



International Review of Innovations to Protect Nursing Home Residents from Infectious Diseases Such as COVID-19

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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 that seeks to spark ideas for immediate, intermediate, and long-term options for transforming long-term services and supports (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.

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

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The COVID-19 pandemic has focused attention on the deficits of U.S. residential care facilities, which include nursing homes and assisted living. People in these facilities are more likely to die or have increased health problems arising from the COVID-19 pandemic and they are subject to other infectious diseases, such as influenza. This situation is not unique to the U.S. Other countries are experiencing the same vulnerabilities.

Nursing homes provide most of the basic requirements for people who need LTSS, including housing, services, a workforce to support resident needs, and some level of community integration (see [A Series on Transforming Long-Term Services and Supports](#)). However, there are driving and restraining forces that affect how well these basic components come together to support a high-quality experience for consumers. Clearly, rapid transmission of a deadly virus is one of those forces, and a very serious one. Yet deaths of thousands of nursing home residents are not inevitable. Critical driving forces for safe care include continual preparation for pandemics, routine infection control procedures, and immediate interventions to combat the threats. Lessons from other countries offer some important ideas for the U.S.

This *Spotlight* follows on and amplifies the earlier AARP Public Policy Institute publication, *LTSS Choices: COVID-19 and Nursing Home Residents*. In this *Spotlight*, we next look to the global community to explore how we can help mitigate the effects of current and future pandemics on U.S. nursing home and assisted living residents. For this report, we reviewed the international community's experience with the COVID-19 pandemic to learn how other

countries have handled their responses to the pandemic and what their experts recommend to improve care for residents (see Methods Summary).

This *Spotlight* focuses on two sources for insights. One is the experience of some countries that have had few deaths in their residential care facilities, how they prepare for pandemics in general, and how they responded to the COVID-19 pandemic. The other is international experts' agreement around recommendations to improve how nursing homes and assisted living facilities respond to infectious disease. Those two areas of focus, in fact, converge, for we found that the relatively successful countries' responses to the pandemic align with those recommendations.

Methods Summary

A Google Scholar search identified relevant COVID-19 publications from 2020 and 2021. We then searched the archives of the International Long-term Care Policy Network, which is a network of researchers, policymakers and other stakeholders that promotes the global exchange of evidence and knowledge on LTSS policy. The network is based at the London School of Economics and Political Science in the United Kingdom. From all these sources, we selected relevant articles from academic authors. The appendix provides a summary of their results.

After examining the scope of the pandemic problem for residents and workers in other countries, we focus on how the relatively successful countries have handled the COVID-19 pandemic and any related special features of their care systems and nursing homes playing a role in that success. We highlight experts' recommendations, understanding that the U.S. cannot implement some of them for various reasons, including differences in government authority across countries. However, sharing ideas offered by global thought leaders can stimulate new approaches to issues that we must address to help ensure that we do not repeat the devastating impact of COVID-19 on residents and staff. Note that this Spotlight does not address all potential workforce innovations. We address additional innovations in a subsequent Spotlight that focuses on the LTSS workforce across care settings.

Worldwide Impact of COVID-19 on People in Nursing Homes and Assisted Living

Several reports show that residents of nursing homes and assisted living facilities comprise a major proportion of deaths due to COVID-19, with substantial variation across countries:

- The July 2020 report from the World Health Organization¹ shows that in many high-income countries, about half of all deaths due to the pandemic occurred among people in nursing homes. At that time, the figure ranged from 24 percent of deaths in Hungary to 82 percent in Canada.
- Data from October 2020 show that the situation changed very little through the months of the pandemic. Based on available data from 21 countries, 46 percent of COVID deaths were in nursing homes and assisted living for older adults.² The figure was 41 percent in the U.S. at that time.
- A third report analyzed deaths in 11 countries with at least 4,000 COVID-19 deaths as of November 25, 2020 and at least 200 deaths in each of the first two waves of the disease. Those waves ended on May 15 and September 15, 2020.³ The proportion of deaths due to nursing home residents fell significantly in most of the countries in the second wave. However, there was a great deal of variation in risk of nursing homes deaths among the countries.

¹World Health Organization. (July 24, 2020) Preventing and Managing COVID-19 across Long-term Care Services, Policy Brief.

²Doty P., Blanco M., Research Brief: Long-term Care and the Impact of COVID-19: a First Look at Comparative Cross-national Statistics, December 2020. HHS, ASPE, Office of Behavioral Health, Disability, and Aging Policy.

³Ioannidis J., Axfors C., Contopoulos D., (November 2020) Second versus First Wave of COVID-19 Deaths: Shifts in Age Distribution and in Nursing Home Fatalities. medRxiv

Death is only the most extreme of COVID-19 consequences for residents. General health and mental health have suffered among residents as well. Many residents have existing health conditions, and those residents have had trouble getting access to the full range of needed health services—prevention, primary care, rehabilitation, and hospital services.⁴ At times in some countries, residents' advance care directives have been developed without the use of practices to ensure they are making their own decisions about end-of-life care.⁵ This, of course, can affect access to care and residents' health, function, and independence.

A review of the psychological impact of the pandemic on residents shows that loneliness and anxiety are among its primary consequences, with residents reporting significantly more of these feelings during the pandemic than they did before it started.⁶ This can result in high blood pressure, depression, suicidal thoughts, and anxiety for residents. Consequences for residents can also include more prescriptions for drugs that affect residents' behavior, mood, thoughts, or perception (e.g., as with anti-anxiety and anti-psychotic drugs).⁷ For example, an Ontario study of prescriptions for all nursing home residents found that practitioners prescribed more of these medications during the pandemic, and a similar increase occurred in the UK.⁸ The authors speculate that increases in prescribing occurred because of residents' isolation due to visitation restrictions.

The pandemic has affected staff too. They witness residents die, and fear getting ill from COVID-19 themselves. Staff also experience uncertainty, hopelessness, work overload, and role conflicts.⁹

Countries' Responses to the Pandemic

International and academic authors assert that, with certain exceptions, most countries spent the first few months of the pandemic ignoring the LTSS sector.¹⁰ For example, many countries did not include nursing homes in their initial pandemic planning.¹¹ In addition, these facilities generally did not get access to personal protective equipment (PPE), testing, and medical support until after there was already widespread infection among residents. Attention swung to the LTSS sector only once residents were dying at disproportionately high rates.¹²

Governments that minimized the impact of COVID-19 in nursing homes had engaged in pre-planning for pandemics generally, or had existing LTSS systems that enabled infection control once the pandemic arrived. We examine both types of governmental approaches next.

⁴WHO 2020.

⁵Ibid.

⁶Mo, S., & Shi, J. (2020). The Psychological Consequences of the COVID-19 on Residents and Staff in Nursing Homes. *Work, Aging and Retirement*, 6(4), 254–259.

⁷Anti-psychotics, anti-depressants, benzodiazepines, and trazodones

⁸Stall, N.M., Farquharson, C., Fan-Lun, C., Wiesenfeld, L., Loftus, C.A., Kain, D., Johnstone, J., McCreight, L., Goldman, R.D. and Mahtani, R., 2020c. A hospital partnership with a nursing home experiencing a COVID-19 outbreak: description of a multiphase emergency response in Toronto, Canada. *Journal of the American Geriatrics Society*, 68(7), pp.1376–1381.

⁹Mo & Shi 2020.

¹⁰Hirdes, J.P., Declercq, A., Finne-Soveri, H., Fries, B.F., Geffen, L., Heckman, G., Lum, T., Meehan, B., Millar, N. and Morris, J.N., 2020. The Long-term Care Pandemic: International Perspectives on COVID-19 and the Future of Nursing Homes.

¹¹WHO 2020.

¹²Hirdes et al. 2020.

Governments that Pre-Planned for Pandemics

Fortunately, a number of countries, or parts of countries, had engaged in pandemic planning before COVID-19 appeared. Therefore, they had sufficient supplies of PPE and took other steps that enabled more of their residents to live. The result was that those governments that were prepared had better outcomes. Researchers report that countries with lower COVID-19 rates in residential care settings tended to have mandatory prevention measures for nursing homes in place, along with strong community prevention measures and access to PPE.¹³ Governments with previous pandemic experiences in Asia were likely to keep nursing home deaths contained. They had plans and sufficient PPE in place, and their populations followed government regulations. About mid-way through 2020, Hong Kong and Taiwan reported no COVID-19 deaths in nursing homes and Singapore and South Korea reported less than 20 each.¹⁴ All four countries had started their infection control measures by February 2020. Below are further details on those countries.

Hong Kong

As reported in a July 2020 study, Hong Kong had no COVID-19 deaths in nursing homes and only one case in these homes.¹⁵ Researchers said that Hong Kong had learned from its experience with the SARS¹⁶ epidemic in 2003. From that epidemic, Hong Kong learned¹⁷ that older adults were more likely to become infected and die, facility residents were five times more likely to become infected than the general population, and older adults acquired most of their infections in hospitals. Also, a high proportion of older SARS patients required intensive care and ventilators.

