and New Jersey reports. Many are not new, but they take on added urgency during the pandemic.

Specifically, AARP recommends that policymakers, health plans, and providers consider changes in care for facility residents and the structure of nursing homes, better staffing patterns and quality assurance, and aligning payment with accountability for quality of care and quality of life.



Care

An important part of nursing home care is making sure that residents are protected during emergencies, which include infectious disease outbreaks such as the COVID-19 pandemic. The following recommendations focus on emergency responses and other special conditions that occur during disease outbreaks.

- **Nursing homes should have current plans in place for emergencies that address both resident and staff needs.** For example, plans for pandemics need to address proper protocol for isolating sick residents, staff testing and quarantining, availability of a sufficient supply of PPE, and back-up staffing plans. Facility plans need to be well-developed and feasible, and staff should practice their emergency plans. Facilities need adequate numbers of well-trained staff to carry out such plans, and facilities lacking such plans should avoid accepting new residents until they have put them in place. Plans should include regional back-up options for resident placement when nursing homes cannot handle their residents' care.
- **Public health officials should prioritize access to testing for both nursing facility residents and staff.** People in nursing homes are a vulnerable population, so infections need to be identified early and plans implemented as the situation requires. Given this vulnerability and the importance of community disease spread, staff also need to be priorities for testing.



- **State policymakers and public health officials should create a central LTSS emergency operations and response center for multiple facilities with a performance dashboard to identify those needing help during emergencies.** Rapid response teams could be deployed to address spikes in infections in these facilities.
- **Health and human service policymakers and providers should strengthen coordination between the health and LTSS systems through relationships between LTSS facilities and managed care plans, hospitals, and practitioners.** Integration strategies can use a variety of data exchange technologies, person-centered care planning, and involvement of direct-care workers in planning.
- **Public and private health insurers should increase resident access to telehealth as a supplement to in-person care.** If nursing home residents had access to telehealth, they could get some services faster, especially during a disease outbreak when providers are stretched thin. In some cases, family caregivers can be included in the telehealth appointment, improving care coordination and facilitating care continuity post-discharge. Some telehealth appointments in nursing homes already can be covered under Medicaid.¹⁴
- **Nursing homes should ensure that resident care plans address their isolation, risk for depression, and ability to interact with loved ones.** For example, facilities should encourage specific communication workarounds for residents and families when visitation limitations are placed during disease outbreaks. These might include creating processes for staff to facilitate phone calls, making video-enabled devices available to facilities and facilitating virtual visits with residents and their loved ones, and promoting more frequent facility communication with families. Families could benefit from a state hotline that enables them to seek assistance and resolution when they believe a family member is inappropriately denied visitation.¹⁵
- **Nursing homes should provide families regular updates about the status of infectious disease outbreaks in the facility and the status of individual residents.**
- **Hospitals and community-based health and human services organizations (such as Aging and Disability Resource Centers/No Wrong Door systems) should work together to discharge patients to home and community-based settings whenever possible, with appropriate services, supports, and care coordination.** This could help reduce patients' exposure to infectious disease.

Staffing

Appropriate staffing is critical to quality nursing facility care since facilities' primary responsibilities are to provide care and services in a group residential setting to people who are frail or have disabilities. Care is best when facilities have adequate, trained staff to provide the mix of services that their residents need. The following recommendations are designed to help improve care during infectious disease outbreaks.