Based on this experience, the government reacted swiftly to the COVID-19 pandemic. Some highlights include:

- Early on, the government implemented strict infection control procedures in the community.
 - People stayed in the hospital until their COVID-19 infections cleared.¹⁸
 - Officials implemented COVID-19 contact tracing, with those identified as having contact quarantining for 14 days.
 - Providers received subsidies for infection control.¹⁹
- Hong Kong took several measures in nursing homes.²⁰
 - The government provided a financial supplement to institutional providers for extra expenses due to the pandemic.
 - All nursing homes have trained infection controllers on staff and four times a year conduct emergency drills simulating outbreak situations such as with the flu or SARS.

¹³ Doty & Blanco 2020.

¹⁴ Lau-Ng R., Caruso L., Perls T., COVID-19 Deaths in Long-term Care Facilities: a Critical Piece of the Pandemic Puzzle. *Journal of the American Geriatrics Society*, vol. 68, no.9, pgs. 1895–1898. Tsay, S. F., Kao, C. C., Wang, H. H., & Lin, C. C. (2020). Nursing's response to COVID-19: Lessons learned from SARS in Taiwan. *International Journal of Nursing Studies*, 108, 103587.

¹⁵ Wong, K., Lum, T., and Wong, G., (July, 2020) The COVID-19 Long-term Care Situation in Hong Kong: Impact and Measures. International Long Term Care Policy Network.

¹⁶ Severe acute respiratory syndrome coronavirus 2

¹⁷ Lum, T., Shi, C., Wong, G., & Wong, K. (2020). COVID-19 and long-term care policy for older people in Hong Kong. *Journal of Aging & Social Policy*, 32(4–5), 373–379.

¹⁸ Lau-Ng et al. [n.d.].

¹⁹ Lum et al. 2020.

²⁰ Wong et al. 2020 and Lau-Ng et al. [n.d.].

- Nursing homes set up temporary isolation wards.
- Other measures included limiting visitors to nursing homes and permitting remote medical appointments.²¹
- To address social isolation issues, non-governmental organizations (NGOs) collaborated with telecommunication companies to facilitate video calls between residents and families and online activities for older adults.

Singapore

Nursing home residents in Singapore accounted for 11 percent of the country’s 27 deaths due to COVID-19. Like Hong Kong, Singapore took aggressive action early in the pandemic.²²

Some highlights include:

- In January 2020, officials notified practitioners to be vigilant and confirmed the first cases of COVID-19 late that month.
 - In February, they distributed PPE from a national stockpile, and began screening visitors to nursing homes.
 - The very first nursing home COVID-19 diagnosis, which occurred on April 1, 2020, marked the immediate implementation of measures to control spread in these facilities.
- Singapore restricted visits and health workers’ movements between nursing homes.
 - Inter-facility transfers involved strict safety protocols, and nursing homes created “bubbles” to treat residents with COVID-19 together.
 - Hospitals were available to support testing residents and staff within 24 hours of exposure to COVID-19. Those with positive or suspected infections went to hospitals. Hospitals also helped with medical management of nursing home residents.
 - Singapore quarantined nursing home staff exposed to the disease and provided them with alternative housing.

South Korea

In South Korea, half of fatal cases occurred as a result of infections in hospitals or other institutions.²³ By April 2020, South Korea had 247 COVID-19 deaths. Eight percent of those who died were infected in nursing homes. Nursing homes transferred infected residents to hospitals where they remained until they recovered or died. South Korea had few nursing-home-related deaths because they implemented comprehensive infection control procedures, both in the population at large and in facilities.

South Korea initially had the second highest number of COVID cases after China, with a peak of 909 cases in February 2020.²⁴ However, South Korea rapidly controlled community transmission of the disease. Some of South Korea’s success appears to be

²¹Lum et al. 2020.

²²Graham W., Wong C., Responding to COVID-19 in Residential Care: The Singapore Experience. International Long Term Care Policy Network. July, 2020.

²³Kim, K., (May, 2020). The Impact of COVID-19 on Long-term Care in South Korea and Measures to Address it. International Long Term Care Policy Network

²⁴Oh, J., Lee, J. K., Schwarz, D., Ratcliffe, H. L., Markuns, J. F., & Hirschhorn, L. R. (2020). National response to COVID-19 in the Republic of Korea and lessons learned for other countries. *Health Systems & Reform*, 6(1), e1753464.

due to its response to an earlier pandemic—Middle Eastern Respiratory Syndrome (MERS).²⁵ Given that previous experience, the country was primed to respond quickly to the COVID-19 pandemic. The country's strategies included:

- South Korea's response started with early recognition of the threat and activation of a response plan, which involved early and widespread diagnostic capability, contact tracing and quarantine, and redesign of case management systems.
- The country also designated triage centers for people with symptoms and allocated non-hospital beds for people with mild symptoms.

Taiwan

As of March 2020, Taiwan had only 135 COVID-19 cases, despite its close proximity to the People's Republic of China.²⁶ Taiwan was successful in preventing a wider spread of the infection because government, hospitals, and nursing organizations collaborated immediately as a result of their experience with SARS in 2003. Strategies included:

- The government set up an internet platform for nurses to report when their hospitals did not act in compliance with protocols.
- The country put in place 134 isolation hospitals after the SARS epidemic. In these hospitals, nurses are experts in infection control.
- Nurse volunteers run a quarantine call center and the country uses extensive phone tracking for infection control.

As of May 2020, in its 1,091 nursing homes, Taiwan had no clusters of infections and only one infection in a staff member.²⁷ Researchers attribute the low rates to infection control being integral to the culture of nursing home care and a sufficient supply of PPE. In addition, Taiwan has a Central Epidemic Command Center that guides local governments, which in turn guide facilities. Care associations and local networks of institutions coordinate. They banned nonessential visits, while each unit had designated staff with no crossover to other units.

Hong Kong, Singapore, South Korea, Taiwan: General Takeaways

The Asian countries had previous pandemic experiences that motivated them to have emergency plans that they used when they were aware of the COVID-19 pandemic. Nursing homes were part of these plans and had immediate access to PPE. In addition, the countries had aggressive testing, contact tracing, and quarantining measures that their populations largely followed. Thus, the U.S. can learn a great deal from their experiences as it considers how to deal more effectively with both future pandemics and the infectious diseases that more regularly occur in facilities.

²⁵Middle East Respiratory Syndrome

²⁶Tsay et al. 2020.

²⁷Yang, P., & Huang, L. K. (2020). Successful prevention of COVID-19 outbreak at elderly care institutions in Taiwan. *Journal of the Formosan Medical Association*, 119(8), 1249–1250.

LTSS Features Protecting Nursing Home Residents

Generally, countries that experienced high rates of COVID-19 infections did take certain measures, reducing occupancy in nursing homes and restricting who could visit residents.²⁸ Some countries restricted workers to one facility, regularly tested staff for the virus, and allowed telehealth services in facilities.

Other countries were able to minimize COVID-19 deaths in nursing homes likely due to their infrastructure. We have two examples worthy of further consideration. One actually involves a comparison of two provinces within one country: British Columbia and Ontario in Canada. Another example is Denmark.

British Columbia and Ontario

One of the most interesting set of responses is the contrast between the Canadian provinces of British Columbia (BC) and Ontario. The former was more prepared than the latter.

As of September 2020, Ontario had 5,965 resident cases and 1,817 deaths in its nursing home population, whereas BC only had 466 cases and 156 deaths.²⁹ Ontario's facility resident infection rate was 7.6 percent, compared to only 1.7 percent in BC. COVID-19 death rates among nursing home residents were 2.3 percent versus 0.6 percent in the two provinces, respectively. Nursing home residents in the two provinces had similar age and sex distributions. It is not clear whether there were differences in residents' frailty.

The authors of this report comparing BC and Ontario assert that the differences in death rates are due to BC having³⁰ responded earlier to the pandemic and having had better pre-existing coordination among the public health, hospital and LTSS sectors. In addition, BC put more resources into its LTSS system in terms of funding and care hours per resident. BC had 3.25 hours of care per day per resident, versus 2.71 hours in Ontario. Only 24 percent of rooms in BC are shared versus 63 percent in Ontario. BC also has more comprehensive facility inspections than Ontario. Finally, BC restricted workers to one facility starting in March 2020, whereas Ontario waited until April to do so.

Denmark

As of May 2020, Denmark had 563 deaths from COVID-19, with about one-third being nursing home residents.³¹ Most other European countries experienced death rates of 40 percent or more.³² Denmark did better than many other European countries because they had better nursing home environments and better prepared staff.

Responding to the pandemic, Denmark quickly locked-down facilities. This included restricting visitors, limiting group activities to two residents, limiting the number of residents that one worker could serve, and immediately isolating residents with symptoms. Another factor is that in Denmark municipalities provide integrated health and LTSS, with each nursing home having its own general practitioner. Interestingly, facility staff have reported that residents are calmer than they were prior to the implementation of COVID-related practices, perhaps due to smaller group activities.

²⁸ Comas-Herrera A., Ashcroft E., & Lorenz-Dant K., (May 2020). International Examples of Measures to Prevent and Manage COVID-19 Outbreaks in Residential Care and Nursing Home Settings. International Long Term Care Policy Network.

²⁹ Liu, M., Maxwell, C. J., Armstrong, P., Schwandt, M., Moser, A., McGregor, M. J., Bronskil S., Dhalla, I. A. (2020). COVID-19 in long-term care homes in Ontario and British Columbia. *CMAJ*, 192(47), E1540–E1546.

³⁰ Ibid.

³¹ Rostgard, T., (May 2020) The COVID-19 Long-Term Care Situation in Denmark. International Long Term Care Policy Network.

³² Ioannidis et al. 2020 and Doty & Blanco 2020.

Two other factors in Denmark include staffing and facilities' physical environment.³³ LTSS workers have extensive training. Social Care and Health Helpers have a 19-month training program with a five-month introductory course. Social Care Assistants have an additional 20 months of training and coursework. Now, during the pandemic, such workers can file a work-related injury claim if they test positive for COVID-19, enabling them to receive worker compensation payments.

Turning to facilities' environments, the majority are public, relatively new, and have one resident per room. In fact, residents typically have small apartments with their own kitchen, bathroom, and two separate rooms with a doorbell and mailbox. The facilities also have common rooms where residents socialize. Single occupancy enables easy isolation of residents with COVID-19 symptoms.

International Researchers and Practitioners' Recommendations for Handling Pandemics

Recommendations to handle the current pandemic and future ones are emerging from a variety of organizations and professionals who have been analyzing the experiences of nursing home residents during such situations. These experts have focused on steps to mitigate the problems that have occurred in many countries across the world. For example, many countries have experienced severe challenges related to infection control and staffing. So, one of the most frequent recommendations is the deployment of rapid response teams to help nursing home staff control infections and provide additional staffing when necessary.

The following recommendations come primarily from the World Health Organization, the American Geriatric Society, and a number of international researchers. **These are important ideas for discussion, but should not be viewed as AARP recommendations, which are included in the *LTSS Choices: COVID-19 and Nursing Home Residents December 2020 Spotlight*.** The ideas of the experts and researchers converge in several themes, including planning and rapid response measures, infection control and quality assurance, integration of health and LTSS, resident and worker issues, and environmental design.

Planning and Rapid Response

- Develop a national coordinating system that can be immediately responsive to pandemics. This system should use relevant data systems to estimate the impact of pandemics and determine how to improve responses to them.
- Ensure that emergency response plans are on hand at care facilities and that facilities update them and practice their execution. These plans should include nursing homes and assisted living residences. There should be a designated government or private-sector focal point (e.g., a response center) to manage the LTSS sector response.
- Establish and maintain facility rapid response teams with geriatric expertise to serve residential settings and reduce avoidable hospital use, and ensure good communication across the health and LTSS sectors.

³³Rostgard 2020.

Infection Control and Quality Assurance

- Ensure adequate pandemic monitoring in nursing homes and assisted living residences and share results with the health care sector.
- Ensure that nursing homes and assisted living residences have a stockpile of PPE. While multiple sets of recommendations mention this, none seems to define what an adequate stockpile is. Likely, this occurs because the requirements vary by type of facility and their resident profiles.
- Test everyone entering a facility for COVID-19 or any future virus threat and give them hands-on training about infection control. All facility staff members serving infected residents should receive training in infection control and recognition of symptoms. Use experienced nurses to educate and train staff in infection control.
- Limit transfers from hospitals during pandemics.

Integration of Health and LTSS

- Ensure that residents continue to receive essential health promotion, prevention, treatment, rehabilitation, and palliation services. Upgrade clinical services in nursing homes to meet the more intense health needs of residents.
- Ensure that all facilities are supported by a primary care service and that health and LTSS services are integrated for residents. Illustrating the importance of this recommendation is a study in France. Researchers compared the experiences of residents in three nursing homes; two were hospital-based and the third was independent.³⁴ They found that at three months, hospital-based nursing homes had case fatality rates of 6.6 percent versus 25.8 percent for the independent facility. Mortality decreased with residents having daily clinical examinations, three vital-sign measurements per day, and anti-coagulation therapy at the hospital-based facility. The independent facility had no effective infection control policy.
- Develop methods of treating LTSS residents with COVID-19 (or other pandemic virus) in the primary, secondary, and tertiary care settings, using virtual techniques for consultations when appropriate.
- Scale up initiatives like the Seniors Quality Leap Initiative, which is a private network of 11 US and Canadian organizations serving 11,000 residents in 68 care homes.³⁵ This group collaborates to use evidence-based metrics to establish common improvement initiatives. The collaborative has improved pain management and reduced inappropriate use of anti-psychotics. The initiative's emphasis is on improving performance.

³⁴Tartaret, P., Strazzulla, A, Rouyer, M., Gore, C., Bardin, G., Noel, C., Benguerd, i Z., Berthaud, J. Hommel, M., Auflaure, S., Jochmans, S., Diamantis, S., (2020). Clinical Features and Medical Care Factors Associated with Mortality in French Nursing homes during COVID-19 Outbreak, *International Journal of Infectious Disease*.

³⁵Hirdes et al. 2020.

Focus on Resident Isolation

Many countries locked down their nursing homes once it became clear that residents were dying of COVID-19 at disproportionate rates. These bans have caused residents high levels of loneliness, depression, and mood and behavioral problems.³⁶ The literature to date does not provide evidence that visitors introduced COVID-19 infections to institutions.

There are concerns that the risks of visitor bans outweigh the benefits. Researchers³⁷ recommend that residents be able to designate caregivers who can visit on a limited basis, except during end of life, when they would be able to visit somewhat more frequently. More generally, visitors need to comply with infection control procedures. Outdoor visitations are preferable when feasible.

Like other countries, the Netherlands prohibited visitors to nursing homes, and residents were not able to go outside. Health professionals also had their visits limited. All group activities for residents ceased. Given the risks to residents, this country developed guidelines for visitors that permitted scheduled visits and required that visitors follow infection control procedures. Researchers studied the impact of these guidelines on COVID-19 infections for three weeks after visits were allowed in 26 nursing homes.³⁸ They found that 57 percent of residents received visitors, who mostly followed infection control protocols. Staff workload increased due to managing the visits. Nursing home staff reported the positive impact that visitors had on residents' well-being and nursing homes reported no new COVID-19 infections for three weeks after visits were allowed. As a result, the Netherlands lifted its ban on visitors because of the detrimental impact on residents and residents are involved in decisions about visitation.³⁹

Residents

- Involve residents in decisions about whether to have visitors.
- Develop interventions during pandemics that can help residents maintain their social connections with family and friends, and provide opportunities for developing leisure skills.
- Use technology during pandemics to facilitate virtual contact between residents and family. Techniques include video chats, window visits, video calls, phone conversations, and emails. Facilities should determine what communication methods residents prefer, in the absence of in-person visits. It turns out that low technology methods may be the ones residents prefer, but facilities should accommodate resident choice. An online survey of 161 adults in the U.S. with relatives or friends in nursing homes queried them about nine communication methods other than physical visits⁴⁰ and how they perceived the resulting emotions of the residents with whom they had contact. More frequent phone and email communication was associated with residents having less negative emotion. Video conferencing⁴¹ had no significant impact on resident emotions, while letters that are more frequent were associated with residents having emotions that are more negative. Phone and email were the communication methods residents appear to prefer.

³⁶ Baumbusch, J., Low, L. F., & Comas-Herrera, A. Rapid review of the evidence on impacts of visiting policies in care homes during the COVID-19 pandemic.

³⁷ Stall, N. M., Johnstone, J., McGeer, A. J., Dhuper, M., Dunning, J., & Sinha, S. K. (2020b). Finding the right balance: An evidence-informed guidance document to support the re-opening of Canadian nursing homes to family caregivers and visitors during the coronavirus disease 2019 pandemic. *Journal of the American Medical Directors Association, 21*(10), 1365–1370.

³⁸ Verbeek, H., Gerritsen, D. L., Backhaus, R., de Boer, B. S., Koopmans, R. T., & Hamers, J. P. (2020). Allowing visitors back in the nursing home during the COVID-19 crisis: A Dutch national study into first experiences and impact on well-being. *Journal of the American Medical Directors Association, 21*(7), 900–904.

³⁹ Kruse F., van Tol L., Vrinzen C., van der Woerd O., Juristen P., (November 2020) The Impact of COVID-19 on Long-term Care in the Netherlands: the Second Wave. International Long Term Care Policy Network.

⁴⁰ Monin, J. K., Ali, T., Syed, S., Piechota, A., Lepore, M., Mourgues, C., ... & David, D. (2020). Family Communication in Long-Term Care During a Pandemic: Lessons for Enhancing Emotional Experiences. *The American Journal of Geriatric Psychiatry, 28*(12), 1299–1307.