¹⁴ For more information please see the table at <https://www.kff.org/coronavirus-covid-19/issue-brief/state-data-and-policy-actions-to-address-coronavirus/>

¹⁵ For more information please see: The COVID-19 Imperative: Keep Family Caregivers and Long-Term Care Facility Residents Connected and <https://www.aarp.org/caregiving/health/info-2020/nursing-homes-expand-visits-coronavirus.html?intcmp=AE-HP-TTN-R4-POS1-REALPOSS-TODAY>

- **State and federal regulators must ensure that nursing homes, at a minimum, meet federal requirements for working with infection preventionists.** These professionals can increase the infection-control training level of people who work in facilities and assist when infectious disease outbreaks occur. Staff who do not understand infection control will not have the tools they need to identify and respond to disease outbreaks in nursing homes.
- **Nursing homes should reduce the number of staff moving in and out of facilities** by increasing the number of full-time positions, considering longer shifts when appropriate, and consistently assigning staffing to the same unit and residents.
- **State policy makers and nursing homes should ensure that staff have health insurance, paid sick leave, and competitive wages** so they do not need to work in multiple facilities to make ends meet. This would also help reduce turnover and help ensure that sick employees stay home when ill.
- **Federal and state governments should establish minimum nursing staff levels no lower than the minimum thresholds identified by CMS and no lower than necessary to ensure that facilities meet their residents' needs related to infectious disease control and prevention.** Long-term care facilities should monitor staffing levels to ensure individual needs are being met and adjust levels accordingly.
- **State and federal regulators should enforce minimum staffing ratios or other requirements and require facilities to provide notification when they are not able to meet them.** This is particularly important during limitations on family members' access to residents because family often provide critical services, such as helping residents eat and providing the social interaction that is so important.
- **State and federal regulators and nursing homes should ensure that residents have access to families and visitors of their choice,** once they have met all COVID-19-related federal and state guidelines.

New LTSS Facility Models

Settings with privacy are what consumers prefer, and new, affordable models of LTSS facilities that acknowledge that preference and others can improve infection control. These settings emphasize resident-centered care, a home-like environment with private rooms and bathrooms, a positive workplace culture, and opportunities for resident involvement in the community. Access to these new models is related to infection control for the following reasons:

- It is easier to isolate residents with infectious diseases when they have their own rooms and bathrooms.
- Consistent staff performing a wide range of tasks minimizes the number of people who interact daily with residents and thus exposure to infectious disease.

For more information, please see the AARP Public Policy Institute's LTSS Choices: www.aarp.org/LTSSChoices



Settings with privacy are what consumers prefer, and new, affordable models of LTSS facilities that acknowledge that preference and others can improve infection control.



Quality Surveys

All nursing homes that participate in Medicare and Medicaid must meet a number of quality care standards and states have responsibility for inspecting facilities' compliance with those standards, some of which relate to emergency plans, staffing, and infection control procedures. We recommend the following measures to address disease outbreaks:

- **Federal and state regulators should strengthen the deficiency severity rating** to define more deficiencies related to infection control and emergency back up plans as at least “serious,” if not “immediate jeopardy.”
- **Federal and state regulators should enhance training of surveyors** around infection control and emergency back-up plans.
- **Federal and state regulators should shorten the length of time for investigating complaints that allege actual harm to residents**, including those related to infection control.
- **Federal and state regulators should impose more meaningful fines and other penalties**, especially for facilities that place residents in immediate jeopardy due to infection control violations.

Payment

States determine how to pay nursing homes under Medicaid, so they have much control over facility incentives regarding delivery of care and services, nurse staffing, availability of PPE, effectiveness of infection control procedures, and presence of emergency back up plans. States could choose to do the following:

- **State and federal regulators should hold nursing homes accountable for the use of public funds by ensuring those funds are used to address the health and safety of residents and staff through such measures as testing, PPE, proper staffing, virtual visits, and infection control.**
- **Policymakers should avoid providing blanket immunity** for facilities related to infectious disease. With blanket immunity, facilities would be able to avoid responsibility for their role in resident deaths during pandemics and outbreaks of infectious diseases. Some resident deaths are avoidable when facilities prepare correctly.

Advancing the Discourse

We invite comment on these ideas and encourage submission of new ones. Contact us at LTSSChoices@arp.org.

About the Authors

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Appendix A – Summary of Study Findings and Recommendations

The Summary of Study Findings table below contains the studies referenced in this Spotlight and the different elements that are addressed in each study’s findings, with recommendations if the authors included them. Please note that the table only indicates whether any finding related to the different elements is presented in a given study (and the summaries of the studies that follow the table). Where an X is indicated, in some cases the study authors found the noted elements to be related to COVID-19 cases and deaths and in other cases the noted elements were found not to be related.