⁴¹ Note that video-conferencing does allow families and friends to see and check in on their loved ones.

- Ensure that palliative care plans and advanced care directives are person-centered and current.
- Ensure that all parties know resident goals of care, plans for end-of-life, medical needs, and whether a facility can appropriately serve a resident with COVID-19 or other future virus. Ensure supplies for symptom management and end-of-life care.

Workers

- Secure sufficient staff and resources for facilities, and restrict staff to working in one facility, if possible, with adequate wages. If not possible to restrict them, provide the incentives they need to work in only one facility so they do not need to seek employment in two or three nursing homes. Staff need a salary sufficient to minimize their movement between facilities and paid sick leave to stay home when they are ill. A literature review showed that increased facility staffing, particularly registered nurses, was consistently associated with reduced risk of COVID-19 infections and mortality.⁴² Another measure that proved effective was voluntary staff confinement to facilities, with staff sleeping in unused areas of the facility.
- Improve facility jobs by providing a living wage, adequate benefits, and stable employment. Train workers in gerontology to be part of the clinical team, and mentor them.
- Ensure the psychosocial well-being of workers by providing assistance, such as a dedicated helpline and offering flexible scheduling.
- Educate staff about infection control, and address their concerns about the pandemic and ethical issues surrounding it.
- Consider psychological intervention teams for staff, residents, and families during pandemics.

Environmental Design

- Redesign nursing homes to make them more homelike. Designs with more private rooms enable better infection control.
- New nursing homes should have private rooms, outdoor spaces, non-slip floors, smaller units, and good sight lines and communication systems.
- In-house services, such as providing meals to staff, can help ensure their safety; staff rooms for breaks and changing out of travel clothes can help reduce virus spread.
- Nursing homes should have spaces for designated for external community members to interact with residents.
- Nursing homes, if feasible, could divide their institutions into one area for people without symptoms, one for suspected cases, and one for those with the pandemic-related disease. Consistent staff should work in each area to minimize spread of the disease.

⁴² National Collaborating Centre for Methods and Tools. (October, 2020). What Risk Factors Are Associated with COVID-19 Outbreaks and Mortality in Long-term Care Facilities and What Strategies Mitigate Risk?

Conclusion

This international review of countries' experiences with the COVID-19 pandemic reveals that the countries that were prepared for pandemics and acted on their plans experienced much less death among nursing home residents. The countries that were prepared tended to have had direct experiences with previous pandemics and to have learned vital lessons from them. These countries were primarily from Asia.

A second important observation is that governments such as those in British Columbia and Denmark had LTSS system features that permit a more effective response to pandemics. Both of these jurisdictions have primarily private rooms or apartments for nursing home residents, sufficient supplies of trained staff, and programs that require or encourage staff to serve one facility.

These lessons and others described here offer the United States innovative ideas for handling future pandemics more effectively than we did COVID-19 in 2020 and 2021.

Advancing the Discourse

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

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Appendix

Country	COVID-19 Impacts on Nursing and Assisted Living Facility Residents	Services in Nursing and Assisted Living Facilities	Quality Assurance	Environment	Workforce
<p>American Geriatrics Society. (2020). American Geriatrics Society Policy Brief: COVID-19 and Nursing Homes. <i>Journal of the American Geriatrics Society</i>, 68(5), 908–911.</p>			<p>At the start of the pandemic, nursing facilities increased infection control, banned visitors, and eliminated group activities. Yet they still experienced infections. CMS changed how Medicare reimburses for telehealth and eliminated the 3-day hospital rule to allow Medicare to cover earlier admissions to nursing facilities.</p> <p>AGS recommends:</p> <ul style="list-style-type: none"> Using the Defense Production Act to increase the supply of PPE, testing kits, laboratory supplies, and, importantly, supplies for symptom management and end-of-life care. Discharging hospital patients with COVID-19 only to nursing facilities that are capable of handling residents with the infection. Knowing residents' goals of care and plans for end-of-life, what the residents' medical needs are, and whether is can appropriately serve the resident with COVID-19. 		<p>All nursing facility staff serving residents with COVID-19 should be trained in infection control and recognition of symptoms.</p>

Country	COVID-19 Impacts on Nursing and Assisted Living Facility Residents	Services in Nursing and Assisted Living Facilities	Quality Assurance	Environment	Workforce
<p>Anderson, D. C., Grey, T., Kennelly, S., & O'Neill, D. (2020). Nursing Home Design and COVID-19: Balancing Infection Control, Quality of Life, and Resilience. <i>Journal of the American Medical Directors Association</i>, 21(11), 1519–1524.</p>				<ul style="list-style-type: none"> • Ensure that facility design enables residents' access to communities. • Ensure resident privacy. • Provide a home-like environment. • Provide bright spacious private rooms with private bathrooms to improve quality of life and to limit disease spread. • Enable connections with nature and the opportunity to be outside. • Ensure integration with health and acute care services. • Provide small buildings with stable staffing • Use signage to ensure that people with certain symptoms do not enter the facility. • Provide hand-sanitizers in all rooms and key spaces, such as common rooms. • Separate staff resident and visitor entrances and exits can reduce exposure to infectious disease, as can doors that automatically open. • Provide staff with adequate changing and hygiene space and space for respite. • Increase air flow to clear out virus and have available negative pressure rooms that can prevent spread of virus from infected residents to others. 	

Country	COVID-19 Impacts on Nursing and Assisted Living Facility Residents	Services in Nursing and Assisted Living Facilities	Quality Assurance	Environment	Workforce
<p>Armstrong, P., Armstrong, H., Choiniere, J., Lowndes, R., & Struthers, J. (2020). Re-imagining long-term residential care in the COVID-19 crisis. <i>Ottawa, ON: Canadian Centre for Policy Alternatives.</i></p>			<p>Authors recommend that:</p> <ul style="list-style-type: none"> • Nursing facilities have a stockpile of PPE. • Everyone entering a facility should have a COVID-19 test and receive hands on training on infection control. • Severely limit transfers from hospitals. 	<p>Authors recommend that:</p> <ul style="list-style-type: none"> • new facilities have private rooms, outdoor spaces, non-slip floors, smaller units, good sight lines and communication systems. • in-house services ensure the safety of staff and staff rooms so they can take breaks and change out of travel clothes to reduce virus spread. • Facilities should have spaces, which the community can use to interact with residents. 	<p>During the pandemic, BC in Canada has restricted workers to one facility by making all of them public employees, offering full-time employment, and increasing wages.</p> <p>Authors recommend:</p> <ul style="list-style-type: none"> • Increasing staffing levels and setting minimum staffing levels in Canada. <p>Authors note that Canadian LTSS workers are seven times as likely to face violence on a daily or near daily basis compared to staff in Nordic countries. These countries have much higher staff levels than in Canada although resident needs are comparable.</p> <ul style="list-style-type: none"> • Requiring nursing facilities to have a surge capacity for additional staff during a crisis • Offering alternative housing for staff during a pandemic.

Country	COVID-19 Impacts on Nursing and Assisted Living Facility Residents	Services in Nursing and Assisted Living Facilities	Quality Assurance	Environment	Workforce
<p>Bauer, A., & Dixon, J., (June, 2020) The Challenges of Providing End-of-Life Support in Care Homes During the COVID-19 Pandemic, and Opportunities for the Future: An International Perspective. International Long Term Care Policy Network.</p>	<p>COVID-19 Impacts on Nursing and Assisted Living Facility Residents</p>	<p>Services in Nursing and Assisted Living Facilities</p> <p>Palliative care has a central role in symptom relief and end-of-life care in COVID-19 patients. Internationally, palliative care has been neglected. Media reports show that some care home residents have died without relief of symptoms. For example, a French care home left residents without any help for days before they died of hypovolemic shock. Also, general practitioners had stopped visiting this home. Similar stories occurred in Spain, Quebec, and the UK. Most homes are poorly prepared for providing palliative care.</p> <p>Most countries have developed palliative care guidelines with varying degrees of completeness.</p> <p>Lack of PPE and palliative medications have been major barriers to a peaceful death for residents with COVID-19. Access to PPE was particularly problematic in Canada, the US, the UK, France, Spain, and Italy. Access to medications was a problem in the U.S., Canada, the UK, and Italy.</p> <p>Most countries have chronically underfunded their palliative care services. To remedy this situation, the authors recommend:</p> <ul style="list-style-type: none"> • Health programs should include palliative care. • Care homes should have contracts with palliative care providers. • Care home staff should have palliative care training. 	<p>Quality Assurance</p>	<p>Environment</p>	<p>Workforce</p>
<p>Baumbusch, J., Low, L. F., & Comas-Herrera, A. Rapid review of the evidence on impacts of visiting policies in care homes during the COVID-19 pandemic.</p>	<p>COVID-19 Impacts on Nursing and Assisted Living Facility Residents</p>	<p>Services in Nursing and Assisted Living Facilities</p>	<p>Quality Assurance</p> <ul style="list-style-type: none"> • No evidence in scientific literature that visitors introduce infections to institutions. • Visitor bans cause residents high levels of loneliness, depression, and mood, and behavioral problems. • No direct evidence of visitor bans affecting quality of care. However, since visitors often assist with resident care, there may have been reductions in quality. 	<p>Environment</p>	<p>Workforce</p>

Country	COVID-19 Impacts on Nursing and Assisted Living Facility Residents	Services in Nursing and Assisted Living Facilities	Quality Assurance	Environment	Workforce
<p>Borasio, G. D., Gamondi, C., Obrist, M., & Jox, R. (2020). COVID-19: decision making and palliative care. <i>Swiss medical weekly</i>, 150(1314).</p>		<p>In Switzerland, a national palliative care organization made recommendations to its affiliated professionals in the wake of COVID-19. The recommendations are:</p> <ul style="list-style-type: none"> • Patients currently receiving palliative care and most of those living in nursing homes should not be eligible for hospitalization, even if they request it. • Advance directives asking for maximal care are not legally binding in Switzerland so can be overridden for medical reasons. This is a form of rationing health care via triage and decisions about whether a resident's COVID symptoms can be controlled in the care home. • All dying COVID patients should have access to palliative care. • Clarify goals of care early with residents. • Complex triage decisions should involve palliative care specialists. • Psychosocial and spiritual care of patients, families, and health staff are paramount. 			
<p>Bruckner M., Fleischer E., Gather C., Jurczyk K., Luck F., Rerrich M., Thiessen B., Weicht B., (August, 2020) Clean Up Time! Redesigning Care after Corona, A Position Paper on the Care Crisis from Austria, Germany, and Switzerland. Care. Power.More.</p>			<p>Residents should be involved in decisions about whether to have visitors.</p>		

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Country	COVID-19 Impacts on Nursing and Assisted Living Facility Residents	Services in Nursing and Assisted Living Facilities	Quality Assurance	Environment	Workforce
<p>Charlesworth, S., Low, L., (October 2020) The Long Term Care COVID-19 Situation in Australia. International Long Term Care Policy Network</p>				<ul style="list-style-type: none"> Health care rapid response teams and surge staffing support when an outbreak occurs in a care home. Private companies largely supplied the extra staff. Prolonged isolation of residents has to be weighed against the detrimental effects. A Royal Commission Report stated that residents needed health and mental health services to avoid deterioration during the pandemic and that the residential care sector needed to allow more visitation, under safe conditions. 	
<p>Comas-Herrera, A., & Fernández, J. L. (March 2020). Summary of international policy measures to limit impact of COVID19 on people who rely on the Long-Term Care sector. International Long Term Care Policy Network.</p>	<p>Hong Kong is providing occupational therapy via telehealth for people with dementia.</p> <p>South Korea is permitting social workers to provide services by phone.</p> <p>Australia is creating rapid response teams for facilities that become overwhelmed.</p>	<p>Countries have:</p> <ul style="list-style-type: none"> Used technology to facilitate virtual contact between residents and family. Techniques include: video chats, window visits, and video calls. Austria, England, and the US have expanded telehealth. Hong Kong offers occupational health via telehealth. Rapid response teams exist in Australia, Israel, Spain, and the U.S. Australia uses private providers and Israel uses government staff. 	<p>Some countries have developed national task forces to coordinate response to the pandemic since their LTSS systems generally are not coordinated at the national level. For example, Israel appointed a national level team in April, 2020. Countries have also:</p> <ul style="list-style-type: none"> Reduced occupancy in care homes. Restricted visitors to care homes. Restricted staff to one care home. Implemented regular testing of staff. Allowed telehealth for health care services in the care home. 		
<p>Comas-Herrera A., Ashcroft E., & Lorenz-Dant K., (May 2020). International Examples of Measures to Prevent and Manage COVID-19 Outbreaks in Residential Care and Nursing Home Settings. International Long Term Care Policy Network.</p>	<ul style="list-style-type: none"> Hong Kong has not had COVID-19 deaths in care homes. Germany has had a low rate of COVID-19 deaths in care homes. 			<p>Canada and Israel restricted workers so that they can only work at one home.</p>	

Country	COVID-19 Impacts on Nursing and Assisted Living Facility Residents	Services in Nursing and Assisted Living Facilities	Quality Assurance	Environment	Workforce
<p>Doty P., Blanco M., Research Brief: Long-term Care and the Impact of COVID-19: a First Look at Comparative Cross-national Statistics, December 2020. HHS, ASPE, Office of Behavioral Health, Disability, and Aging Policy.</p>	<p>It's hard to compare countries because their definitions of LTSS facilities and data collection methods differ. Based on 21 countries' data, 46 percent of COVID deaths were in care homes (NFs and AL) for older adults in October 2020; the proportion was 47 percent in June of that year. In October 2020, among countries reporting confirmed and probable cases, the 41 percent of US deaths occurred in care homes. The figure was 80 percent in Canada, 44 percent in the UK, and eight percent in South Korea. The percentage of all care home deaths due to COVID ranged from 6.2 percent in Spain to 0.01 percent in South Korea in October 2020. The U.S. rate was 4.2 percent.</p>		<p>Some researchers assert that countries with lower COVID-19 rates in care homes tended to have mandatory prevention measures for care homes, along with strong community prevention measures and access to PPE.</p>		<p>Authors did a literature review on the psychological impact of pandemics on LTSS staff and measures to support them. Staff reported:</p> <ul style="list-style-type: none"> • Fears and concerns about outbreaks, particularly their risk of infection, how to manage people with dementia, infection control, and job loss due to infection. • Tension among colleagues. • Stress due to increased workload and increased cleaning tasks. • Confusion about job responsibilities. • Ethical dilemmas over isolating residents and needing to maintain physical distance from them. • Work refusal. <p>Staff reported:</p> <ul style="list-style-type: none"> • Need for isolation units within facilities to isolate infected residents. • Their concerns being ignored. • Lack of information and education about how to handle their work challenges. The more they knew, the better they felt about their work. • No studies available on interventions.
<p>Embregts, P., van Oorsouw, W., & Nijs, S. (2020). Impact of infection outbreak on long-term care staff: a rapid review on psychological well-being. <i>Journal of Long-Term Care</i>, 2020, 70–79.</p>					

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Country	COVID-19 Impacts on Nursing and Assisted Living Facility Residents	Services in Nursing and Assisted Living Facilities	Quality Assurance	Environment	Workforce
<p>Graham W., Wong C., Responding to COVID-19 in Residential Care: The Singapore Experience. International Long Term Care Policy Network. July, 2020.</p>	<p>Nursing home residents in Singapore accounted for 11 percent of 27 deaths due to COVID-19 in that country.</p>		<p>Singapore took the following steps in reaction to the pandemic:</p> <ul style="list-style-type: none"> • In January 2020, they notified practitioners to be vigilant and the first cases of COVID-19 were confirmed late that month. • In February, they distributed PPE from the national stockpile, and began screening visitors to facilities. • The first nursing home COVID-19 diagnosis occurred on April 1, 2020 and this marked the implementation of measures to control spread in these facilities. • Restricting visits and health workers movements between facilities. • Adhering to strict safety protocols for inter-facility transfers • Creating “bubbles” where residents with COVID-19 are treated together. • Testing residents and staff within 24 hours of exposure to COVID-19. Suspect and positive cases go to hospitals. • Making hospitals available to support testing and medical management of residents. • Quarantining nursing facility staff exposed to the disease and providing them with alternative housing. 		<p>blank</p>
<p>Help Age International, COVID-19, Older Adults, and long-term care in Asia Pacific. 2020</p>			<p>Methods that certain Asian countries have used to reduce impact of COVID-19 on Nursing Facility Residents:</p> <ul style="list-style-type: none"> • Establishing national task forces to coordinate responses and ensure compliance. • Increasing funding for PPE, staffing, and training. • Restricting staff movement across and within facilities. • Restricting visitors. • Screening, testing, and quarantining residents • Sanitizing facilities and equipment daily. • Cancelling group activities. 		