Following the table, summary highlights from each study are presented, delineating each study’s findings and in some cases, the study authors’ recommendations. Please note that the recommendations presented below do not represent the opinions or policies of AARP. AARP’s recommendations are presented within the main body of the Spotlight.

Summary of Study Findings Noting Elements Addressed by Each Study

Study/Report Information: US/State	Facility Characteristics	Resident Cases and Deaths	Staff Cases and Deaths	Community Cases and Deaths	PPE & Testing Access	Quality Star Ratings & Infection Control Deficiencies	Staffing Levels	Recommendations
US-30 states, Abrams	×	×				×		
US – Grabowski								×
US – 12 states Konetzka	×	×				×		×
US – McGarry	×				×		×	×
CA – Harrington	×					×	×	×
CA – He	×	×				×		×
CT – Li	×					×	×	×
CT – Mathematica - Interim Report	×	×		×		×	×	×
CT – Mathematica - Final Report	×			×			×	×
MI – CHRT		×	×	×	×			×
MI – COVID-19 Task Force								×
NJ – Manatt	×			×		×		×
NY – Dept. of Health		×	×	×		×		×

Characteristics of US Nursing Homes with COVID-19 Cases

Source: Abrams, H. R., Loomer, L., Gandhi, A., & Grabowski, D. C. (2020). Characteristics of US Nursing Homes with COVID 19 Cases. Journal of the American Geriatrics Society.

Area of Focus: USA/30 States

Findings:

- **Facility Characteristics:** Large urban nursing home, and non-chain status, are related to increased probability of having a COVID case. Ownership type is not related. Outbreak size is related to increased facility size, and for-profit status.
- **Resident Cases and Deaths:** Higher % of Black residents related to higher probability of nursing home having a COVID case. Percentage of Medicaid residents was not. Nursing home COVID rates varied by state, likely reflecting the spread of the virus.
- **Star Ratings and Infection Control Deficiencies:** Five-star rating and prior infection control violations were not related to probability of nursing home having a COVID case.

Nursing Home Care in Crisis in the Wake of COVID-19

Source: Grabowski, D. C., & Mor, V. (2020). Nursing Home Care in Crisis in the Wake of COVID-19. JAMA.

Area of Focus: USA

Recommendations of Grabowski & Mor:

- More bundled payments and special relationships between hospitals and post-acute nursing homes
- More integration of health and LTSS in nursing homes
- More Physicians and Nurse Practitioners in LTSS settings
- Higher Medicaid payment rates
- More testing and PPE

Testimony: Caring for Seniors Amid the COVID-19 Crisis

Source: Konezka, R.T., Testimony Submitted for the Record at a hearing on: Caring for Seniors amid the COVID-19 Crisis, before the US Senate Special Committee on Aging on May 21, 2020.

Area of Focus: USA/12 States

Findings:

- **Facility Characteristics:** For-profit status did not appear to affect COVID rates.
- **Resident Cases and Deaths:** Nursing homes with the highest percentage of residents who are persons of color were 2 times more likely to have COVID cases or deaths. Weak increased probability of cases or deaths with increased percent of Medicaid residents.
- **Star Ratings and Infection Control Deficiencies:** Marginal reductions in COVID cases and deaths occurred in nursing homes with 4- and 5-star ratings. Individual state results varied from this overall finding.

Recommendations of Konetzka et al:

- Regular and rapid testing
- Adequate staffing
- Availability of PPE
- Increase home and community-based services to avoid institutionalization
- Better data for consumers about nursing home COVID-19 performance
- Increased Medicaid payment rates
- More focus on infection control during inspections

Severe Staffing and Personal Protective Equipment Shortages Faced by Nursing Homes During The COVID-19 Pandemic

Source: McGarry, B. E., Grabowski, D. C., & Barnett, M. L. (2020). Severe Staffing and Personal Protective Equipment Shortages Faced by Nursing Homes During The COVID-19 Pandemic: Study examines staffing and personal protective equipment shortages faced by nursing homes during the COVID-19 pandemic. *Health Affairs*, 10-1377.

Area of Focus: USA/National CMS database

Findings:

- **Facility Characteristics:** Being for-profit or chain affiliated was associated with increased likelihood of severe PPE shortage. Nursing homes that were government-owned, had higher percentages of Medicaid revenue, or lower 5-star ratings were more likely to report staff shortages.
- **PPE and Testing:** As of 7/19/20, 19.1% of nursing homes reported severe shortages of PPE. N95 masks and gowns were the most common shortage.
- **Staffing Levels:** As of 7/19/20, 21.9% of nursing homes reported a staff shortage.

Recommendations of McGarry et al:

- Target financial support to direct patient care and supplies
- Oversee funds to ensure they are used for intended purposes
- Medicare should update survey questions to reflect the current realities of the pandemic

Nurse staffing and coronavirus infections in California nursing homes.

Source: Harrington, C., Ross, L., Chapman, S., Halifax, E., Spurlack, B., & Bakerjian, D. (2020). Nurse staffing and coronavirus infections in California nursing homes. *Policy, Politics, & Nursing Practice*, 21(3), 174-186.

Area of Focus: California

Findings:

- **Facility Characteristics:** Nursing homes with more beds had a higher probability of having residents with COVID-19.
- **Star Ratings and Infection Control Deficiencies:** Nursing homes with lower 5-star ratings on total nurse and RN staffing levels (adjusted for acuity) had higher probability of resident COVID-19 cases and for higher total health deficiencies.
- **Staffing Levels:** Nursing homes with total RN staffing levels under 0.75 hours per resident day had twice the probability of having COVID-19 resident cases.

Recommendations of Harrington et al:

- Establish minimum staffing standards
- Use 5-star rating system to establish high-quality nursing home networks and help consumers choose them

Is there a Link between Nursing Home Reported Quality and COVID-19 Cases?

Source: He, M., Li, Y., & Fang, F. (2020). Is there a Link between Nursing Home Reported Quality and COVID-19 Cases? Evidence from California Skilled Nursing Facilities. *Journal of the American Medical Directors Association*.

Area of Focus: California

Findings:

- **Facility Characteristics:** Non-profit ownership was related to lower COVID case and death rates. Higher occupancy rates and larger nursing homes were related to higher case and death rates.
- **Resident Cases and Death:** Higher percentage of White residents was related to lower COVID case and death rates.
- **Star Ratings and Infection Control Deficiencies:** Higher quality ratings were related to lower case and death rates. Between 4/23/20 and 6/2/20 the rate of increase in COVID cases was much lower in 5-star homes.

Recommendations of He et al:

- Hospitals, patients, and caregivers could use nursing home quality ratings more often during discharge planning

COVID-19 infections and deaths among Connecticut nursing home residents: facility correlates.

Source: Li, Y., Temkin Greener, H., Shan, G., & Cai, X. (2020). COVID 19 infections and deaths among Connecticut nursing home residents: facility correlates. *Journal of the American Geriatrics Society*, 68(9), 1899-1906.

Area of Focus: Connecticut

Findings:

- **Facility Characteristics:** Nursing homes with more Medicaid or racial/ethnic minority residents had more COVID cases. Nursing homes with more cases or deaths were more likely to be large for-profit facilities affiliated with a chain and have a higher resident census.
- **Star Ratings and Infection Control Deficiencies:** 4- or 5-star nursing homes had 13% fewer COVID cases than 1- to 3-star facilities.
- **Staffing Levels:** Among nursing homes with at least one COVID case, every 20-minute increase in RN staffing per resident day was associated with 22% fewer confirmed cases. For nursing homes with at least one death, every 20-minute increase in RN staffing predicted 26% fewer deaths.