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<p>Hirdes, J.P., Declercq, A., Finne-Soveri, H., Fries, B.F., Geffen, L., Heckman, G., Lum, T., Meehan, B., Millar, N. and Morris, J.N., 2020. The Long-term Care Pandemic: International Perspectives on COVID-19 and the Future of Nursing Homes.</p>	<p>International and academic authors assert that, with a few exceptions, most countries spent the first few months of the pandemic ignoring the LTSS sector. Attention swung to this sector when care home residents were dying disproportionately.</p> <p>Calls to eliminate nursing home occurred. This is difficult because of many countries' investments in these facilities and the fact that home care depends heavily on families' willingness and ability to provide the care their loved ones need. Also, very frail older adults who do not have a carer living with them likely need a care home. The authors advocate the following:</p> <ul style="list-style-type: none"> • Upgrade clinical services in nursing facilities need to meet the more intense health needs of residents. • Redesign nursing facilities to make them more homelike. Designs that provide more private rooms enable better infection control. • Scale up initiatives like the Seniors Quality Leap Initiative, which is a network of 11 US and Canadian organizations serving 11,000 residents in 68 care homes. This group collaborates to use evidence-based metrics to establish common improvement initiatives. The collaborative has improved pain management and increased appropriate use of anti-psychotics. The emphasis is on improving performance, not blaming for missteps. • Enhance the evidence base in LTSS and ensure availability of real time data in the LTSS sector. This sector has not been a priority for public health reporting. • Engage in emergency preparedness. Most countries had little focus on this before the COVID-19 pandemic. However, New Zealand, which has a history of earthquakes, was an exception. It acted on pre-established emergency plans when the pandemic hit. So did Hong Kong. • Improve LTSS jobs by providing a living wage, adequate benefits, and stable employment. Train workers in gerontology to be part of the clinical team, and mentor them. 				

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<p>Hsu, A., Lane, N., Sinha, S., Dunning, J., Dhrupe, M., Kahiel, Z., Sveistrup, H., (June, 2020) Understanding the Impact of COVID-19 on Residents of Canada's Long-term Care Homes- Ongoing Challenges and Policy Responses. International Long Term Care, Policy Network.</p>	<p>The percentage of deaths due to nursing home residents ranged from 18 percent in Saskatchewan to 92 percent in Nova Scotia. British Columbia was the first province to bring all care home workers under the employment of the province. This was done to stabilize the workforce by giving these workers full-time jobs with benefits and restricting them to one worksite. Other Canadian provinces followed suit.</p>				
<p>Ioannidis J., Axfors C., Contopoulos D., (November 2020) Second versus First Wave of COVID-19 Deaths: Shifts in Age Distribution and in Nursing Home Fatalities. medRxiv</p>	<p>Stanford and Uppsala researchers analyzed deaths in 11 countries with at least 4000 COVID-19 deaths as of November 25, 2020 AND at least 200 deaths in the first wave, which ended on May 15, and 200 in the second wave, which ended on September 15. The proportion of deaths among those aged 50 years of age or less declined slightly between the two waves. However, the proportion of deaths due to nursing home residents fell significantly in most countries in the second wave.</p> <p>There was a great deal of variation in risk of nursing homes deaths among the countries with available data.</p>				
<p>Janssen, D.J., Ekström, M., Currow, D.C., Johnson, M.J., Maddocks, M., Simonds, A.K., Tonla, T. and Marsaa, K., 2020. COVID-19: guidance on palliative care from a European Respiratory Society international task force. <i>European respiratory Journal</i>, 56(3).</p>		<p>A multinational task force arrived at consensus recommendations, which are:</p> <ul style="list-style-type: none"> • Advance care planning should occur upon diagnosis with COVID-19. • Staff should receive training in wearing PPE and facilitating communication between patients and their families. • Patients should have access to palliative care that can help alleviate their symptoms. • Health care staff with palliative and spiritual care training should be involved with the care of people with severe and persistent COVID symptoms. • Family using PPE should be able to visit dying loved ones and should have bereavement support. • Staff should be offered psychological support to deal with their bereavement when patients die. 			

Country	COVID-19 Impacts on Nursing and Assisted Living Facility Residents	Services in Nursing and Assisted Living Facilities	Quality Assurance	Environment	Workforce
<p>Kim, K., (May, 2020). The Impact of COVID-19 on Long-term Care in South Korea and Measures to Address it. International Long Term Care Policy Network</p>	<p>In South Korea, half of fatal cases occurred as a result of infections in hospitals or other institutions. By April 2020, South Korea had 247 COVID-19 deaths. Eight percent of those who died were infected in nursing homes. Residents who become infected are transferred to hospitals and die there. South Korea had few nursing-facility-related deaths because they implemented comprehensive infection control procedures in the population at large and in facilities.</p>				
<p>Kruse F., van Tol L., Wrinzen C., van der Woerd O., Juristen P., (November 2020) The Impact of COVID-19 on Long-term Care in the Netherlands: the Second Wave. International Long Term Care Policy Network.</p>		<p>The Netherlands kept nursing facilities open to visitors during the second wave of COVID-19. Facilities in the Netherlands created crisis management teams during the first wave of the virus and included client councils in these teams during the second wave.</p>	<p>The Netherlands lifted its ban on visitors because of the detrimental impact on residents. Residents are involved in decisions about visitation.</p>		
<p>Lapid, M. I., Koopmans, R., Sampson, E. L., Van den Block, L., & Peisah, C. (2020). Providing quality end-of-life care to older people in the era of COVID-19: perspectives from five countries. <i>International psychogeriatrics</i>, 32(11), 1345-1352.</p>		<ul style="list-style-type: none"> • Use telehealth as an alternative to face to face visits. 			<ul style="list-style-type: none"> • LTSS staff need psychological support due to the stress of working during a pandemic. • Manage demands on the workforce so staff are able to rest.
<p>Lau-Ng R., Caruso L., Perlis T., COVID-19 Deaths in Long-term Care Facilities: a Critical Piece of the Pandemic Puzzle. <i>Journal of the American Geriatrics Society</i>, vol. 68, no.9, pgs. 1895-1898.</p>	<p>Hong Kong had no COVID-19 deaths in nursing facilities and Singapore and South Korea reported less than 20 each. All three countries started their infection control measures in February, 2020. According to a researcher in Hong Kong, that city's success was due to:</p> <ul style="list-style-type: none"> • People staying in hospital until their COVID-19 infection cleared. • Contacts of those with COVID-19 were traced and quarantined for 14 days. • All nursing facilities have trained infection controllers, and emergency drills simulating the flu or SARS four times a year. <p>South Korea took these same three steps, plus inspected all facilities.</p>				

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<p>Liu, M., Maxwell, C. J., Armstrong, P., Schwandt, M., Moser, A., McGregor, M. J., Bronskil S., Dhalla, I. A. (2020). COVID-19 in long-term care homes in Ontario and British Columbia. <i>CMAJ</i>, 192(47), E1540–E1546.</p>	<p>As of September, 2020, Ontario had 5965 resident cases and 1817 deaths in Ontario nursing facilities, whereas British Columbia only had 466 cases and 156 deaths. Ontario's resident infection rate was 7.6 percent vs 1.7 percent in British Columbia. Death rates among residents were 2.3 percent vs 0.6 percent in the two provinces, respectively. The two provinces' residents' age and sex distribution were similar; it's not clear whether there were differences in residents' frailty.</p> <p>The authors assert that the differences in death rates are due to British Columbia having:</p> <ul style="list-style-type: none"> • an earlier response to the pandemic. • better pre-existing coordination among public health, hospitals and long-term care sectors. • more pre-existing funding for long-term care. • more pre-existing care hours per resident 3.25 vs 2.71 hours per day per resident in Ontario. • fewer shared rooms 24 percent vs 63 percent in Ontario. • less for-profit facility ownership 34 percent vs 58 percent in Ontario. • more comprehensive inspections in British Columbia. • British Columbia restricted workers to a single facility starting in March, whereas Ontario waited until April, 2020. 				
<p>Lorenz-Dant, K., (May, 2020) Germany and the COVID-19 Long-term Care Situation. International Long Term Care Policy Network.</p>				<p>Facilities should divide their institutions into one area for people without symptoms, one for suspected cases, and one for those with COVID-19 and staff should work in only one of these areas.</p>	