Recommendations of Li et al:

- Target help to nursing homes caring for sociodemographically vulnerable residents

A Study of the COVID-19 Outbreak and Response in Connecticut Long-Term Care Facilities Interim Report

Source: Mathematica. (August 14, 2020) A Study of the COVID-19 Outbreak and Response in Connecticut Long-Term Care Facilities Interim Report.

Area of Focus: Connecticut

Findings:

- **Facility Characteristics:** For-profit nursing homes had about 60% more COVID cases and deaths per licensed bed than nonprofits. Larger nursing homes had more COVID cases and deaths per licensed bed. Nursing homes that were part of a chain had about 40% more COVID cases and deaths than independently owned nursing homes.
- **Resident Cases and Death:** 3,000 LTC residents died from COVID, comprising 74% of all COVID deaths as of July 30. About half of resident COVID cases occurred in 26% of nursing homes. 20% of residents with COVID died in 15 percent of nursing homes. About 30% of nursing homes had very few or no COVID cases or deaths.
- **Community Cases and Spread:** Nursing homes in communities with higher COVID rates had more cases and deaths per licensed nursing home bed.
- **Star Ratings and Infection Control Deficiencies:** 4- and 5-star nursing homes had fewer COVID cases and deaths than nursing homes with 1 to 3 stars. Nursing homes with fewer health inspection deficiencies had fewer cases but not fewer deaths. Nursing homes with a complaint in the last three years had about 35% more cases and deaths than those without.

Recommendations of Mathematica:

- State and facilities should balance person-centered care and the need to protect residents from COVID
- State should continue Money Follows the Person model
- Continue robust testing efforts, staff training, technical assistance, and acquiring PPE
- State and the industry should work together to protect and improve staffing
- Improve communications among the state, facilities, residents, and families.
- The state should plan now for a second wave of COVID-19 in facilities
- The state should continue to augment nursing home payment

A Study of the COVID-19 Outbreak and Response in Connecticut Long-Term Care Facilities Final Report

Source: Rowan, P., Lester, R., Levere, M., Libersky, J., Lipson, D., & Robison, J. A Study of the COVID-19 Outbreak and Response in Connecticut Long-Term Care Facilities (No. 6374a316a4ac4caa91fa97a2990c2a7f). Mathematica Policy Research.

Area of Focus: Connecticut

Findings:

- **Facility Characteristics:** Higher numbers of residents in facilities and higher occupancy rates of licensed beds were significant predictors of cases and deaths.
- **Community Cases and Spread:** Nursing homes in communities with more COVID cases had more cases and deaths. Nursing homes with more residents on dialysis or cancer treatments had more cases per licensed bed. Treatment often occurs outside nursing homes.
- **Staffing Levels:** Nursing homes with high staffing levels had significantly fewer cases and deaths per licensed bed.

Recommendation of Rowan et al:

- Provide person-centered care
- Recognize essential family caregivers
- Improve infection control systems and procedures, including testing residents at higher risk (outpatient treatment)
- Augment staffing
- Improve state emergency response and coordination with LTSS providers
- Have full-time staff and consistent assignment

- Train more staff in infection control
- Discharge more people to home with HCBS
- Increase payment rates to facilities for certain improvements

Keeping Nursing Home Residents Safe and Advancing Health in Light of COVID-19, Analysis and Recommendations for the State of Michigan

Source: Center for Health and Research Transformation. Keeping Nursing Home Residents Safe and Advancing Health in Light of COVID-19, Analysis and Recommendations for the State of Michigan. September 2020.