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Country	COVID-19 Impacts on Nursing and Assisted Living Facility Residents	Services in Nursing and Assisted Living Facilities	Quality Assurance	Environment	Workforce
<p>Lum, T., Shi, C., Wong, G., & Wong, K. (2020). COVID-19 and long-term care policy for older people in Hong Kong. <i>Journal of aging & social policy</i>, 32(4-5), 373-379.</p>	<p>COVID-19 Impacts on Nursing and Assisted Living Facility Residents</p>	<p>Services in Nursing and Assisted Living Facilities</p>	<p>Quality Assurance</p> <p>Hong Kong took a number of quick actions when COVID-19 appeared in January, 2020. This occurred based on the city's experience during the SARS epidemic in 2003.</p> <p>During the 2003 SARS epidemic, Hong Kong learned:</p> <ul style="list-style-type: none"> • Older adults were more likely to be infected and die. • Facility residents were five times as likely to become infected than the general population. • Most infections among older people were acquired in hospitals. • A high proportion of older SARS patients require intensive care and ventilators. <p>In January, 2020 measures related to LTSS were:</p> <p>Visiting to facilities was reduced.</p> <ul style="list-style-type: none"> • Day care centers closed, except to those who had no family to care for them during the day. • HCBS was limited to meals, transport to medical appointments, and medication administration. • Providers received subsidies for infection control. • Medical appointments occurred remotely. 	<p>Environment</p>	<p>Workforce</p> <p>Globally, LTSS workers struggle with chronic understaffing in nursing facilities, part-time employment, heavy workloads, little if any sick leave, low wages, and requirements to work while sick. Staff often work at multiple facilities.</p> <p>Globally, months into the crisis, workers were afterthoughts and still have struggles getting PPE. Also, changing guidelines confuse staff.</p>
<p>McGilton, Katherine S., Astrid Escrig-Pinol, Adam Gordon, Charlene H. Chu, Franziska Zúñiga, Montserrat Gea Sanchez, Veronique Boscart et al. "Uncovering the devaluation of nursing home staff during COVID-19: are we fuelling the next health care crisis?" <i>Journal of the American Medical Directors Association</i> 21, no. 7 (2020): 962-965.</p>	<p>COVID-19 Impacts on Nursing and Assisted Living Facility Residents</p>	<p>Services in Nursing and Assisted Living Facilities</p>	<p>Quality Assurance</p> <p>Globally:</p> <ul style="list-style-type: none"> • Use experienced nurses to educate and train staff in infection control • Promote use of infection control procedures. • Stockpile and use PPE. 	<p>Environment</p>	<p>Workforce</p> <p>Globally, LTSS workers struggle with chronic understaffing in nursing facilities, part-time employment, heavy workloads, little if any sick leave, low wages, and requirements to work while sick. Staff often work at multiple facilities.</p> <p>Globally, months into the crisis, workers were afterthoughts and still have struggles getting PPE. Also, changing guidelines confuse staff.</p>

Country	COVID-19 Impacts on Nursing and Assisted Living Facility Residents	Services in Nursing and Assisted Living Facilities	Quality Assurance	Environment	Workforce
<p>Mo, S., & Shi, J. (2020). The Psychological Consequences of the COVID-19 on Residents and Staff in Nursing Homes. <i>Work, Aging and Retirement</i>, 6(4), 254–259.</p>	<p>COVID-19 Impacts on Nursing and Assisted Living Facility Residents</p> <ul style="list-style-type: none"> Loneliness and emotional anxiety are the main consequences of the pandemic for nursing facility residents. Loneliness may have consequences for residents, including high blood pressure, depression, suicidal thoughts, and anxiety. Research shows that residents report significantly higher anxiety and depression during the pandemic than they did before it. Interventions during the pandemic that can help residents involve maintaining their social connections with family and friends, and opportunities for developing leisure skills. The pandemic has caused uncertainty, hopelessness, work overload, and role conflict for facility staff. Interventions for staff are education about infection control, and their concerns about the pandemic, and the ethical issues surrounding it. Another intervention is a psychological intervention teams for staff, residents, and families. 				
<p>Monin, J. K., Ali, T., Syed, S., Piechota, A., Lepore, M., Mourgues, C., ... & David, D. (2020). Family Communication in Long-Term Care During a Pandemic: Lessons for Enhancing Emotional Experiences. <i>The American Journal of Geriatric Psychiatry</i>, 28(12), 1299–1307.</p>			<p>This study was an online survey of 161 adults in the US with relatives or friends in nursing facilities about nine communication methods other than physical visits. The participants reported their views of residents' emotions. Results are:</p> <ul style="list-style-type: none"> More frequent phone communication was associated with residents having less negative emotion. More frequent emails were associated with residents having more positive emotions. More frequent letters were associated with residents having more negative emotions. Video-conferencing had no significant impact on resident emotions. <p>Conclusion was that phone and email were the communication methods residents preferred, based on reports from their relatives and friends.</p>		

Country	COVID-19 Impacts on Nursing and Assisted Living Facility Residents	Services in Nursing and Assisted Living Facilities	Quality Assurance	Environment	Workforce
<p>National Collaborating Centre for Methods and Tools. (October, 2020). What Risk Factors Are Associated with COVID-19 Outbreaks and Mortality in Long-term Care Facilities and What Strategies Mitigate Risk?</p>	<p>A literature review showed that increased facility staffing, particularly RNs, was consistently associated with reduced risk of COVID-19 infections and mortality. Other strategies that reduced the impact of COVID-19 included infection control audits, enforcement of maximum occupancy in small areas, and voluntary staff confinement to facilities while sleeping in unused areas.</p>				
<p>Oh, J., Lee, J. K., Schwarz, D., Ratcliffe, H. L., Markums, J. F., & Hirschhorn, L. R. (2020). National response to COVID-19 in the Republic of Korea and lessons learned for other countries. <i>Health Systems & Reform</i>, 6(1), e1753464.</p>	<p>South Korea initially had the second highest number of COVID cases after China with a peak of 909 cases in February 2020. However, South Korea rapidly controlled community transmission of the disease. The country's strategies included:</p> <ul style="list-style-type: none"> • Early recognition of the threat and activation of a response plan. • Early and widespread diagnostic capability. • Rapid implementation of prevention of community transmission through contact tracing and quarantine. • Redesign of case management systems. This included designating triage centers for people with symptoms and allocating non-hospital beds for people with mild symptoms. <p>The authors state that some of Korea's success is due to their response to an earlier pandemic - MERS-CoV. Given their previous experience, the country was primed to respond quickly to the COVID-19 pandemic.</p>				

Country	COVID-19 Impacts on Nursing and Assisted Living Facility Residents	Services in Nursing and Assisted Living Facilities	Quality Assurance	Environment	Workforce
<p>O'Neill, D., Briggs, R., Holmerová, I., Samuelsson, O., Gordon, A. L., & Martin, F. C. (2020). COVID-19 highlights the need for universal adoption of standards of medical care for physicians in nursing homes in Europe. <i>European Geriatric Medicine, 11</i>(4), 645–650.</p>			<p>Nursing home residents receive less organized medical care than their community counterparts with less monitoring. Residents also receive unnecessary drugs, including more inappropriate sedating drugs. Physicians serving nursing facility residents need training in geriatrics to address these problems.</p> <p>In response to the pandemic and its impact on nursing facility residents, the European Geriatric Medicine Society updated its standards for medical care in facilities. These standards are:</p> <ul style="list-style-type: none"> • All potential residents should have an assessment by a specialist in geriatric medicine to determine if admission can be avoided. • Facilities should have clinical leadership commensurate with the needs of their residents to ensure appropriate coordination of health and LTSS. • Physicians serving residents should have formal competence in geriatric care or old-age psychiatry given the complexity of residents' care needs. • Nurses also need gerontological training, which includes dementia and palliative care topics. Direct care workers should also have training in the conditions residents have. • Residents' medical care requires services from associated disciplines, such as physical and occupational therapists, dentists, pharmacy, ophthalmology, and audiology, social work and psychology. • Residents' conditions need to be systematically and comprehensively included in their medical records to serve them appropriately. • Residents need regular vaccines, monitoring of their chronic diseases, and regular clinical and medication reviews. 		

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<p>Rostgard, T., (May 2020) The COVID-19 Long-Term Care Situation in Denmark. International Long Term Care Policy Network.</p>	<p>As of May 2020, Denmark had 563 deaths from COVID-19, with about one third being nursing facility residents. Factors that account for Denmark's success relative to other European countries are:</p> <ul style="list-style-type: none"> • a quick lock down • a decentralized and integrated approach to LTSS; municipalities have responsibility for managing social and health care, except for hospital care. • Older people generally receive care at home and the Danish public is supportive of LTSS; 16 percent of the population is belongs to an aging advocacy organization. • Employed and trained staff provide LTSS. Social Care and Health Helpers have a 19 month training program with a five month introductory course. Social Care Assistants have an additional 20 months of training and coursework. • Each nursing facility has its own general practitioner. • The majority of nursing facilities are public, relatively new, and have one resident per room. In fact residents have small apartments with their own kitchen, bathroom, and two separate rooms with a doorbell and mailbox. The facilities also have common rooms where residents socialize. 	<p>In response to the pandemic, nursing facilities are:</p> <ul style="list-style-type: none"> • restricting visitors. • conducting smaller size group activities - no more than two residents. • limiting the number of residents one staff person serves. • isolating residents with symptoms immediately. <p>Facility staff report that residents are calmer, perhaps as a result of smaller group activities.</p> <p>Denmark allows workers to file a work-related injury claim if they test positive for COVID-19, so workers can receive workman's compensation payments.</p>			