Area of Focus: Michigan

Findings:

- **Resident Cases and Death:** From March-August 2020, nursing home resident COVID deaths were 33.2% of Michigan's total COVID deaths. By May 2020, MI had designated 21 regional nursing home hubs to care for medically stable COVID patients coming from hospitals. Hubs overall had 17% of residents with COVID die compared to 26% of non-hub nursing home residents with COVID.
- **Staff Cases and Death:** By August 2020, 25% of 442 nursing homes only had staff COVID cases, with no resident cases. 14% of nursing homes had no staff or resident cases. 4,226 nursing home staff had COVID-19 and 21 had died.
- **Community Cases and Spread:** Nursing home resident COVID prevalence was correlated with county prevalence rates. **PPE & Testing Access:** 46% of nursing homes had a PPE shortage during June and July 2020. The shortages varied across the state, with some regions reporting no shortages, while others had high proportions of facilities that reported PPE shortages.

Recommendations of Center for Health and Research Transformation:

- Detailed set of criteria for hub nursing homes.
- Procedures for "cohorting" residents with COVID-19; i.e., grouping them together in homes.
- Nursing homes should have strong partnerships with hospitals.
- Increase use of HCBS.
- Better training and more equipment for infection control.
- Augmented staffing and pay.
- Better nursing home connections with managed care plans.

Michigan Nursing Homes COVID-19 Preparedness Task Force Final Recommendations.

Source: Michigan Nursing Homes COVID-19 Preparedness Task Force Final Recommendations. August 31, 2020

Area of Focus: Michigan

Recommendations of Preparedness Task Force:

- Improve supply of PPE and testing
- Improve opportunities for resident socializing
- Provide more activities for residents
- Improve opportunities and supports for certified nursing assistants
- Operate dedicated COVID nursing homes
- Improve connections between nursing homes and health care systems

Recommendations to Strengthen the Resilience of New Jersey's Nursing Homes in the Wake of COVID-19

Source: Manatt. (June 2, 2020) Recommendations to Strengthen the Resilience of New Jersey's Nursing Homes in the Wake of COVID-19. State of New Jersey.

Area of Focus: New Jersey

Findings:

- **Facility Characteristics:** No relationship found between size of facility or for-profit status and COVID deaths per licensed bed.
- **Community Cases and Spread:** COVID cases in nursing homes are related to rates in surrounding communities.
- **Star Ratings and Infection Control Deficiencies:** No relationship between star-ratings and COVID deaths per licensed nursing home bed. Weak, if any, relationship between infection control deficiencies and deaths.

Recommendations of Manatt:

- Create a Central LTC Emergency Operations Center
- Create a performance dashboard to identify nursing homes needing help
- Pair hospitals with nursing homes in emergencies
- Create a nursing home reopening plan; no discharges to nursing homes that don't comply with rules
- Create a regional back-up plan for patient placement in case of infection surges
- Require nursing homes to have back-up staffing plans
- Facilitate resident and family communications through guidance to nursing home
- Strengthen MLTSS coordination requirements for care managers who cannot visit nursing homes

Factors Associated with Nursing Home Infections and Fatalities in New York State During the COVID-19 Global Health Crisis

Source: New York State Department of Health. (July 20, 2020) Factors Associated with Nursing Home Infections and Fatalities in New York State During the COVID-19 Global Health Crisis.

Area of Focus: New York

Findings:

- **Resident Cases and Deaths:** 30% of nursing homes had very few or no cases or deaths. Cases and fatalities were not related to COVID admissions from hospitals to Nursing homes. NY only counts COVID nursing home resident deaths if deaths occur in facilities.
- **Staff Cases and Deaths:** Between 1/4 and 1/3 of nursing home staff had COVID. NYSDOH states that nursing home resident cases and deaths were most likely related to infected staff.
- **Community Cases and Spread:** Nursing home COVID deaths tracked with deaths among the general population in timing and location. Nursing home resident cases and deaths are related to rates in their communities.
- **Star Ratings and Infection Control Deficiencies:** COVID cases and fatalities were not related to 5-star ratings. Mortality rates in 5-star facilities were 12% vs 7% in the lowest rated facilities. Geographic location outweighed star-rating system in terms of influence on COVID rates.

Recommendations of New York Department of Health:

- The state would have benefited from accurate information about who tested positive early on