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<p>Spilsbury, K., Devi, R., Daffu-O'Reilly, A., Griffiths, A., Haunch, K., Jones, L., and Meyer, J., "Less COVID-19 Learning by Experience and Supporting the Care Home Sector During the COVID-19 Pandemic: Key Lessons Learnt, so far, by Frontline Care Home and NHS Staff. University of Leeds' National Care Forum.</p>			<p>Researchers interviewed 35 frontline and 15 managerial workers in UK health care and care homes who served older people. The following recommendations for care homes during pandemics is based on lessons learned:</p> <ul style="list-style-type: none"> • Offer emotional support to residents and care staff. • Ensure advance care planning occurs with residents and that needed services and supports are available during end-of-life. • Ensure ongoing support for family who cannot visit their loved ones. • Create zones where people who have the disease can socialize with one another. • Encourage residents to exercise to maintain their health and function during isolation. • Help residents maintain their social relationships outside the nursing facility. • Promote rehabilitation for those residents that survive the disease. 		
<p>Stall, N. M., Zipursky, J. S., Rangrej, J., Jones, A., Costa, A. P., Hillmer, M. P., & Brown, K. A. (November, 2020a). Increased Prescribing of Psychotropic Medications to Ontario Nursing Home Residents during the COVID-19 Pandemic. <i>medRxiv</i>.</p>		<p>Stall examined prescribing of psychotropic medications for all Ontario nursing facility residents—77,000 residents in 623 facilities. The medications were anti-psychotics, anti-depressants, benzodiazepines, and trazodones. Practitioners prescribed more of these medications during the pandemic, a pattern which persisted from February through September 2020. A similar increase occurred in the UK. The authors speculate that increases in prescribing occurred because of residents' isolation due to visitation restrictions.</p>			

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<p>Stall 2020b Canada Stall, N. M., Johnstone, J., McGeer, A. J., Dhuper, M., Dunning, J., & Sinha, S. K. (2020b). Finding the right balance: An evidence-informed guidance document to support the re-opening of Canadian nursing homes to family caregivers and visitors during the coronavirus disease 2019 pandemic. <i>Journal of the American Medical Directors Association</i>, 21(10), 1365–1370.</p>	<p>Canadian nursing homes implemented a strict no visitors policy during the pandemic to reduce transmission of the virus. However, there are concerns that the risks outweigh the benefits because many residents have experienced long-term declines in function - physical, cognitive, and emotional. This article recommends a more nuanced visitation policy based on the authors' reviews of international guidelines.</p> <ul style="list-style-type: none"> Residents or substitute decision-makers should retain the ability to designate two family caregivers who could make visits. Limit the number of carers to one at a time per resident, except during end-of-life. Visits should be able to occur once a week. Give carers an identifying badge and require them to maintain distance from other residents and staff, and comply with infection control procedures. Revoke visiting for carers who do not comply with the procedures. Use outdoor visitation when feasible for carer and resident. Use virtual visits when there are active infections. Give visitors access to a bathroom. Stall's guidelines could apply to other residential settings. 				
<p>Tartaret, P., Strazzulla, A., Rouyer, M., Gore, C., Bardin, G., Noel, C., Benguier, J. Z., Berthaud, J., Hommel, M., Aurtaure, S., Jochmans, S., Diamantis, S., (2020). Clinical Features and Medical Care Factors Associated with Mortality in French Nursing homes during COVID-19 Outbreak, <i>International Journal of Infectious Disease</i>.</p>	<p>The authors compared the experiences of residents in three nursing facilities in France; two were hospital-based facilities and the third was independent. They found:</p> <ul style="list-style-type: none"> At three months, hospital-based facilities had case fatality rates of 6.6 percent versus 25.8 percent for the independent facility. Mortality decreased when residents had daily clinical examinations, three vital sign measurements per day, and anti-coagulation therapy. The independent facility had no effective infection control policy. 				

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<p>Tsay, S. F., Kao, C. C., Wang, H. H., & Lin, C. C. (2020). Nursing's response to COVID-19: Lessons learned from SARS in Taiwan. <i>International Journal of nursing studies</i>, 108, 103587.</p>	<p>As of March 2020, Taiwan had only 135 COVID-19 cases, despite how close it is to China. Taiwan was successful in preventing a wider spread of the infection because:</p> <ul style="list-style-type: none"> • Government, hospitals, and nursing organizations collaborated immediately because of their experience with SARS in 2003. • The government set up an internet platform for nurses to report when their hospitals do not act in compliance with protocols. • Taiwan set up 134 isolation hospitals after the SARS epidemic. In these hospitals, nurses are experts in infection control. • Nurse volunteers run a quarantine call center. • Taiwan uses extensive phone tracking for infection control. 				

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<p>Verbeek, H., Gerritsen, D. L., Backhaus, R., de Boer, B. S., Koopmans, R. T., & Hamers, J. P. (2020). Allowing visitors back in the nursing home during the COVID-19 crisis: A Dutch national study into first experiences and impact on well-being. <i>Journal of the American Medical Directors Association, 21</i>(7), 900-904.</p>		<p>Services in Nursing and Assisted Living Facilities</p>	<p>In response to the pandemic, the Netherlands prohibited visitors to nursing facilities and residents were not able to go outside. Health professionals also had their visits limited. All group activities for residents ceased.</p> <p>Later, the Dutch developed guidelines for permitting visitors to nursing facilities during the pandemic. The guidelines included:</p> <ul style="list-style-type: none"> • Making agreements with visitors about the timing of visits. • Permitting only one visitor per resident. • Requiring physical distance between visitor and resident. • Requiring that visitors have no COVID-19 symptoms. • Requiring visitors to wear masks. • Ensuring that facilities have sufficient PPE, appropriate hygiene, and sufficient staffing and testing capacity. <p>This study examined local implementation of the guidelines in 26 nursing facilities. One staff person at each facility participated in a survey and interviews.</p> <ul style="list-style-type: none"> • Fifty-seven percent of residents received visitors. • Sometimes visitors didn't follow protocols regarding masks and physical contact with residents. • Staff workload increased due to managing the visits. • Nursing facility staff reported the positive impact that visitors had on residents' well-being. • Compliance with the protocol was sufficient to good. • During the study period these facilities reported no new COVID-19 infections for three weeks after visits were allowed. 		

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<p>Wong, K., Lum, T., and Wong, G., (July, 2020) The COVID-19 Long-term Care Situation in Hong Kong: Impact and Measures. International Long Term Care Policy Network.</p>	<p>Hong Kong had no COVID-19 deaths in nursing facilities and, in July 2020, the country had its only case of COVID-19 in a facility.</p> <p>Researchers said that Hong Kong learned from the SARS epidemic in 2003, so the government reacted swiftly to the current pandemic. In addition to strict infection control procedures in the community, Hong Kong took the following measures in the LTSS sector:</p> <ul style="list-style-type: none"> • The government provided a supplement to institutional and home care providers for extra expenses due to the pandemic. • NGOs have partnered with telecommunication companies to facilitate video calls between residents and families and online activities for older people. • Nursing facilities set up temporary isolation wards. • Day care centers reduced the number of clients and senior centers closed, but regularly call members to provide social and emotional support. 				

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<p>World Health Organization. (July 24, 2020) Preventing and Managing COVID-19 across Long-term Care Services, Policy Brief.</p>	<p>In many countries 40 percent of COVID-19 deaths have been linked to LTSS facilities, with percentages as high as 80 in some high income countries. The range is from 24 percent in Hungary to 82 percent in Canada.</p> <p>Many countries did not include long term care facilities in their initial pandemic planning. In some countries the army and other emergency response personnel had to support facilities that had become overwhelmed. Also facilities generally did not get access to PPE, testing, and medical support until after there was widespread infection in facilities.</p> <p>The WHO, based on its study of the international situation, developed policy objectives to improve response to the pandemic:</p> <ul style="list-style-type: none"> • Include LTSS in all phases of planning with a focal point for management of the response in that sector. • Ensure adequate funding for LTSS. • Ensure adequate monitoring in the LTSS sector and share information effectively with the health care sector. • Secure sufficient staff and resources. In Israel, the Ministry of Health sends extra staff to stressed facilities for 7 to 14 days. Provide staff a salary sufficient to minimize movement between facilities and paid sick leave to stay home when they are ill. • Ensure that residents continue to receive essential health promotion, prevention, treatment, rehabilitation, and palliation services. • All facilities need to have a relationship with a primary care service to care for residents. • Establish rapid response teams with geriatric expertise for facilities to help prevent hospitalizations and ensure good communications. • Ensure compliance with infection control procedures. • Ensure the psychosocial well-being of people receiving and providing LTSS through such measures as a dedicated helpline and use scheduling flexibility to help workers. • Ensure smooth transition to recovery from the disease. 				

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<p>Yang, P., & Huang, L. K. (2020). Successful prevention of COVID-19 outbreak at elderly care institutions in Taiwan. <i>Journal of the Formosan Medical Association</i>, 119(8), 1249–1250.</p>	<p>COVID-19 Impacts on Nursing and Assisted Living Facility Residents</p>	<p>Services in Nursing and Assisted Living Facilities</p>	<p>Quality Assurance</p> <p>As of May 2020, Taiwan had no clusters of infections in their 1091 nursing facilities and only one infection and that was in a staff member. The authors attribute that to:</p> <ul style="list-style-type: none"> • Infection control is integral to the culture of nursing facility care, as is a sufficient supply of PPE. • The Central Epidemic Command Center guides local governments and they in turn guide facilities. Care associations and local networks of institutions coordinate. They banned nonessential visits, and units had designated staff without crossover to other units. 	<p>Environment</p>	<p>Workforce</p>